

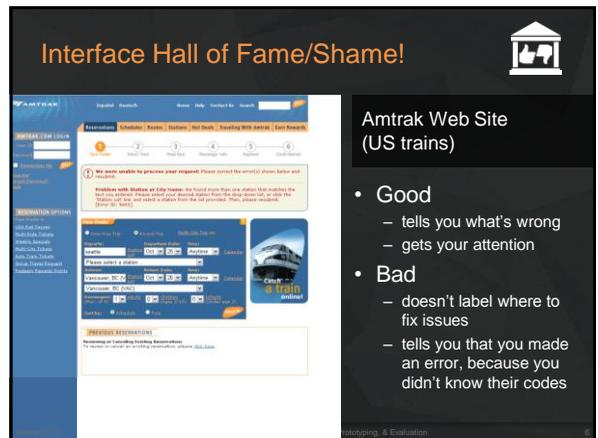
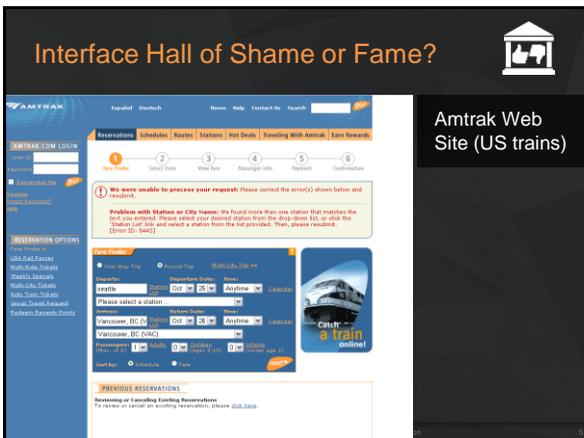
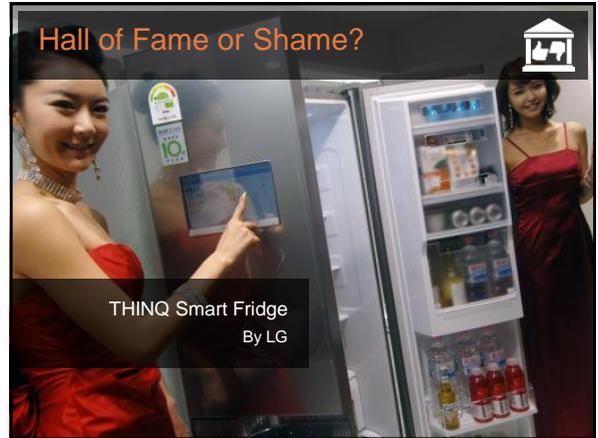
USER INTERFACE DESIGN + PROTOTYPING + EVALUATION

