HCI Bootcamp

28 October – 4 November 2019

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https://ex-situ.lri.fr/people/mackay/teaching/2019-HCIBootcamp

HCI Bootcamp Schedule

Building: SupeLec building

Monday	Tuesday	Wednesday	Thursday	Friday
		Interview exercise **11 Sep**		
Interpret users **28 Oct** 9^{30} - 16^{30}	Explore Ideas **29Oct** 9^{30} - 16^{30}	Video Prototype 1 **30 Oct** 9^{30} - 16^{30}	Redesign: Prototype 2 **31 Oct** 9^{30} - 16^{30}	Holiday **1 Nov**
Final presentation **4 Nov** 13^{30} - 17^{30}				

HCI Bootcamp: one *intense* week!!

Lectures (in class)
- Present fundamentals & principles from different disciplines
- Relate design activities to each other - complete design process

Design activities (in class or at home)
- Individual *and* group
- Each exercise builds upon previous results

Project (in class and at home)
- Groups of 4
- Goal: produce a grounded video prototype

Who is who?

Wendy Mackay — mackay@lri.fr
Research Director — professor

Yi Zhang — Zhang@lri.fr
Ph.D. student — teaching assistant

Tong Xue — tong.xue@u-psud.fr
Ph.D. student — teaching assistant

HCI Bootcamp project

Create a ***video prototype*** of a redesigned interactive map
Meet the needs of *real users in a real setting*

Work in groups of 3 or 4 people

Attendance is critical!
Grades:
Individual: in-class participation and some design activities
Group: most design activities
final presentation of video prototype
final poster

2 Story interviews due: Wednesday, 25 September

Individual activity:
Story interview with two (or more) people
Generate (at least) two real, detailed stories

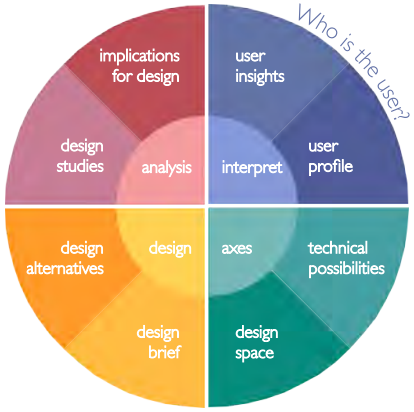
Feedback: If you submit your interviews on time,
you can revise them to make sure they are right

Important!!

Good interviews: inspire innovative ideas
Poor interviews: you won't do well...

Generative Design

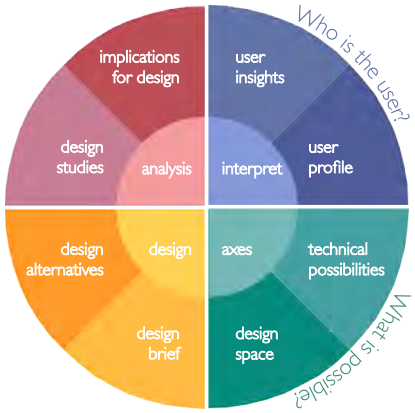
Discovery
Who is the user?



Generative Design

Discovery
Who is the user?

Invention
What is possible?

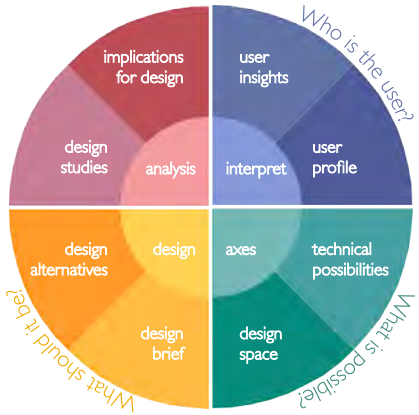


Generative Design

Discovery
Who is the user?

Invention
What is possible?

Design
What should it be?



