Personas and Prototyping

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Personas

Scenarios

Lo-fi prototyping

Hi-fi Prototyping

PERSONAS

WHO IS THE USER?

"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 interesting 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

Personas are "hypothetical archetypes inspired by user research to ground design discussions"

Cecilia, librarian

Mike, experienced PhD student

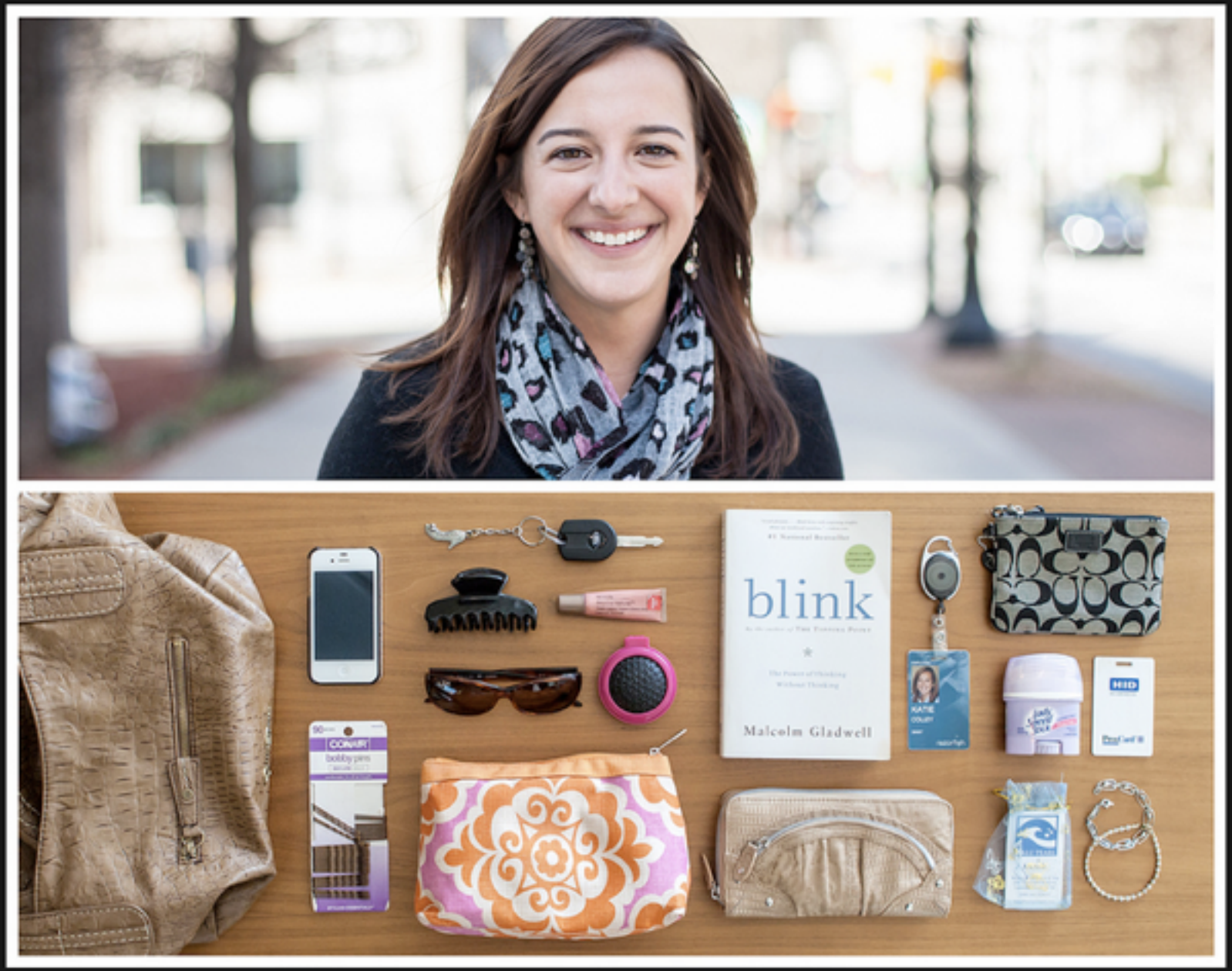
Joe Bloggs, first year MIMS

Tajel, undergrad doing work study

Kivio Users

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

http://wiki.fluidproject.org/display/fluid/Persona+Format



Katie Diptych

Personified – By Jason Travis - http://www.flickr.com/photos/jasontravis/sets/72157603258446753/

Troy Diptych

Personified – By Jason Travis - http://www.flickr.com/photos/jasontravis/sets/72157603258446753/