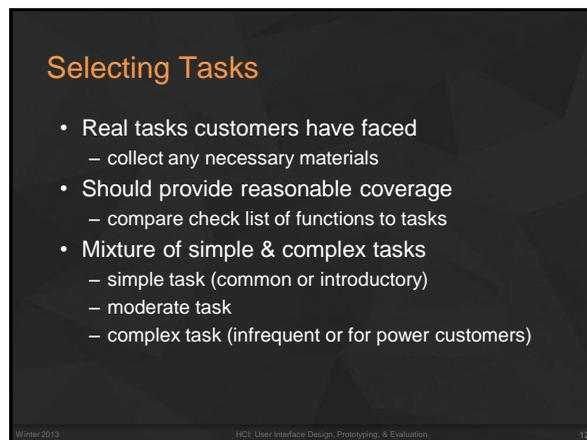
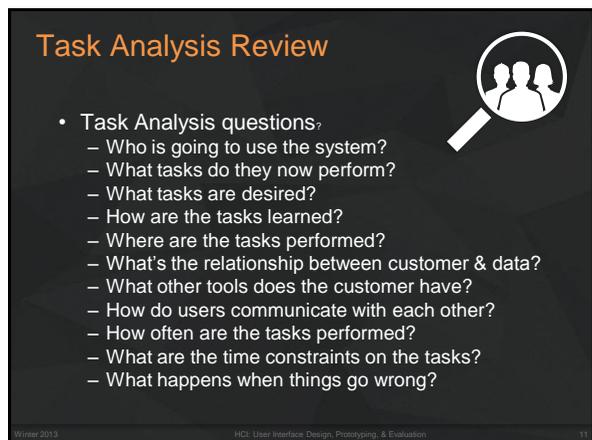
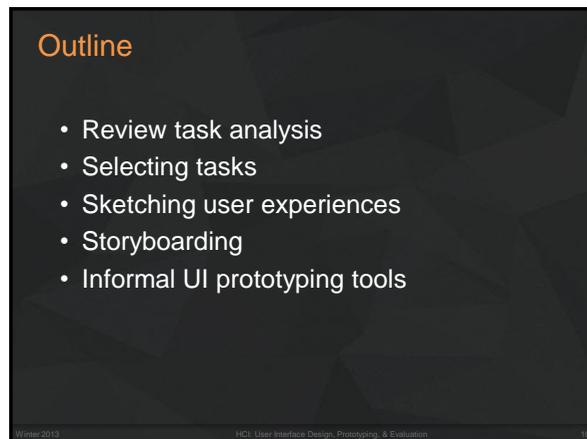
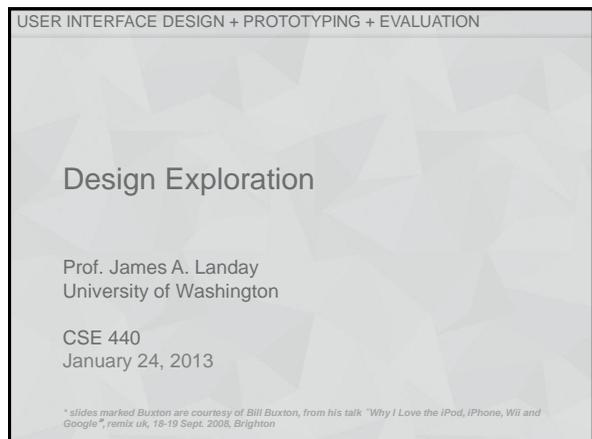
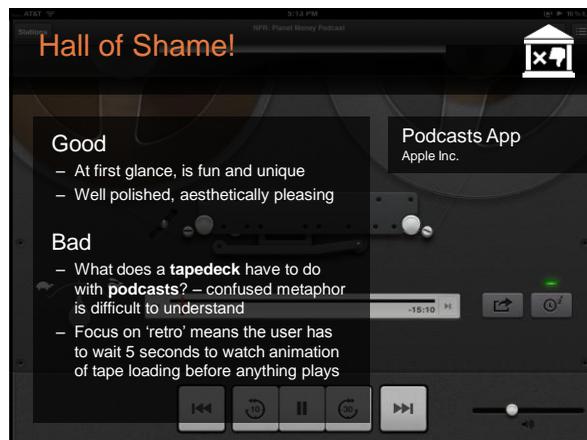
Design Exploration

Prof. James A. Landay
 University of Washington

CSE 440
 January 24, 2013

* slides marked Buxton are courtesy of Bill Buxton, from his talk "Why I Love the iPod, iPhone, Wii and Google", remix uk, 18-19 Sept. 2008, Brighton





What Should Tasks Look Like?

- Say what customer **wants to do**, but **not how**
 - allows comparing different design alternatives



What Should Tasks Look Like?

- Say what customer **wants to do**, but **not how**
 - allows comparing different design alternatives
- Be very specific – stories based on facts!
 - say who customers are (use personas or profiles)
 - design can really differ depending on who
 - name names (allows getting more info later)
 - characteristics of customers (job, expertise, etc.)
 - forces us to fill out description w/ relevant details
 - example: file browser story
- Some should describe a complete job
 - forces us to consider how features work together
 - example: phone-in bank functions

Using Tasks in Design

- Write up a description of tasks
 - formally or informally
 - run by customers and rest of the design team
 - get more information where needed

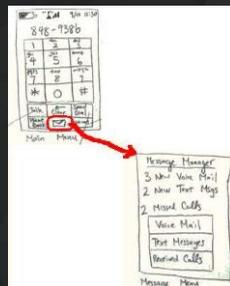
Manny is in the city at a club and would like to call his girlfriend, Sherry, to see when she will be arriving at the club. She called from a friend's house while he was on the subway, so he couldn't answer the phone. He would like to check his missed calls and find the number so that he can call her back.