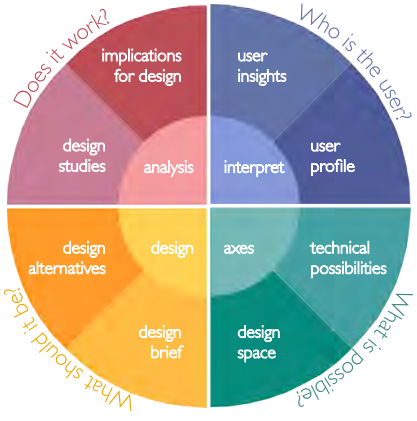
Generative Design

Discovery
Who is the user?

Invention
What is possible?

Design
What should it be?

Evaluation
Does it work?

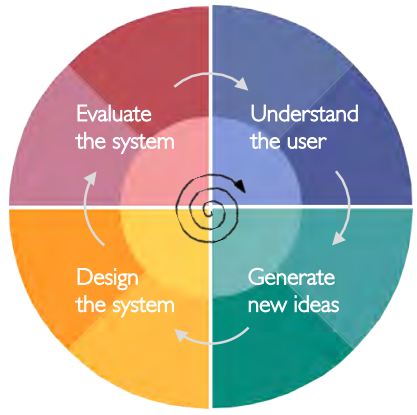


Four interconnected phases

Each phase contributes to the other phases:

The process is iterative

Jump from any phase to any other phase as needed



Generative Design

Each phase includes:

Collecting or sampling information

Analyzing information

Generating design resources

Design Brief

Design brief

Find a real group of users
with a real problem to solve*

Gather detailed, step-by-step stories
What went wrong? What worked well?
What surprised you?

Design a technology innovation to
help these users in a particular setting

Focus on a specific audience
do not try to solve everyone's problem

* May include having fun

Group project

Choose groups:
ideally four people per group

Gather 8 or more story interviews
Each person conducts *at least* two story interviews
to inspire ideas for your project

Design Brief: Map Redesign

This year's design challenge:
Redesign a Map application (Google Maps or ...?)
using principles of instrumental interaction

Find examples of real user needs
when using a map app on a phone

Create a new design that addresses a real problem
and illustrate with a video prototype

Redesign the app
using principles of instrumental interaction

Story Interviews

How to ask questions

The form of the question
provides the form of the response

If you want specific, real answers,
you *must* ask the questions correctly

If not, you will get vague general answers
that provide little help with design

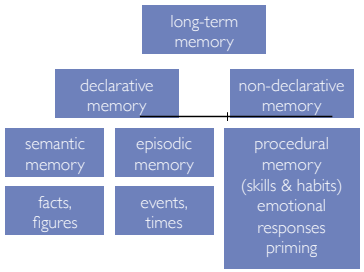
Careful! This is *not* a marketing interview
Your goal is to better understand users
to design a better system

On memory

Long-term memory is organized into two major categories
- declarative
- non-declarative

Declarative memory
- semantic memory including facts & figures
- episodic memory including events, times

Non-declarative memory
- procedural memory including skills & habits
- emotional responses can be primed



When we interview

We can ask for:

Descriptions
- What is this <technology>?

Explanations
- How does this <technology> work?

Stories
- What happened to those people when they used this <technology>?

Conversations
- What did those people communicate to each other?

Types of Interviews

Story interviews — Best for design
- Elicit real stories that include user context, breakdowns, work arounds and user innovations

Tutorial interviews — Lacks breakdowns
- Describe how it is supposed to work, not how it actually works

Opinion interview — Lacks detail
- Provide evidence of 'pain points' but little help for design

How to ask questions

Your goal is to understand users in context
- to design a better system

Good design interviews
- provide concrete, specific stories
- include context
- emphasize breakdowns

NOT market surveys
NOT explanations of how it is *supposed* to work

Story Interviews

Three main types:

Critical object

Critical incident

Recent event

Example: Asking questions about email

Bad question:
How do you manage your email?

Good question:
Tell me about the last time you looked for a particular message.