PERSONAS ACTIVITY

COOPER'S ADVICE

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

PRUITT & GRUDIN'S ADVICE

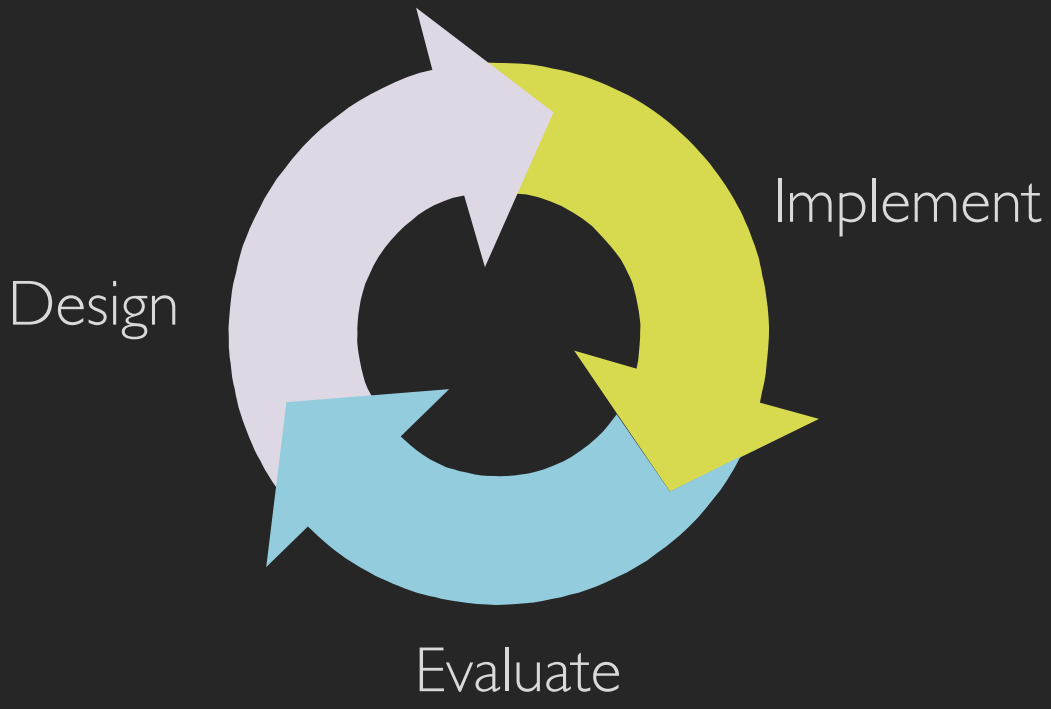
Personas can be based on market research, contextual inquiry and design ethnography

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

PROTOTYPING AND ITERATION

Test as many ideas as possible

Formative versus Summative Evaluation

Prototyping

FORMATIVE vs SUMMATIVE EVALUATION

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.

