



Prototyping

Lecture 14, Week 8

February 25, 2015

CSC318HIS

Velian Pandeliev

Announcements

- Assignment 3 was due Monday at 6 pm
- Phase 3 is due Friday Feb. 27 at 6 pm**
- Assignment 4 is due Mar. 6 at 6 pm
- Phase 3 extension?
- Elevator pitch: problem, persona, scenario

Prototype, Wireframe, Mockup?



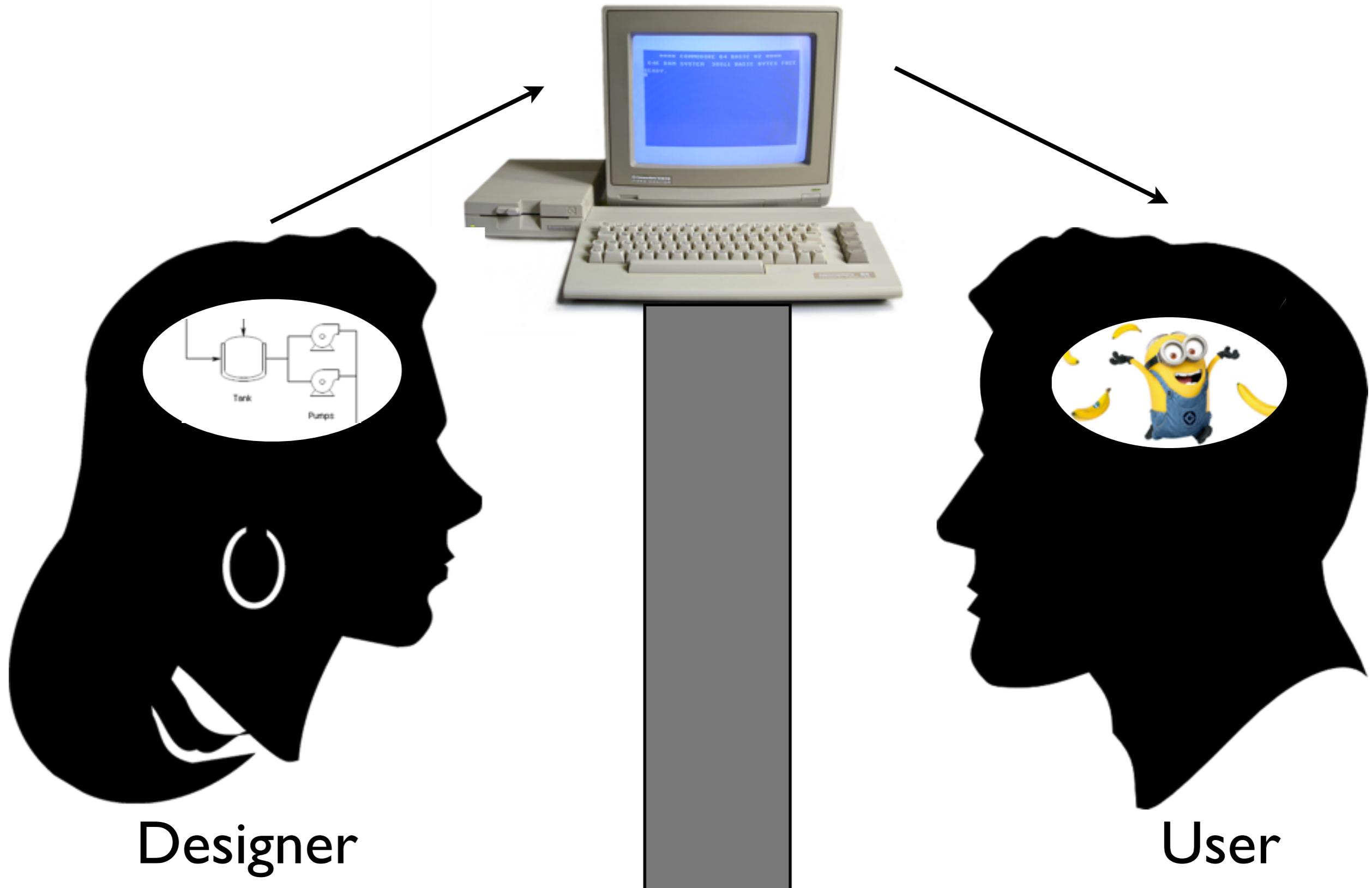
Prototyping Tools

- InVision (FREE)
- Demonstrate (FREE)
- Prototyping on Paper (POP) (FREE)
- Proto.io (15-day trial)
- Flinto (30-day trial)
- Balsamiq (trial)
- Keynotopia (expensive)

Conceptual Models

Conceptual models

System





"I'm going to keep saying it until it understands Scottish."