Why did you need it?
Why couldn't you find it?
What did you do first?
Then what happened?

Interview question examples

Critical Incident question:
Can you think of a time in the past few days when you tried to find a particular email message?
What steps did you go through to find it, step by step?

Critical object question:
Do you have a message that is currently in draft form, that you have not sent?
Please walk through the steps you took to create it and explain why it has not been sent?

Recent event:
Please walk through the process you went through to read your email this morning.

Choose questions that support design

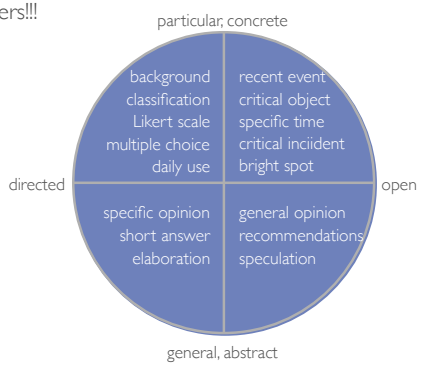
Question order matters!!!

First particular
then general

First concrete
then abstract

First directed
then open-ended

First facts
then opinions



Interview Exercise

individual: 15-20 min per interview

Goal: Find a story about a recent, memorable event using a map application to solve a problem

Story interview
Ask critical object and/or critical incident questions to gather stories about recent, memorable uses of a map app on a phone

Take notes: Record your questions, their answers
Include questions to probe for more information

Convert key incidents into interaction points

Remember

The form of the question provides the form of the response

If you want specific, destailed answers,
ALWAYS start with a SPECIFIC, RECENT question
NEVER START WITH A GENERAL QUESTION

Avoid yes/no questions or short answers

PROBE for details: What happened next
Get them to TELL YOU THE STORY

Red flags:

If you hear these, change the interview!

Usually …
Sometimes …
Normally …
When I do this, …

YOU NEED TO SAVE THE INTERVIEW!!

Probe for a specific story,
NOT how they usually do things

Important!!

Good interviews that find real, surprising stories will
- make this course interesting and fun
- produce innovative ideas
- help you really learn and understand these techniques

Poor interviews that result in explanations will
- make this course frustrating
- producing boring, useless ideas
- not teach you much

THIS IS THE MOST IMPORTANT SKILL OF THE CLASS!!!

Interaction points

Interaction Points: Summarize interviews

Interaction point: Titlecard

a b c

Interaction Points: Summarize interviews

Interaction point: Titlecard

Describe what happened

a b c

Sketch: What did user do?

Sketch: How did system react?

Sketch: How did user respond?

~~Describe: What did user do?~~

~~Describe: How did system react?~~

~~Describe: How did user respond?~~

Interaction points

Miniature storyboards that describe interaction between the user and the system

Title: What does the user want to accomplish?

Sketches and descriptions — or —

What did the user do?	What did the system do?
How did the system react	How did the user react?
How did the user react?	How did the system react?

Focus on surprises:
breakdowns, workarounds, user innovations

Homework Exercise: Story Interviews

Due: Wednesday, 25 Setpember
to: zhang@lri.fr, mackay@lri.fr
subject: HCI Bootcamp Ex#1: Story Interviews

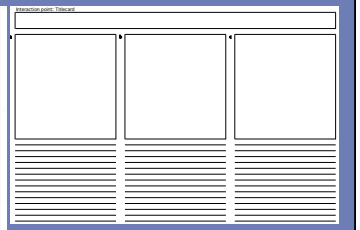
For each interview:

Your name	Date, time & setting of interview
Interview topic	Interviewee information (job, age, sex)
Your questions	Their responses
Probing questions	Surprising answers

Bring paper copies of the interviews to class on Monday.

Worksheets

web:site:
https://ex-situ.lri.fr/people/mackay/teaching/2019-HCIBootcamp



2 Story Inteviews:

due September 25

send to:
zhang@lri.fr
mackay@lri.fr