Personas and Prototyping

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Personas
Scenarios
Lo-fi prototyping
Hi-fi Prototyping
PERSONAS
“User” can be an abstract concept used to support any design idea – for users of a library:

- The user who is interested in finding books quickly
- The user who is interested in filing books quickly
- The user who is interested in making sure books get filed correctly
- The user who wants to make sure indexes are consistent
- The user who wants to study
- The user who wants to work with a team

Are these all the same “user”?
Personas are “hypothetical archetypes inspired by user research to ground design discussions”

- Cecilia, librarian
- Mike, experienced PhD student
- Joe Bloggs, first year MIMS
- Tajel, undergrad doing work study
# Kivio Users

<table>
<thead>
<tr>
<th>Name</th>
<th>Alexander Weiß</th>
<th>Donald M. Berry</th>
<th>Kristian Larsson</th>
<th>Eric Neville</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>30</td>
<td>30</td>
<td>26</td>
<td>24</td>
</tr>
<tr>
<td>Location</td>
<td>Germany</td>
<td>US</td>
<td>Sweden</td>
<td>France</td>
</tr>
<tr>
<td>Social Life</td>
<td>Alexander lives with his girl-friend in a flat in Hamburg.</td>
<td>Donald lives with his wife and 1-year old daughter in a house in Portland.</td>
<td>Kristian shares an apartment with two friends in Stockholm. His girl-friend lives in Uppsala. They see each other every weekend.</td>
<td>Eric lives with his parents in a small city close to Lyon. He visits the university there. Often, he stays at his friend’s apartment for playing PC games and programming.</td>
</tr>
<tr>
<td>Work Life</td>
<td>He works at centre for environmental systems research and designs plans for replaceable energies in a EU-funded project.</td>
<td>He is a lead system administrator in a huge network solutions company in Portland.</td>
<td>A software developer with a dayjob in a medium-sized software company. Works on KDE in his spare time.</td>
<td>He is a student of computer science. Besides university, he performs small programming jobs for people in his neighbourhood.</td>
</tr>
<tr>
<td>Computer Experience</td>
<td>All are highly experienced with computers.</td>
<td>All are highly experienced with computers.</td>
<td>All are highly experienced with computers.</td>
<td>All are highly experienced with computers.</td>
</tr>
<tr>
<td>Time at a computer per week</td>
<td>26-50 hours per week</td>
<td>35-50++ hours per week</td>
<td>30-50++ hours per week</td>
<td>25-45 hours per week</td>
</tr>
<tr>
<td>Computer tasks</td>
<td>Office tasks and Field-dependent. Also educational and recreational. No development.</td>
<td>Development and network administration. Does not use PC for office tasks, educational, and even recreational.</td>
<td>Mostly development and recreational. Also network administration and office.</td>
<td>Mostly development. Also educational, recreational, and network administration. Does not use for office work.</td>
</tr>
<tr>
<td>Relation to OSS.</td>
<td>He is not passionate about OSS.</td>
<td>He is a convinced user of OSS.</td>
<td>He is involved with OSS development.</td>
<td>He is a convinced user of OSS.</td>
</tr>
</tbody>
</table>

[http://wiki.fluidproject.org/display/fluid/Persona+Format](http://wiki.fluidproject.org/display/fluid/Persona+Format)
PERSONAS ACTIVITY
Personas are the single most powerful design tool that we use.

Precision matters more than accuracy.

Personas smoothen out individual quirks.

Aim for the center.

Stereotypes are OK!

It’s a user persona, not a buyer persona.

Focus on the primary persona.
Personas can be based on market research, contextual inquiry and design ethnography.

Personas “act” in scenarios, and scenarios contain personas.

Try not to re-use the same personas excessively.

Personas are not a panacea.
PROTOTYPING
Design

Implement

Evaluate
Test as many ideas as possible

Formative versus Summative Evaluation

Prototyping
**Formative evaluation** - Discover usability problems as part of an iterative design process. Goal is to uncover as many problems and get as much feedback as possible.

**Summative evaluation** - Assess the usability of a prototype, or compare alternatives. Goal is a reliable, statistically valid comparison.
Early representation of a design idea.

Provides hands-on experience for all stakeholders (design teams, users, customers, etc.)

Everyone understands their limitations

Can be made cheaply, and can be fun to make and use

LOW FIDELITY TECHNIQUES

Scenarios

Storyboards

Design Sketch

Paper flipbook

Cardboard/Foam Mock-up
Scenarios are stories about personas and their activities.

