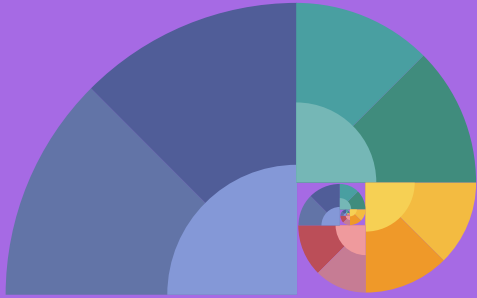


Redesign

How to improve it ?



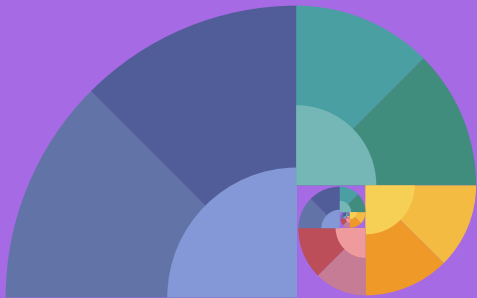
Thursday

Morning
Generative walkthrough
Revised concept, storyboard #2

Afternoon
Video prototype #2









For Monday
Final poster
Final video prototype
Final presentation slides


Generative Walkthrough



Exercise: Generative Walkthroughs

Analyze, critique and reconstruct storyboard 1 from the perspective of instrumental interaction

scenario or storyboard	Instrumental Interaction
	
	
	
	



What are socio-technical principles ?


Social scientists conduct extensive field studies and provide deep insights in the form of **socio-technical principles** about how people interact with technology in context

But
it is difficult to translate these principles into specific designs

So ...

How do we incorporate **socio-technical principles** into the design process?

Generative Walkthroughs: Creative redesign



Structured walkthroughs
Systematic critique of design artifacts, such as scenarios & storyboards

Generative Walkthroughs: Creative redesign



Structured walkthroughs
Systematic critique of design artifacts, such as scenarios & storyboards

plus



Focused brainstorming
Generation of novel ideas, based on socio-technical principles

Generative Walkthroughs

1. **Analyze** the interaction point:
Does the design principle already exist?
If so how?
2. **Critique** the interaction point:
What works?
What does not work?
3. **Reconstruct** the design of the interaction point:
Use the principle to improve the interaction
(you can modify the interaction point or the story)

Instrumental interaction

Interaction instruments

Conceptual model

Two levels of interaction: mediation

Instruments and modes

An instrument turns a mode into an object

Activating a mode = activating an instrument

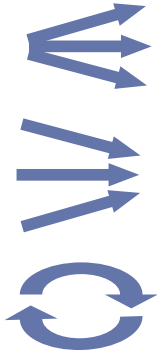
Spatial mode: pointing

Temporal mode: selection

Cost of activation

Generative power : Three design principles

- Reification**
 extends the notion of what constitutes an object
- Polymorphism**
 extends the power of commands with respect to these objects
- Reuse**
 provides a way of capturing and reusing interaction patterns

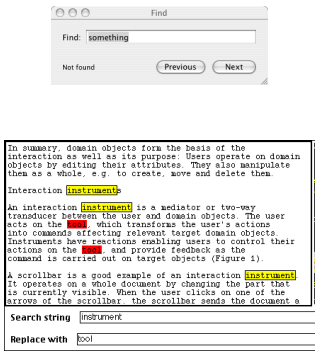


Example : text search instrument

Classic search:
Sequential
Modal

Search instrument:
Show all occurrences
Allow replacing occurrences in any order

Augmented scrollbar





Reification

Turns concepts into (interface) objects

Interaction instrument
Reification of a command into an interface widget

Example :
scrolling a document -> scrollbar

Examples
Guidelines: reification of alignment
Layers: reification of mode

Polymorphism

Extends commands to multiple object types

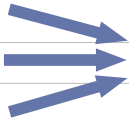
Common examples:
Cut, paste, delete, move

Input polymorphism
brush picks up color and width

Output polymorphism
Brush affects text and shapes

Homogenous groups
If applicable to one object, then applicable to a group of same-type objects

Heterogeneous groups
Applicable to a heterogeneous group if it has meaning for individual object types



Reuse

Captures interaction patterns for later reuse

Input reuse
 Reuse previous commands
 Example: redo, history, macros

Output reuse
 Reuse previously created objects
 Example: duplicate, copy/paste

Generative walkthrough

Instrumental interaction:

What are the user's objects of interest?

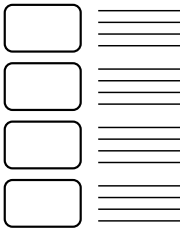
- If they are ephemeral* – make them persist
- If they are persistent – make them interactive
- If they are interactive – make them instruments