Using Tasks in Design (cont.)

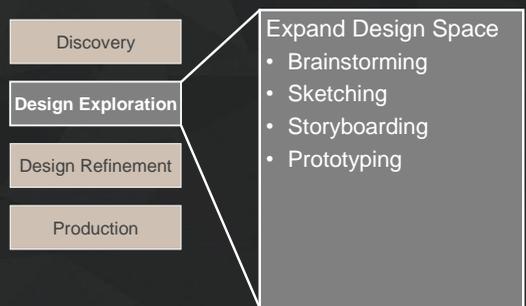
- Rough out an interface design
 - discard features that don't support your tasks
 - or add a real task that exercises that feature
 - major screens & functions (not too detailed)
 - hand sketched
 - at *least 30 sketches* on the current assignment!
- Produce scenarios for each task
 - what customer has to do & what they would see
 - step-by-step performance of task
 - illustrate using storyboards
 - sequences of sketches showing screens & transitions

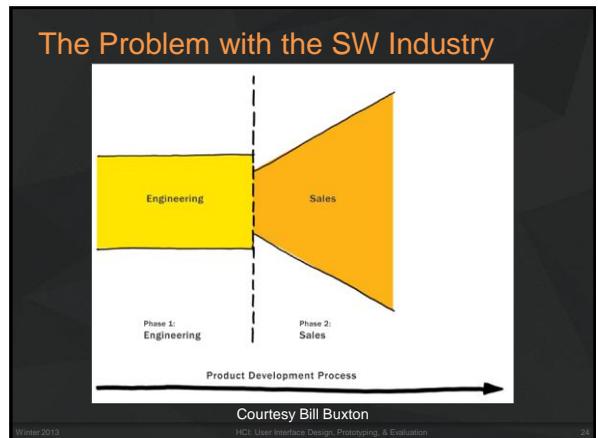
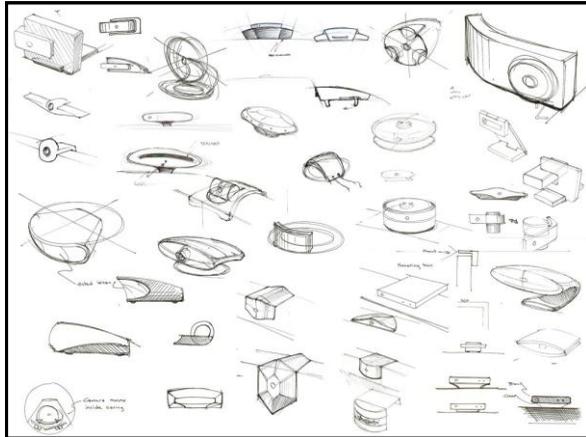
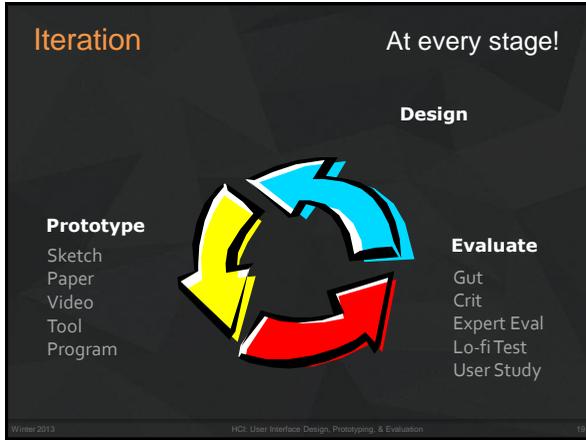
Scenarios (cont.)