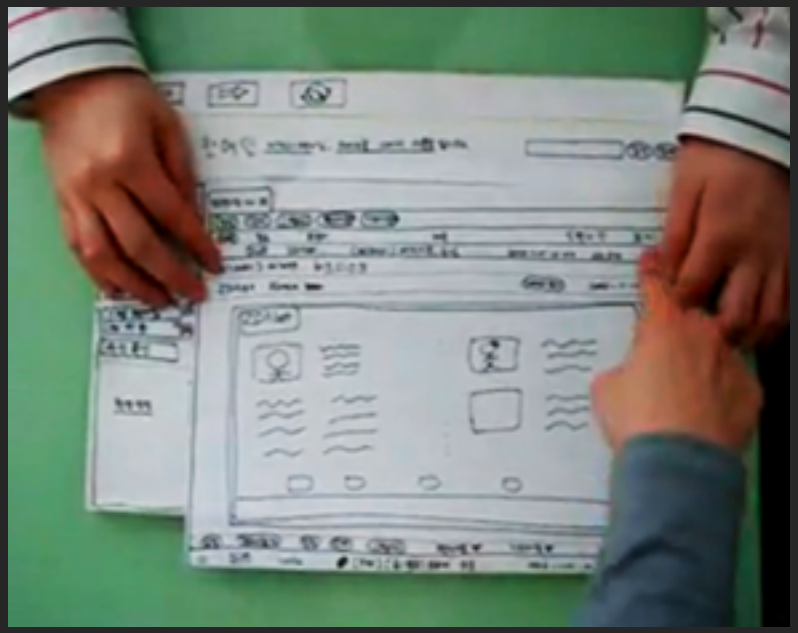
LOW FIDELITY PROTOTYPING

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



http://graphicdesignblog.com.au/wp-content/uploads/2009/11/paperprototyping.jpg

LOW FIDELITY TECHNIQUES

Scenarios

Storyboards

Design Sketch

Paper flipbook

Cardboard/Foam Mock-up

SCENARIOS

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

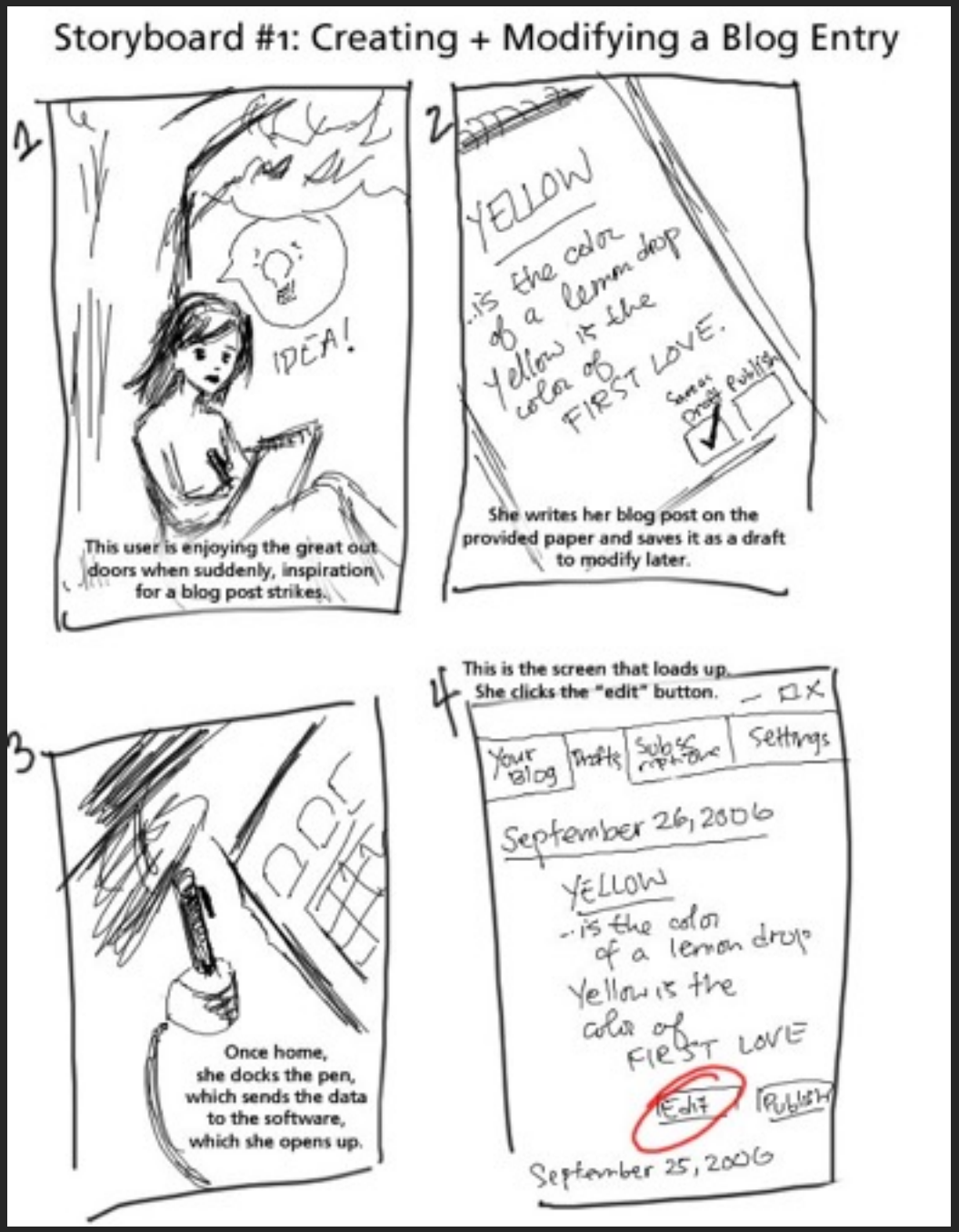
