CSE440: Introduction to HCI
Methods for Design, Prototyping and Evaluating User Interaction

Lecture 09: Scenarios & Storyboarding
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This is a busy week!!!
Project Status

Framing the problem
- User research
- Competitive analysis
- Data analysis and summary

Exploring the solution space
- Brainstorming
- Ideation through sketching

Finding a good solution
- Scoping
- Consideration of constraints
- Scenarios, storyboards, personas
- Design rationale

Refining the solution
- Wireframes
- Lo-fi prototypes
- Early evaluations
- Mockups/mid-fi prototypes
- Additional evaluations
Revisit: Personas & Task Analysis
Task Analysis Questions

Who is going to use the system?
What tasks do they now perform?
What tasks are desired?
How are the tasks learned?
Where are the tasks performed?
What is the relationship between people & data?
What other tools do people have?
How do people communicate with each other?
How often are the tasks performed?
What are the time constraints on the tasks?
What happens when things go wrong?
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**What tasks are desired?**

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Storytelling

“Sometime reality is too complex. Stories give it form.”

— Jean Luc Godard
Why do we need stories in design?

Communicate with your audience
   Other designers, clients, stakeholders, managers, funding agencies, potential end-users...

Explore people's purpose
   Gather and share information about people, tasks, goals
   Put a human face on user data
   Spark new design concepts and encourage innovation
   Share ideas and create a sense of history and purpose
   Giving insight into people who are not like us (empathy)

"Maybe stories are data with a soul!" - Brene Brown
Why do we need stories in design?

How would you explain your favorite social media tool to someone living in 1995? E.g., yelp, twitter, snapchat,…

https://www.commoncraft.com/video/twitter
## Storytelling

### Good stories
- Understand audience
- Provide context of use
- Are well-motivated
- Memorable
- Evokes a reaction
- Evokes empathy
- Illustrate experience
- Convey emotions
- Short and to-the-point

### Bad stories
- Do not account for audience
- Boring or un-engaging
- Fantastical or unrealistic
- Wrong story for purpose
- Too long to hold attention
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Three Ways of Telling Stories

**Scenarios**
- A short story about a specific user with a specific goal
- Written accounts and narratives of the experience
- Analogy: Books

**Storyboards**
- A series of sketches showing how a user might progress through a task in a system
- Visual storytelling with rough sketches/cartoons
- Analogy: Comics, Picture books

**Video Storyboards**
- Richer visual storytelling
- Analogy: Movies/TV
Scenario
Scenario

Persona + Task + Action = …

Scenarios are stories created to communicate and explore the context on WHO does WHAT, WHEN, WHERE and WHY.
Scenario Example (Persona)

Peter Jones is a 23 years-old design professional.

He is a hard-worker, and things big career-wise. He is kind of an introvert, now single, and most of his social life happens on the weekends with roommates and a couple of good friends.

He likes to recharge by reading at home and sometimes playing video-games or watching movies.

User-story:
- Wants to make his weekend hours last as much as possible because those are the only leisure time he gets.
Scenario Example (Task Analysis)

Have a brunch with roomies
- Organize
  - Chose place
  - Poll for date
  - Share calendar invite
- Get everybody to place
  - Wake-up everybody
  - Drive to place
    - Get direction
    - Drive
    - **Park**
- Have a fun eating time
  - Order food
  - Take photos
  - Eat
Scenario Example: Parking

Peter is going to brunch on a Sunday with his roommates. He is trying a new place he found on Yelp. He has the address for the place and he is using a smartphone GPS for directions. He leaves the apartment with his roommates at around 8:30am and he wants to beat the crowd so they won’t have to wait in line. He is driving a Toyota Corolla that he has owned for five years. It is a rainy day and he doesn’t have an umbrella.
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Scenario Example: Parking

needs to find a parking spot close by?

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Team activity

Using your project as a basis:

Create one SCENARIO that presents
- one of your personas,
- and one of the tasks you plan to support.
- IMPORTANT: I still don't want details on the solution.
Team activity

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Create one SCENARIO that presents
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Does anyone feel like sharing your scenario?
Storyboarding
Storyboard

1. Check what time is it.
2. Check current location.
3. Check the task list.
4. Assign priorities.
5. Check leaves.
6. Check availability.
7. Check impact.
8. Assign tasks.
9. When will I do my own work?
10. Check skills matrix.
11. Check holidays.
12. Smart dashboard.
13. Click! Click!
14. I can really do all of this within 5 mins and a few clicks.
15. A break wouldn't hurt after all!
Another one
Another one
Storyboading

WHAT IS A SERVICE? THE ARGOS EXPERIENCE...