Elements of a scenario: Agents / Actors (Personas), Setting, Goals / Objectives, Actions / Events

Focuses developers on the most important user activities that should be supported

Does not focus on implementation or metrics

Can either describe current practice, or a future hypothetical scenario
SCENARIO FORMAT

Comic book/ storyboard

Text paragraph

Video
Cecilia wants to take notes while in class. Even though the slides will be posted online later, she wants to make sure he captures the most important points. Before the professor starts the lecture, she starts the note-taking application on his phone. The application automatically notes the current date, time and class. During the class she can press one of two buttons - to start recording audio or to take a picture. After recording, the application allows her to tag the recording with keywords. Later, when she is home, she can review her notes, synchronized with the powerpoint slides downloaded from the course web site. She can search by keyword, follow the lecture linearly, or sped up in time.
Storyboard #1: Creating + Modifying a Blog Entry

1. This user is enjoying the great outdoors when suddenly, inspiration for a blog post strikes.

2. She writes her blog post on the provided paper and saves it as a draft to modify later.

3. Once home, she docks the pen, which sends the data to the software, which she opens up.

4. This is the screen that loads up. She clicks the "edit" button.

Source: http://vis.berkeley.edu/courses/cs160-fa06/wiki/index.php/InteractivePrototype-Group:4Corners
Paper Prototyping

http://www.usabilitygeek.com
Paper Prototyping

E-Finder

Your location:
Hearst + Le Roy
Berkeley 94709

Search region:
Bay Area

Change search region

Search:
Godzilla

Genre:
Action

Adventure

Drama

Recommended

Action:

Synopsis:

AMC 21
8:00 9:00 10:00

AMC 19
3:00 5:00

Reviewer:

Address:

Note:

slide: from Jake Wobbrock
Paper Prototyping

http://www.fastcodesign.com/1669513/using-origami-to-mock-up-ingenuous-gestural-interfaces
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MATERIALS FOR PROTOTYPING

Large, heavy white paper
Colored paper
Thumbtacks
Cardboard or foam core
Index cards
Tape or glue
Pencils, pens, markers
Overhead transparencies
Scissors
Exacto knife
slide: from Jake Wobbrock
HIGH FIDELITY PROTOTYPING

Provide increasing amounts of functionality and refinement

Usually involve some amount of programming and interactivity

Can provide functionality that can be tested with users

Take more time and resources to build

Users can be distracted by limitations
Human operator mimics advanced computational functionality
Speech recognition, gesture recognition, vision, etc.
Allows for testing advanced functionality without full implementation
TOOLS FOR HIGH FIDELITY PROTOTYPING

Powerpoint
Balsamiq
Invision
Justinmind
Axure
Photoshop
HTML
Video
Kinect
Arduino, etc
Lots of possibilities
PROTOTYPING TECHNIQUES

- Scenario • Storyboard • Video
- Design Sketch • Screenshot
- Paper • Cardboard • Foam Mockups
- Wizard of Oz
- Interactive Prototypes
KINDS OF PROTOTYPES

**Role** - “are built primarily to answer questions of what an artifact could do for a user”

**Look and Feel** - “explore and demonstrate options for the concrete experience”

**Implementation** - “experiments… to demonstrate technical feasibility”

**Integration** - “verify that the design is complete and coherent, and to find synergy”

Source: Houde and Hill, ”What do Prototypes Prototype”
Example 1. Role prototype for 3D space-planning application [E1 Houde 1990].

Example 2. Look-and-feel prototype for 3D space-planning application [E2 Houde 1990].

Example 3. Implementation prototype for 3D space-planning application [E3 Chen 1990].

Source: Houde and Hill, "What do Prototypes Prototype"
TWO KEY QUESTIONS

What do I want to learn?

What do I want to communicate?
I am Disposable

I am easy to Change

I do not need to be Complete

I do not need to be Updated

Source: Houde and Hill, "What do Prototypes Prototype"
“Small, entrepreneurial companies tend to be prototype-driven”

“Companies that manage a large installed base of users tend to be specification-driven”

“Organizations intending to be innovative need to move from specification-driven prototypes to prototype-driven specifications”

Source: Michael Schrage, “Cultures of Prototyping”
PROTOTYPING ACTIVITY
Heuristic Evaluation
Focus Group Presentation
Cognitive Walkthrough
Think Aloud
Usability Testing
etc… more on this later!
Development has traditionally been very top-down and requirements driven

Needs to become more participatory, iterative and focused on learning

The development equivalent of field testing a prototype/probe is often a pilot study
For next time

Paper prototyping activity

User Research Assignment Due!

Personas and Scenarios Due!

Assignments every week!