Text paragraph

Video

TEXT PARAGRAPH

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

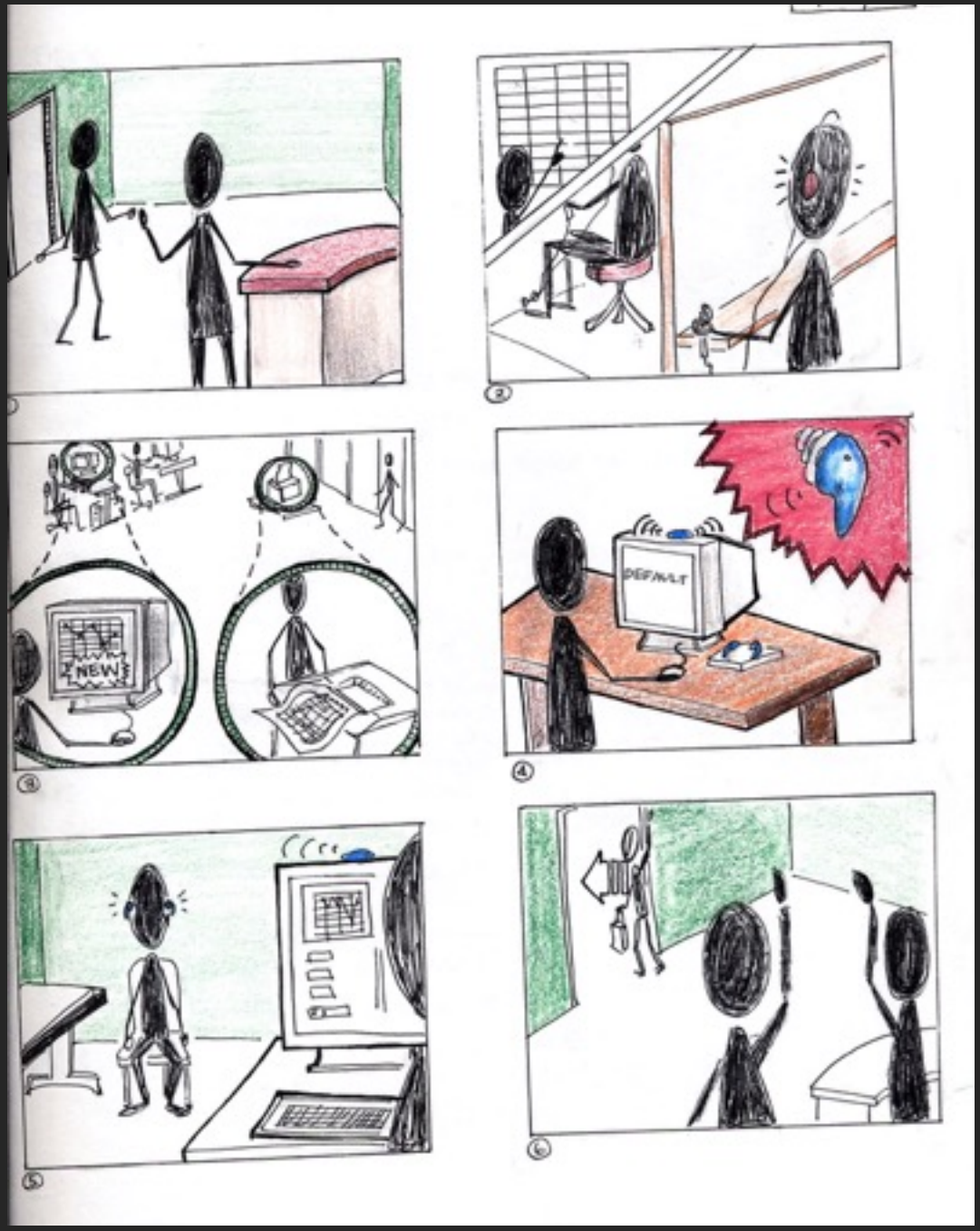


Source: http://vis.berkeley.edu/courses/cs160-fa06/wiki/index.php/InteractivePrototype-Group:4Cornersa

COMIC FORMAT/STORYBOARD

STICK FIGURE STORIES

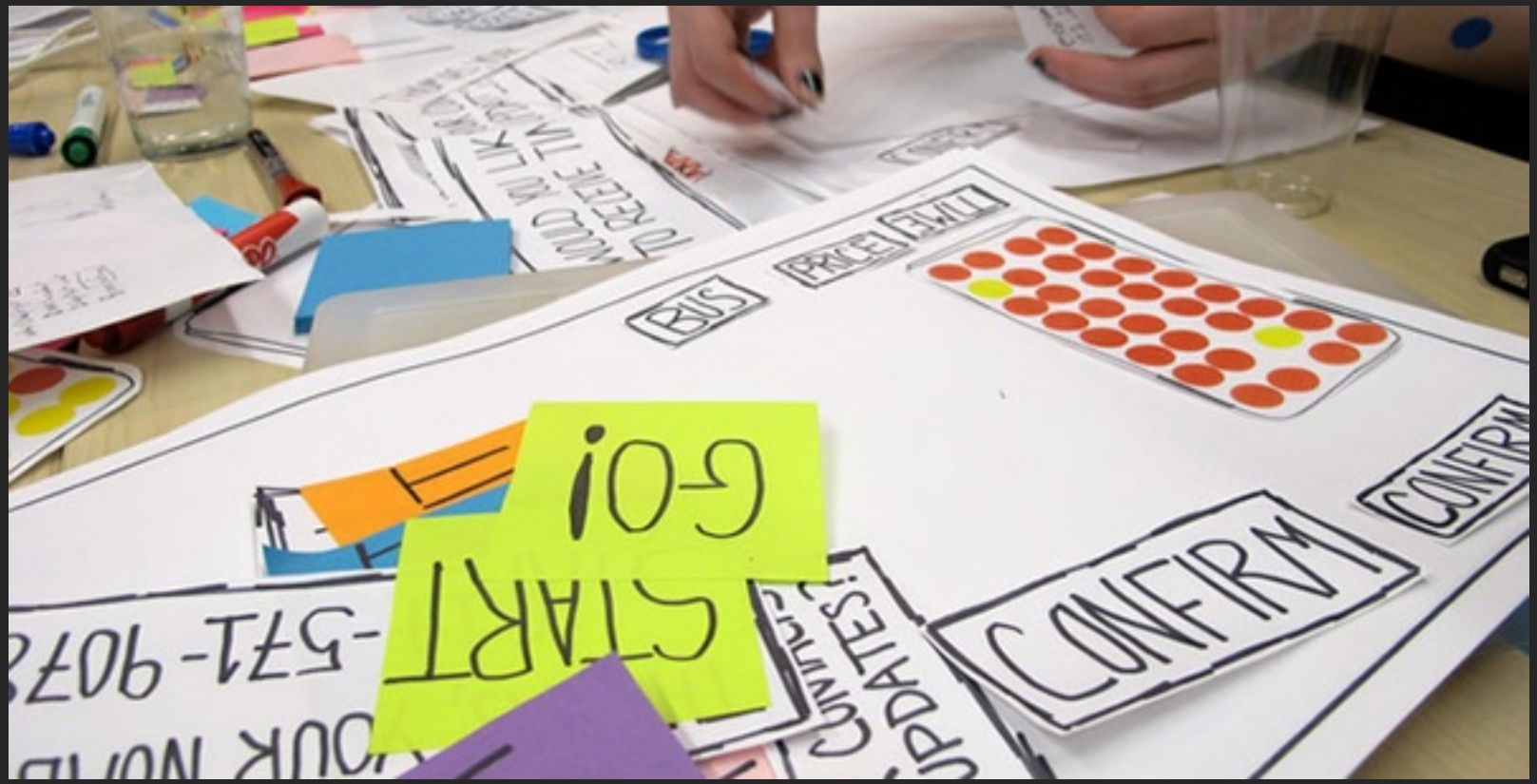
ACTIVITY



Source: http://best.me.berkeley.edu/~lora/images/process_photos/ses_storyboard.jpg