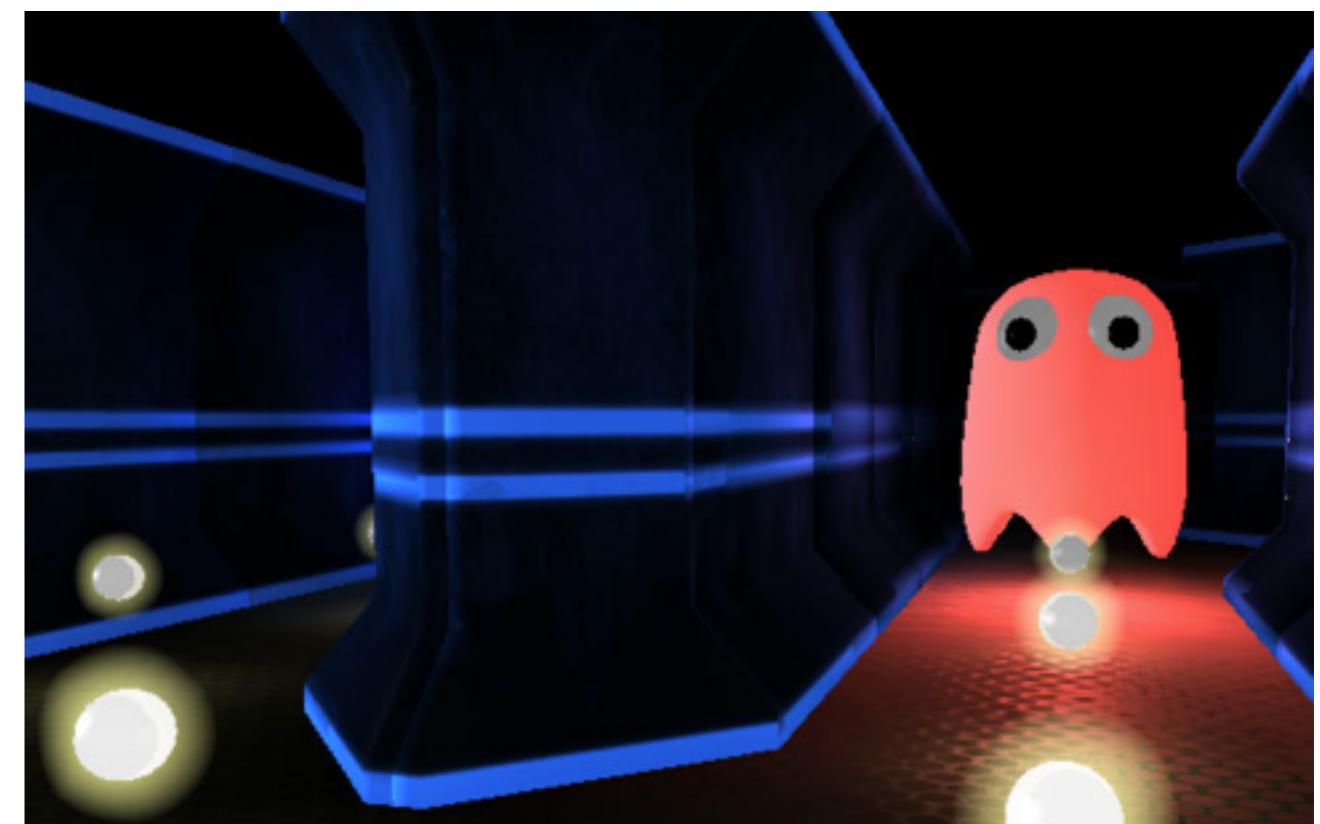
"Just wait for it to speak..."

User models and game design

Games are structured, carefully designed interactive experiences.

*"The most important model is the one in the player's head.
The game itself is a compiler for that model."*

Will Wright, lead designer of SPORE & SIMS (2009)



Conceptual model components

A conceptual model is built from:

- **Affordances** (what things can do) and **signifiers** (what things look like they can do)
- **Constraints** (what things are made not to do)
- **Mappings** (how actions relate to results)
- **Metaphors** (how things relate to user's prior knowledge)
- **Standards** and **norms** (how things should be)
- **Instructions** (what users are told to do)
- **Interactions** (what users learn by interacting with the system)

Affordances

"Affordances are the actions possible by a specific agent on a specific environment."

[Gibson 1977]

What can we do with this thing?



Affordances

Don Norman [1990] talks about **perceived affordances** in design.

Every pixel affords clicking.

But, "Does the user **perceive** that clicking on that location is a meaningful, useful action to perform?"