* ephemeral: last a short time, then disappear


Exercise: Generative Walkthroughs

Analyze storyboard 1
 from the perspective of instrumental interaction

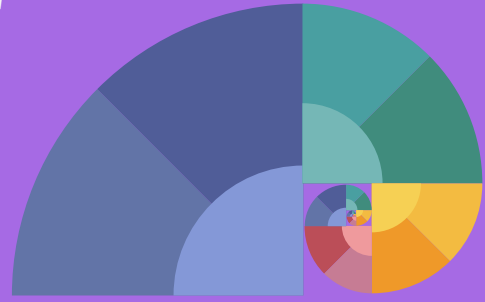
scenario or storyboard



Instrumental Interaction

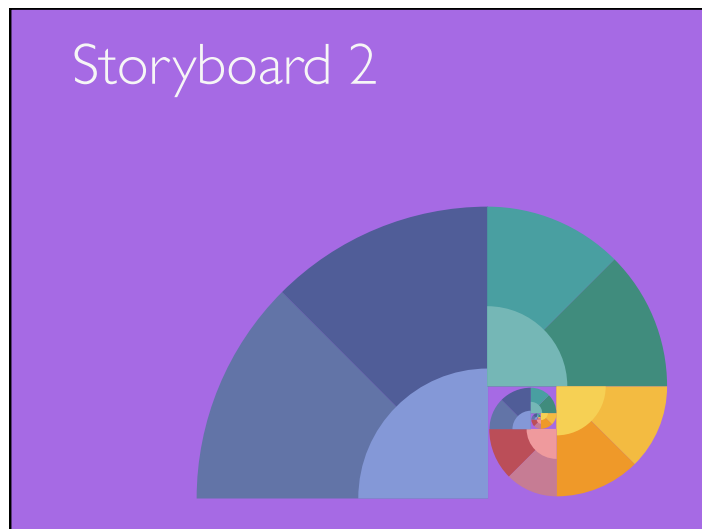


Design Concept revised

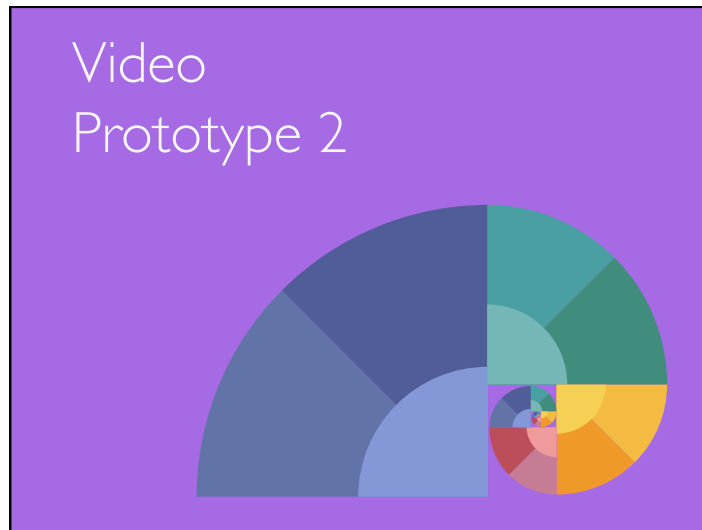


Revise the design concept
Consider results of the generative walkthrough Reassess your design concept Can you create a simpler, more powerful concept?
Consider your first design Who is it <i>really</i> for? Can you be more specific? What should it do? Is there an overall design angle?
State the concept in one sentence: What is the user's problem and what is your original solution?

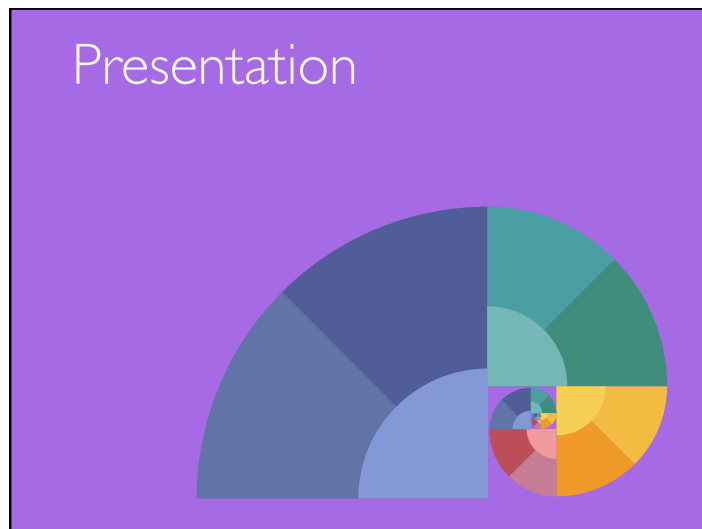
Revise your design concept
Explore breakdowns Identify at least three possible breakdowns How do they affect the design of your system? How can you address them?
Modify your design with the revised concept Include three new interaction points Show how to address <i>some</i> breakdowns



Exercise: Storyboard 2
Revise your first storyboard to reflect ideas from the walkthroughs according to your revised design concept
Include at least two, ideally three breakdowns and three new interaction points



Video Prototype 2	
Copy video prototype #1 (or start a new one)	
Follow storyboard #2 Update the titlecards Identify where to add new interaction points Modify any remaining interaction points	



Final presentation	13 – 17	Mon. 5 Nov.
Oral presentation		
10 minutes:		
title slide		(Title includes system name, group #, your names)
user profile & personas		
design problem & design concept		
design diagram		
video prototype	(maximum 5 minutes)	
justification	(key improvements & why)	
conclusion		
5 minutes:		
class discussion		(group members ask questions)

On grading
<p>Some exercises have grades: story interviews (individual) storyboard & video prototype #1 storyboard & video prototype #2 * final presentation * final poster</p> <p>Other exercises are marked as having been done (but if exercises are done well, it can help your grade)</p> <p>* graded by external jury and us</p>

Hand in or upload:	due: Monday, 4 Nov
<p>Ipads Folders with unused tools materials</p> <p>Storyboards #1 and #2 Video prototype (4-5 minutes) Presentation slide Poster</p> <p>Course evaluations (anonymous)</p>	

Final reminders
<p>To be graded by a jury: Final presentation with Video Prototype 2 Final poster</p> <p>Hand in or upload Ipad Design Folder with supplies Paper folder with filled in handouts Physical mock-ups</p> <p>Remember: 10-minute talk 5 minutes for questions</p> <p>Fill out the final evaluation form</p>