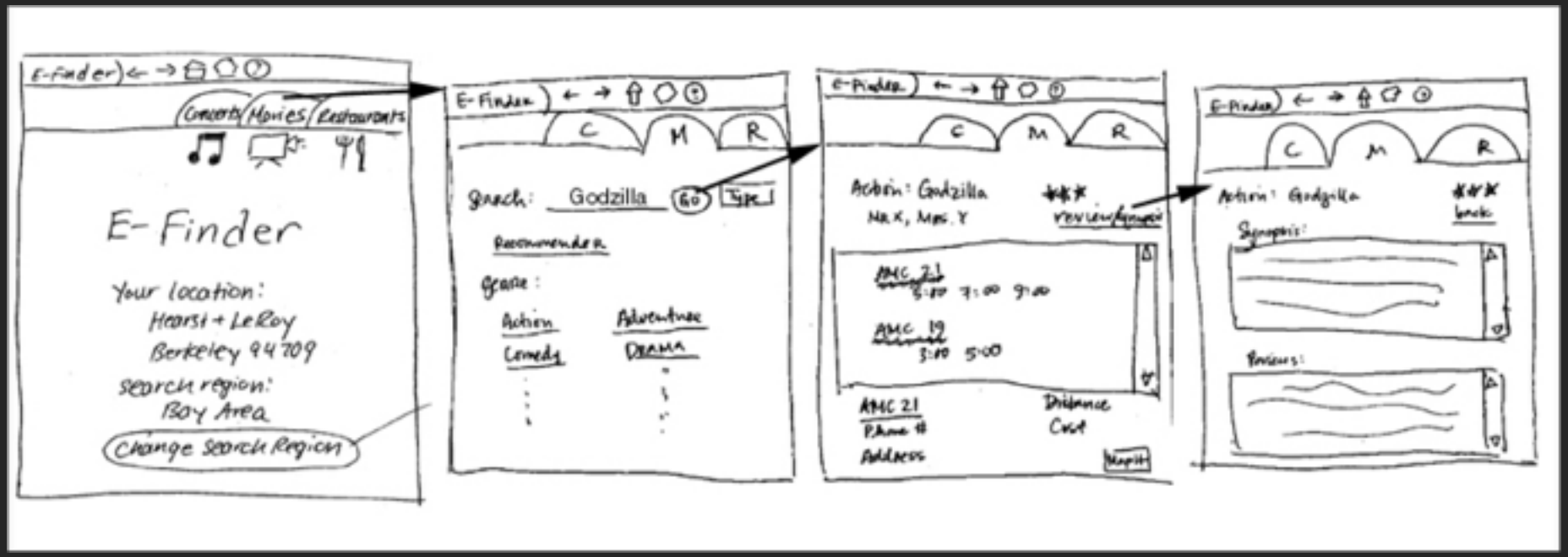
http://www.digitalwaxworks.com/uploads/blog/IDEO_iphone_prototype.jpg

Paper Prototyping



http://www.usabilitygeek.com

Paper Prototyping



slide: from Jake Wobbrock

Paper Prototyping

http://www.fastcodesign.com/1669513/using-origami-to-mock-up-ingenious-gestural-interfaces

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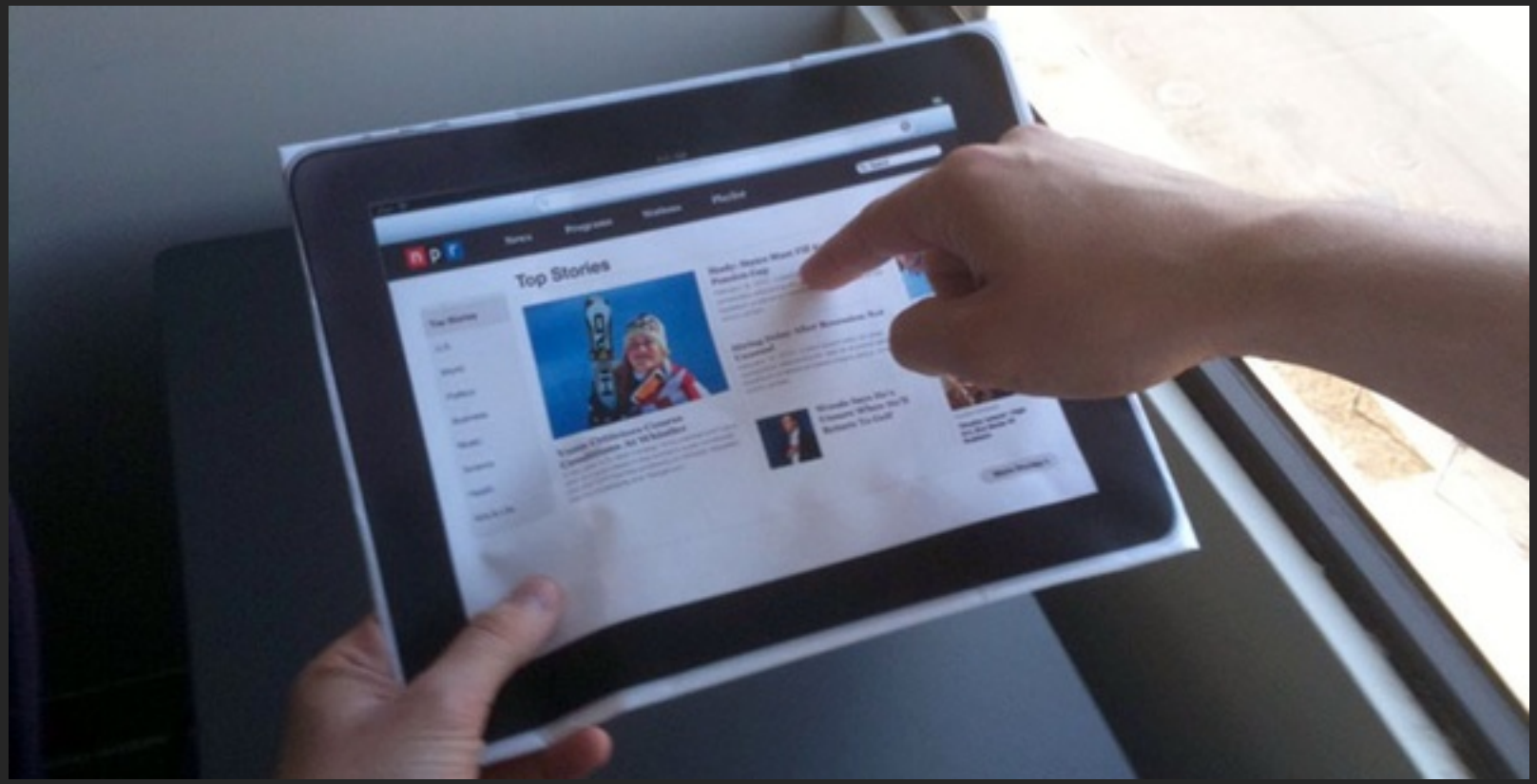
Paper Prototyping