[Don Norman 2008]



Affordances



4GIFs
.com

Signifiers

Signifiers are "*clues to understanding the product or service, some sign of what it is for, what is happening and what the alternative actions are.*" [Norman 2008]



Hyperlink - Wikipedia, the free encyclopedia

en.wikipedia.org/wiki/Hyperlink ▾

In computing, a **hyperlink** is a reference to data that the reader can directly follow either by clicking or by hovering or that is followed automatically. A **hyperlink** points to a whole document or to a specific element within a document. Hypertext is text with **hyperlinks**.

[Types of links](#) - [Hyperlinks in various technologies](#) - [How hyperlinks work in HTML](#)

Signifiers vs Affordances

Affordances are **fixed** and somewhat incidental.

"Not necessarily perceived or knowable, they simply exist." [Gibson 1977]

Signifiers are **deliberate**: designers use them to highlight perceived affordances for the user.

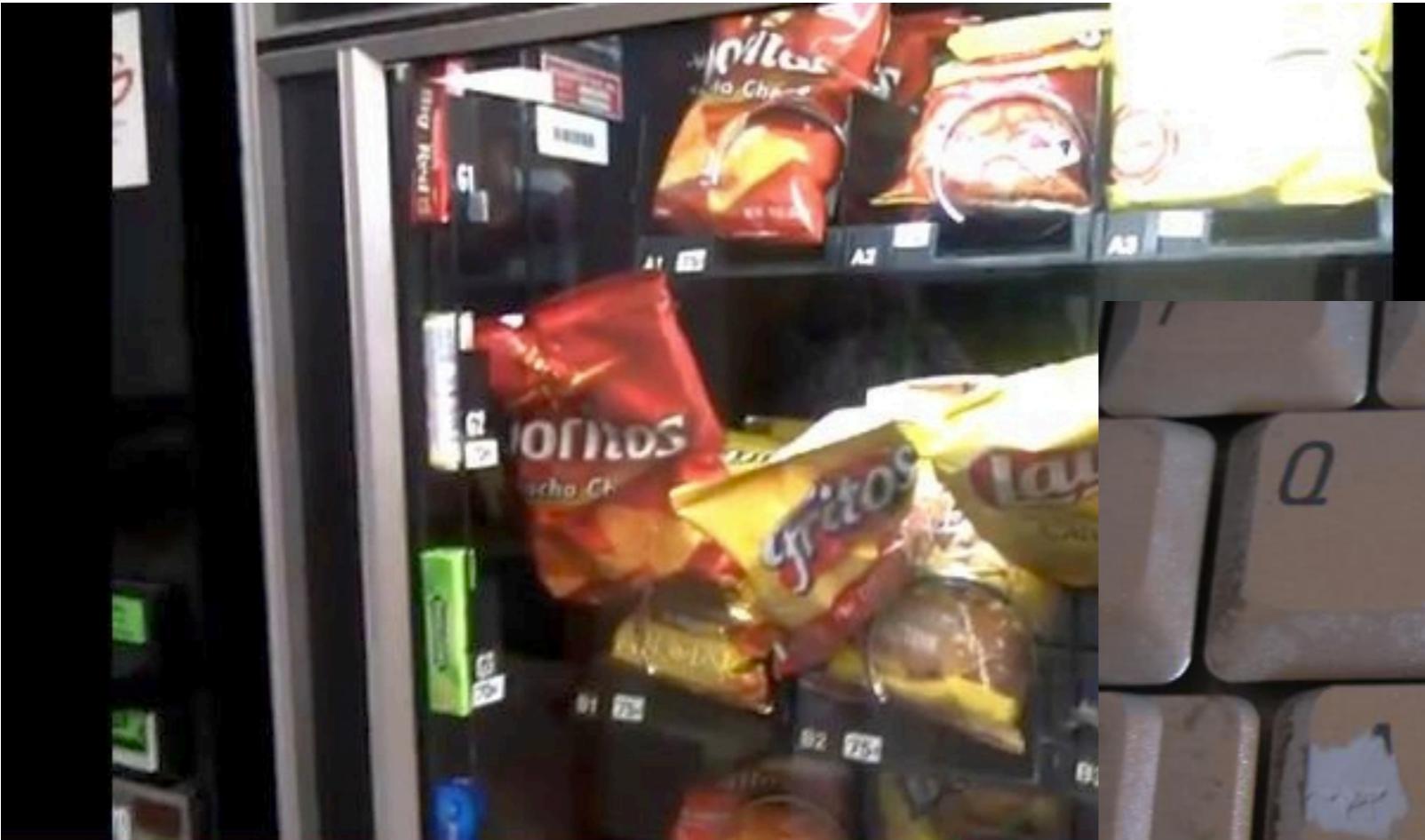
Signifiers separate the important **information** (object is for sitting) from the **noise** (object is throwable, breakable, tippable, burnable, etc.)