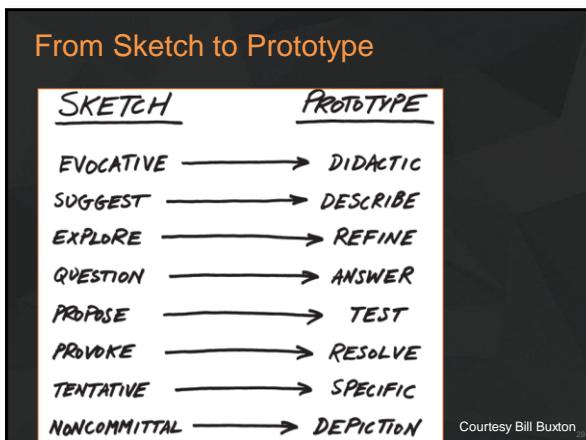
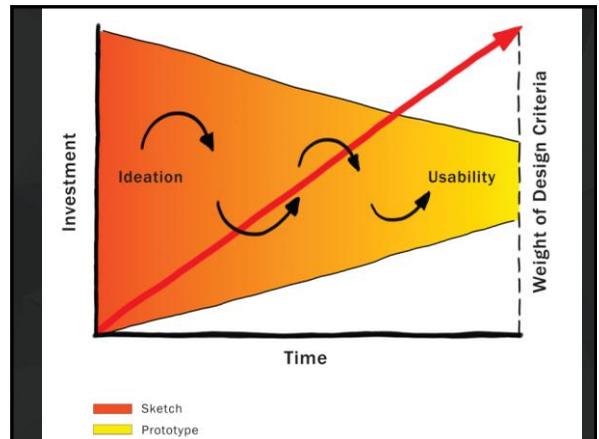
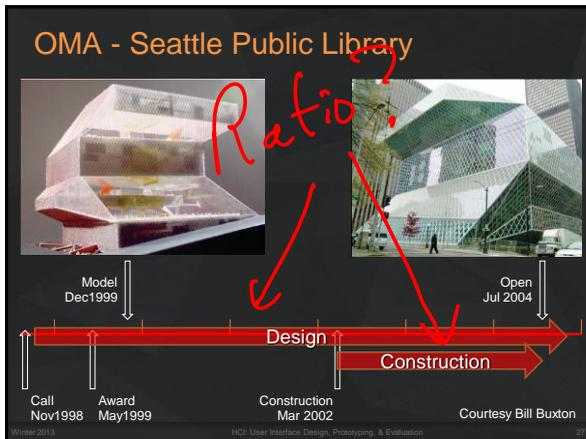
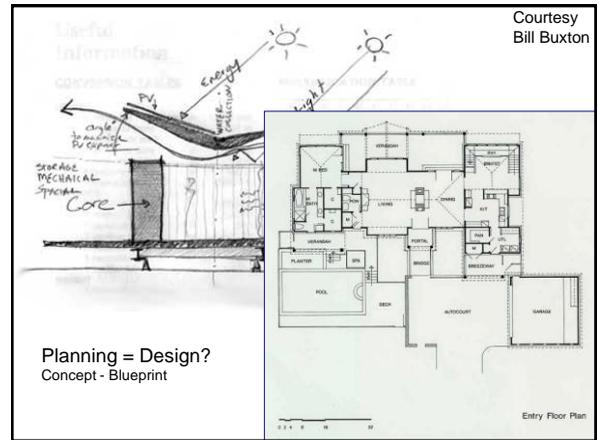
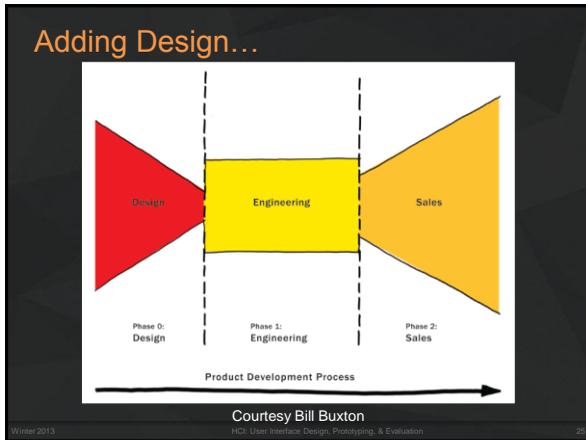
- Scenarios are *design specific*, tasks aren't
- Scenarios force us to
 - show how various features will work together
 - settle design arguments by seeing examples
 - only examples → sometimes need to look beyond
- Show users storyboards
 - get feedback