http://www.matomeno.com

Paper Prototyping



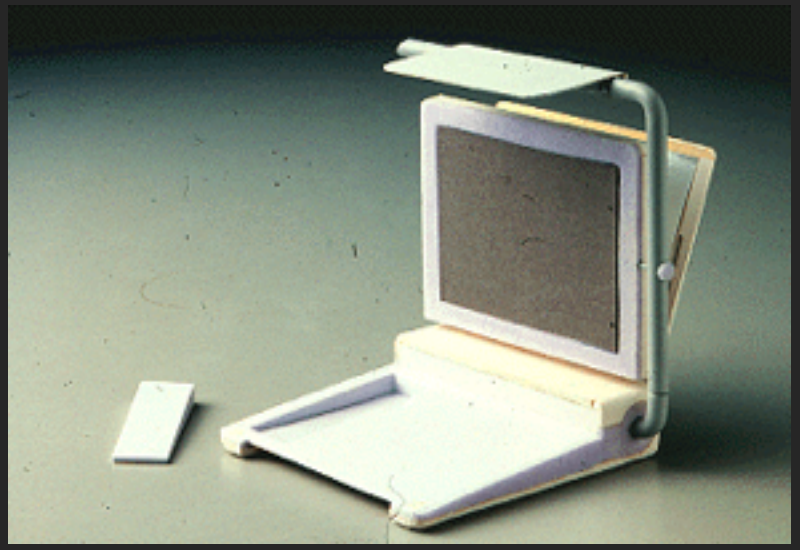
http://www.usabilitygeek.com

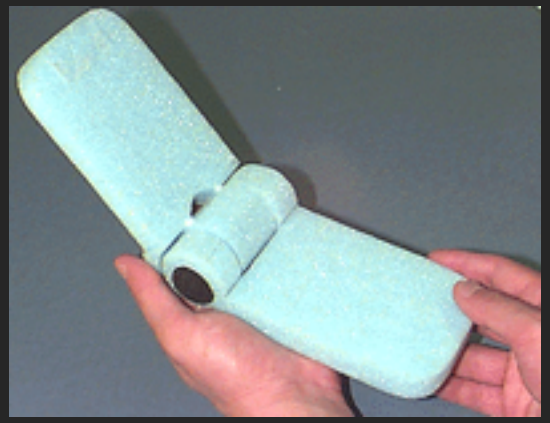
Paper Prototyping

http://www.usabilitygeek.com

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

Source: IDEO (adapted from Scott Klemmer)