 HOW DO ARGOS PROVIDE A SERVICE FOR THEIR CUSTOMERS? ONE INTREPID REPORTER FINDS OUT...
Why Storyboards? (If you have Scenarios)

As a visual representation, storyboards help thinking deeply about…

Specific environments where the system is used
Physical constraints (size of system, space where it’s used…)
Relationships among multiple people
Provide Context

Characters
  Who is involved

Setting
  Environment

Sequence
  What task is illustrated
  What leads a person to use a design
  What steps are involved

Satisfaction
  What is the motivation
  What is the end result
  What need is satisfied
Images in action

Storyboards come from film and animation
the script tells in details what is said
the storyboard focus on context and interactions
Allows Exploration

Much faster and less expensive to produce

Can therefore explore more potential approaches

(Use notes to help fill in missing pieces of the proposal)
Effective to communicate

Effective storyboards can quickly **convey information** that would be difficult to understand in text

(Imagine explaining the storyboard on the right in text, for various audiences)

Can illustrate key requirements and leave open less important details of design
Amal’s Guide to Storyboarding

Don’t use this to illustrate all the UI features & components.*

*This is what paper prototyping is for!

Red & Sean were bored after going to the Bluegrass Festival, & decided to find out what else they could do...

- Dude, what do we do?
- Let me use Toursafari!

<Red>

On my iPhone!

Instead, show why & when features would be used.

Amal Dar Aziz
Elements of a Storyboard

5 visual elements
- Level of detail
- Inclusion of text
- Inclusion of people and emotions
- Number of frames
- Portrayal of time
1. How Much Detail?

Too much detail can lose universality

Scott McCloud
1. How Much Detail?

How to sketch people?

Star people
by Bill Verplank

PERSON

(c) 2009 SACHA CHUA
1. How Much Detail?
1. How Much Detail?
2. Use of Text
2. Use of Text

It is often necessary, but keep it short

1. At home, Mary checks her blood pressure.
2. After a few simple key presses, her blood pressure readings get sent to a clinic.
3. The information is made available to her doctor.
3. Include People and Emotions

Include people experiencing the design and their reactions to it (good or bad)

The point of a storyboard is to convey the experience of using the system
4. How Many Frames?

4-6 frames is ideal for end-users
   Less work to illustrate
   Must be able to succinctly tell story

More is not always better
   May lose focus of story
   May lose attention
4. How Many Frames?
4. How Many Frames?

Remove unnecessary frames
5. Passage of Time

Only use of necessary to understand
Team activity

Again, using your project as a basis:

Create one storyboard that presents
- one of your personas,
- and one of the tasks you plan to support,
- IMPORTANT: I still don't want details on the solution.

When you finish, get feedback from another team.
More Examples and Tricks in Storyboarding
Storyboards for Comparing Ideas

**Authoritative**

Hey! You need to exercise at least 20 days a month.

Oh! Um... Okay.

Good job!

Phew.

Cell phone is used to keep track of one's fitness goal.

**Supportive**

Hey! I will keep a record of days you exercise.

Okay! Let's do it.

Good job! You've exercised more than 20 days a month!

Thanks!

Cell phone is used to keep track of one's fitness goal.
Storyboards for Comparing Ideas

Cooperative

1st Week

1st Week

2nd Week

2nd Week

Competitive

Let's use our cell phones to keep a record of the number of days that we exercise!

Okay! Let's work together to meet a goal of exercising for least 2 weeks.

Let's compare to see who exercises more.

Okay, Let's do it!

Yeah! We are almost there. Good job!

Yeah! I win this week! Let's see who wins next week.
Storyboards for Comparing Ideas

Negative Reinforcement

I'm going to use my phone to keep track of my fitness goals.

Week 1

Week 2

Oh no! My virtual garden on my phone is ugly. I need to exercise to keep the flowers alive!

Positive Reinforcement

I'm going to use my phone to keep track of my fitness goals.

Week 1

Week 2

Each time I exercise, I will get another item added to my garden.

Now I have a full garden

Now I have lots of flowers in my garden!
Use Pictures (only if really necessary)

IT IS SO DARK JANE CAN HARDLY READ HER BOOK

SHE GESTURES IN FRONT OF HER SPECIAL PENDANT TO TURN ON THE LIGHTS

THE LIGHTS TURN ON!

FINALLY, SHE CAN READ HAPPILY.
Existing Images from Other Sources

http://designcomics.org/

http://www.pdclipart.org/
Blur Out Unnecessary Detail

Using image editing software to simplify photos into sketches
Selective Use of Color

An F?! But I studied for hours yesterday!!

Yesterday

<table>
<thead>
<tr>
<th>Time</th>
<th>Productive</th>
<th>Distracted</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 am</td>
<td>5 pm</td>
<td>12 pm 5 pm</td>
</tr>
<tr>
<td>80%</td>
<td></td>
<td>20%</td>
</tr>
</tbody>
</table>

3:30 p.m.
Facebook

Recommendation
- Use Facebook blocker
Selective Use of Color

Diagram showing a day's activities:
- Friday:
  - Dinner
  - Groceries
  - Looks interesting but you're late
  - Save Location!
  - Downtown meeting
- Saturday:
  - 16
  - Elliot Bay Book Co
  - You are two blocks from a saved location. Would you like to visit?
  - Home
  - Coffee
Summary

Think about your audience
Think about your time constraints
Think about how much you want to tell
Think about options for presenting your story

And most importantly: Think about your users
Ask me something!