Design Process: Exploration







- ### The Anatomy of Sketching
- Quick / Timely
 - Inexpensive / Disposable
 - Plentiful
 - Clear vocabulary. You know that it is a sketch (lines extend through endpoints, ...)
 - No higher resolution than required to communicate the intended purpose/concept
 - Resolution doesn't suggest a degree of refinement of concept that exceeds actual state
 - Ambiguous
- Courtesy Bill Buxton



Sketching in Interaction Design

- Analogous to traditional sketching
- Shares all of the same key attributes
- More feel than look
- Must accommodate time & dynamics
- Phrasing

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Design as Choice

Elaboration Reduction

Courtesy Bill Buxton Laseau (1980)

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Exploration of Alternatives

... a designer that pitched three ideas would probably be fired. I'd say 5 is an entry point for an early formal review (distilled from 100's). ... if you are pushing one you will be found out, and also fired. ... it is about open mindedness, humility, discovery, and learning. If you aren't authentically dedicated to that approach you are just doing it wrong!

Alistair Hamilton
VP Design
Symbol Technologies

Courtesy Bill Buxton 35



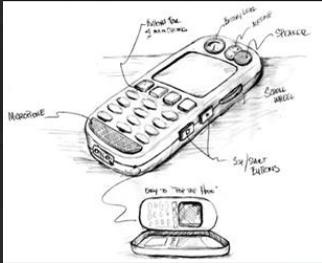
Experience Design

- Draw my phone
- Draw my phone's interface
- Draw the experience of using my phone
- Which is the true object of design?

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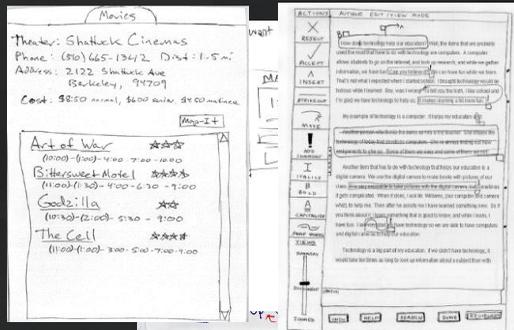
Minimal Detail

Include only what is required to render the intended purpose or concept



People think focusing is about saying "yes." But...
 "Focusing is about saying no." – Steve Jobs

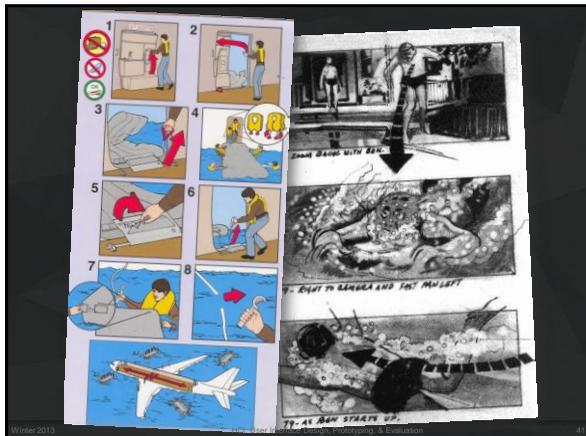
Sketches & Storyboards



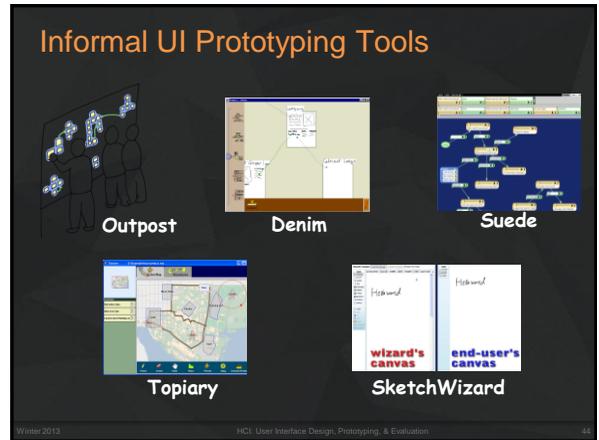
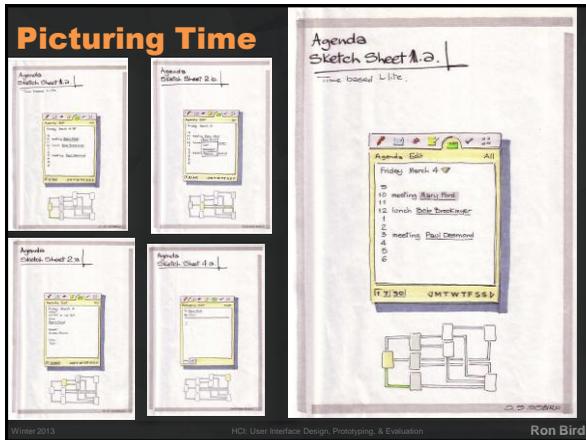
Sketches & Storyboards