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

WIZARD OF OZ TECHNIQUE

Human operator mimics advanced computational functionality

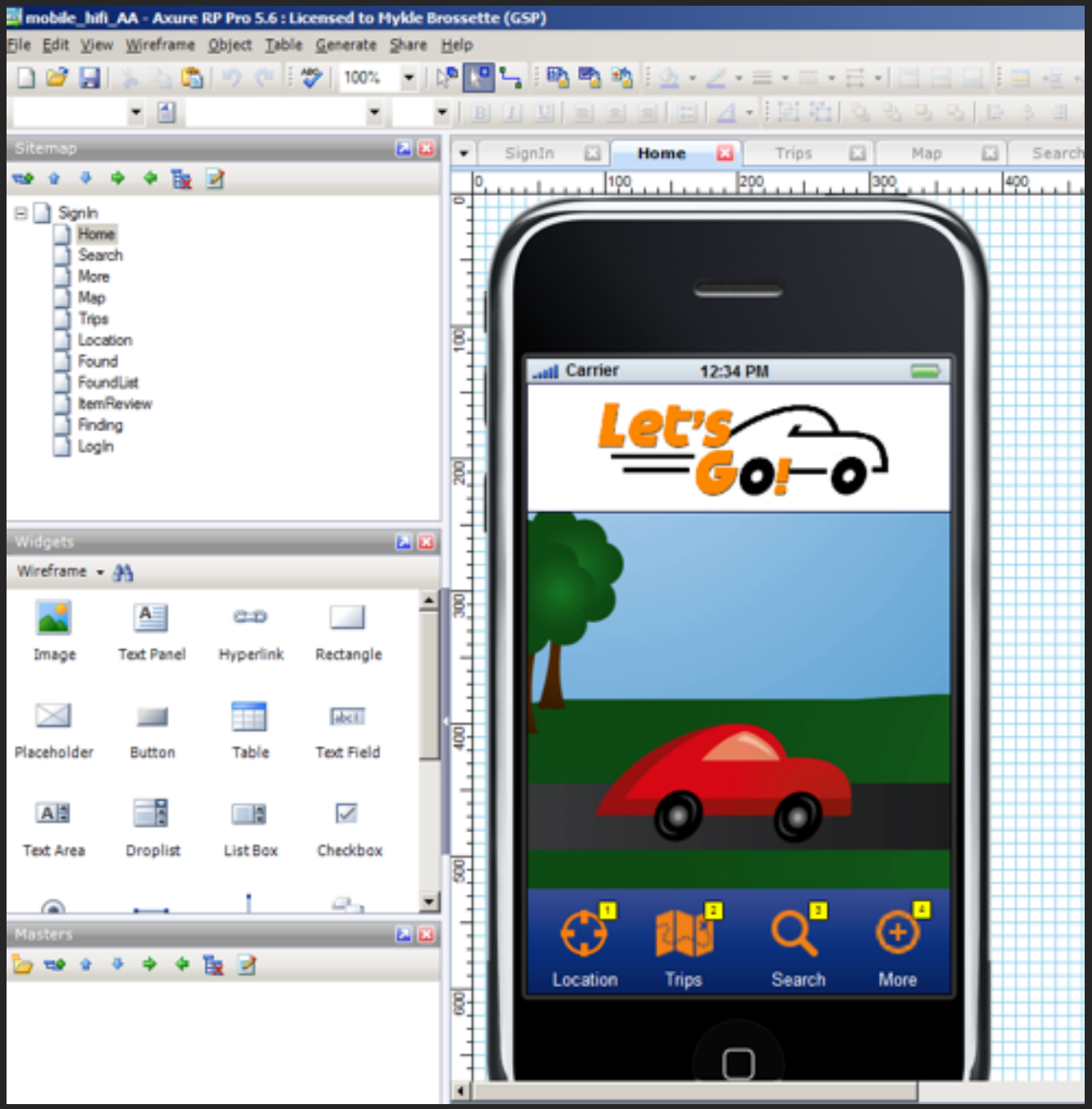
Speech recognition, gesture recognition, vision, etc.

Allows for testing advanced functionality without full implementation

http://hci.stanford.edu/courses/cs247/2009/handouts/oz_curtain.jpg

TOOLS FOR HIGH FIDELITY PROTOTYPING

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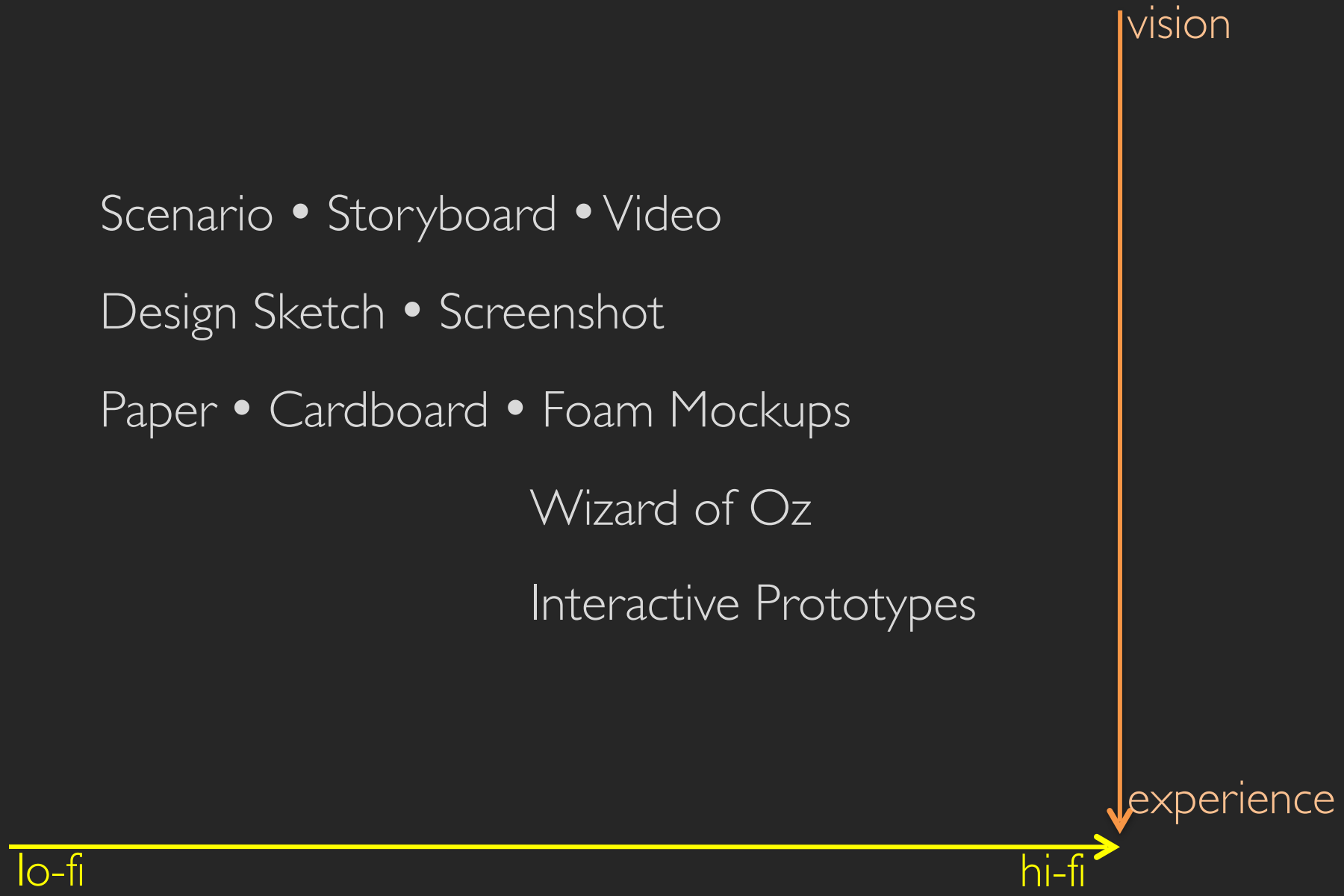
PROTOTYPING TECHNIQUES