Well?

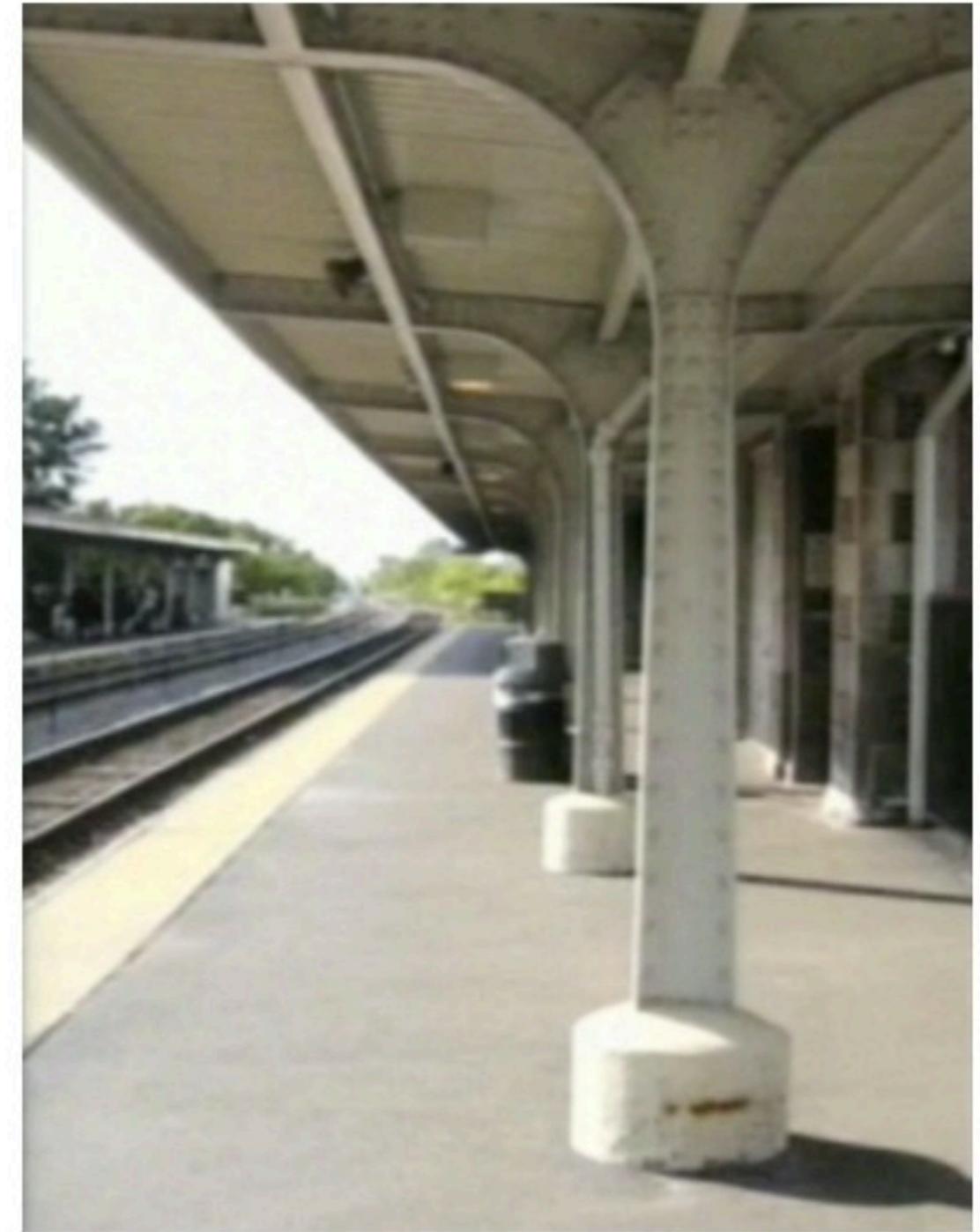


Incidental Signifiers

Not all signifiers are deliberate.



Social Signifiers



Wrong Signifiers



Questions?

This lecture is based on slides and content by:

ILONA POSNER

Materials from:

Interaction Design: Beyond Human-Computer Interaction. Rogers, Sharp and Preece. 2011

References:

creately.com

blackbookoperations.com

Paper prototyping. Snyder, 2003.

The psychology of everyday things. Don Norman.

The theory of affordances. Gibson, 1977.

Catalog of unfindable objects. Jacques Carelman.