- Where do storyboards come from?
 - film & animation
- Give you a “script” of important events
 - leave out the details
 - concentrate on the important interactions



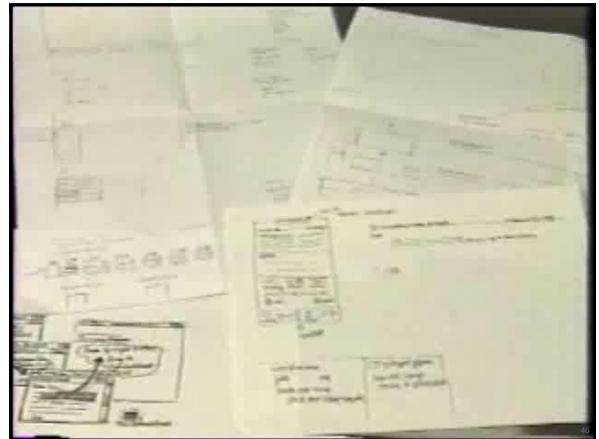
Not storyboard – this shows design details not a scenario



Informal UI Prototyping Tools

- Support advantages of low-fi paper prototypes
 - brainstorming
 - consider different ideas rapidly
 - do not require specification of details
 - incomplete designs
 - need not cover all cases, just illustrate important examples
- Add advantages of electronic tools
 - evolve easily
 - support for “design memory”
 - transition to other electronic tools
 - allow end-user interaction

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Designers' Outpost:
 A Tangible Interface for Designing Information Architectures

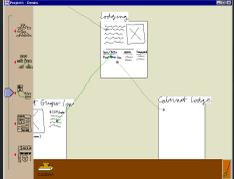
- Combines physical & virtual
 - physical post-its, virtual feedback
- Supports existing practice
 - affordances of paper
 - collaboration
 - large, persistent representation
- Adds advantages of e-media
 - editing, reuse, distribution
 - hand-off later to other tools

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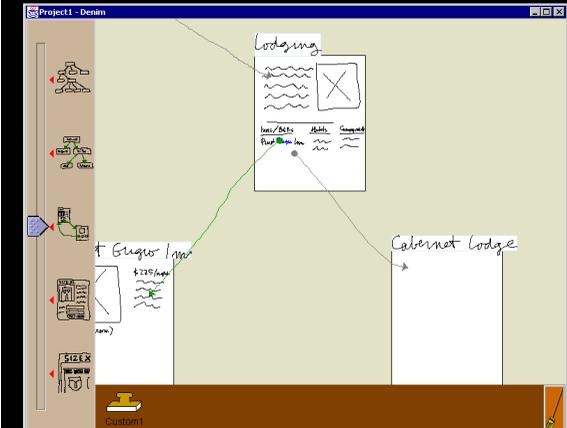


DENIM: Designing Web Sites by Sketching

- Early-phase navigation & interaction design
- Integrates multiple views
 - site map – storyboard – page sketch



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Project1 - DENIM

Looking

Sugar / Map

Cabernet Lodge

Custom1

Low-fi Prototyping & Testing



Travelshare

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Summary

- Selecting tasks ?
 - real tasks with reasonable functionality coverage
 - complete, specific tasks of what customer wants to do
- Sketching allows exploration of many concepts in the very early stages of design
- As investment goes up, need to use more and more formal criteria for evaluation
- Informal prototyping tools bridge the gap between paper & high-fi tools

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Next Time

- Lecture
 - Human Abilities
- Readings
 - Ch. 2: The Human Information Processor, from The Psychology of Human-Computer Interaction By Stuart K. Card, Thomas P. Moran, & Allen Newell, 1983, pp. 23-83

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