KINDS OF PROTOTYPES

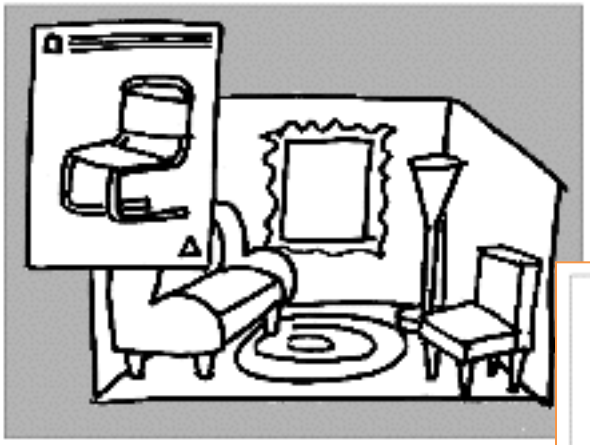
Role - "are built primarily to answer questions of what an artifact could do for a user"

Look and Feel - "explore and demonstrate options for the concrete experience"

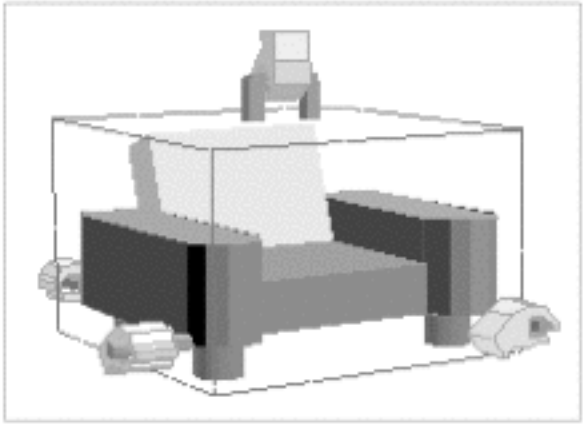
Implementation - "experiments… to demonstrate technical feasibility"

Integration - "verify that the design is complete and coherent, and to find synergy"

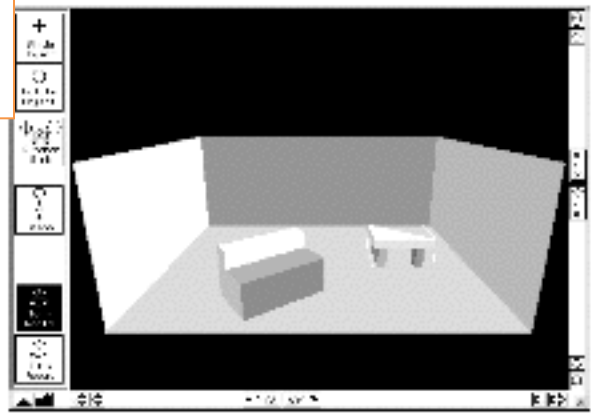
Source: Houde and Hill, "What do Prototypes Prototype"



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?

RIGHTS OF A PROTOTYPE

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”

CULTURES OF PROTOTYPING

"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"

CLASSIC VIDEO SCENARIO – APPLE KNOWLEDGE NAVIGATOR

1987

PROTOTYPING ACTIVITY

TESTING PROTOTYPES

Heuristic Evaluation

Focus Group Presentation

Cognitive Walkthrough

Think Aloud

Usability Testing

etc… more on this later!

PROTOTYPING, PILOTS AND DEVELOPMENT

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!