

by Mike Mandel, Making Good Time

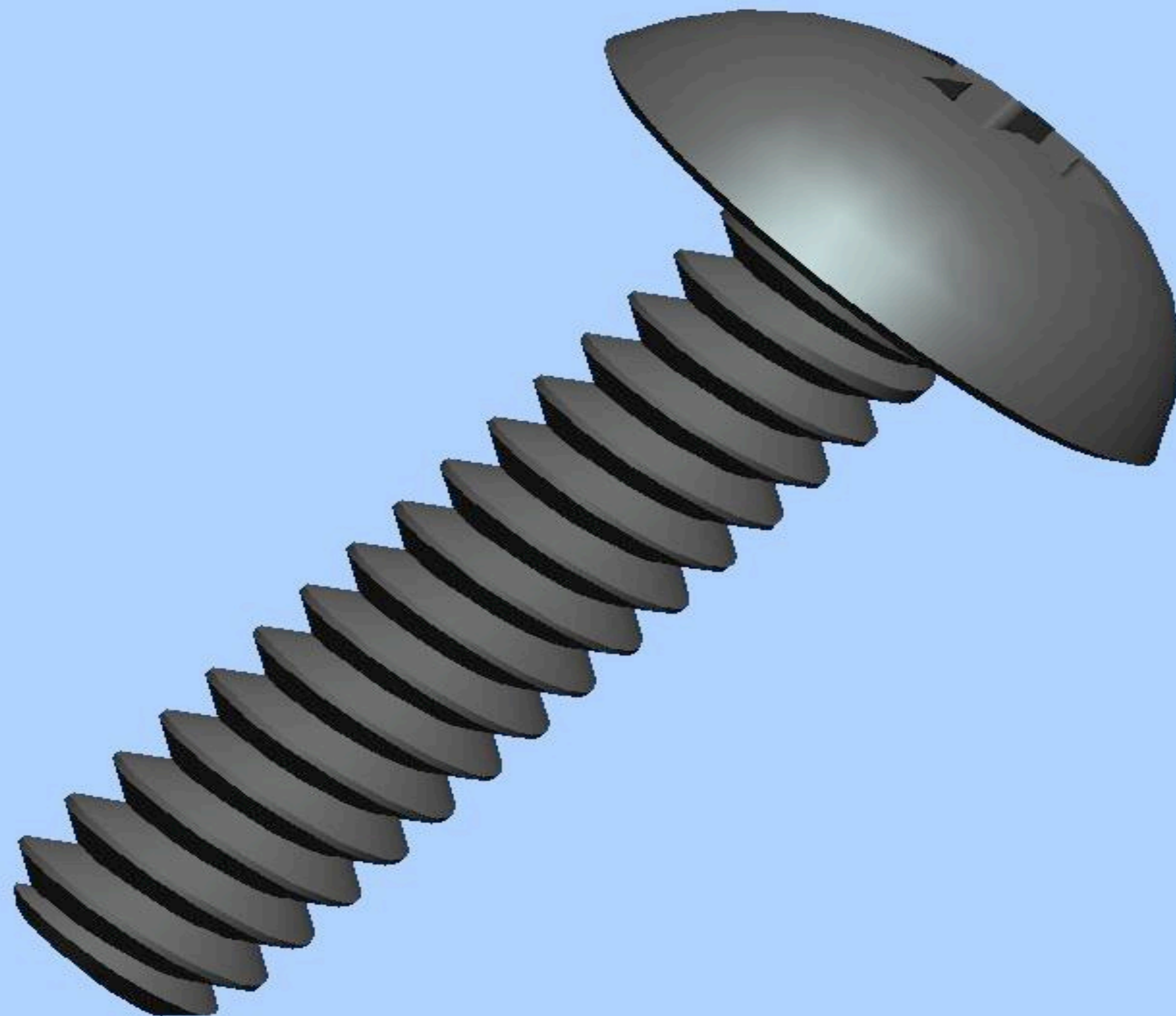
Software Tools

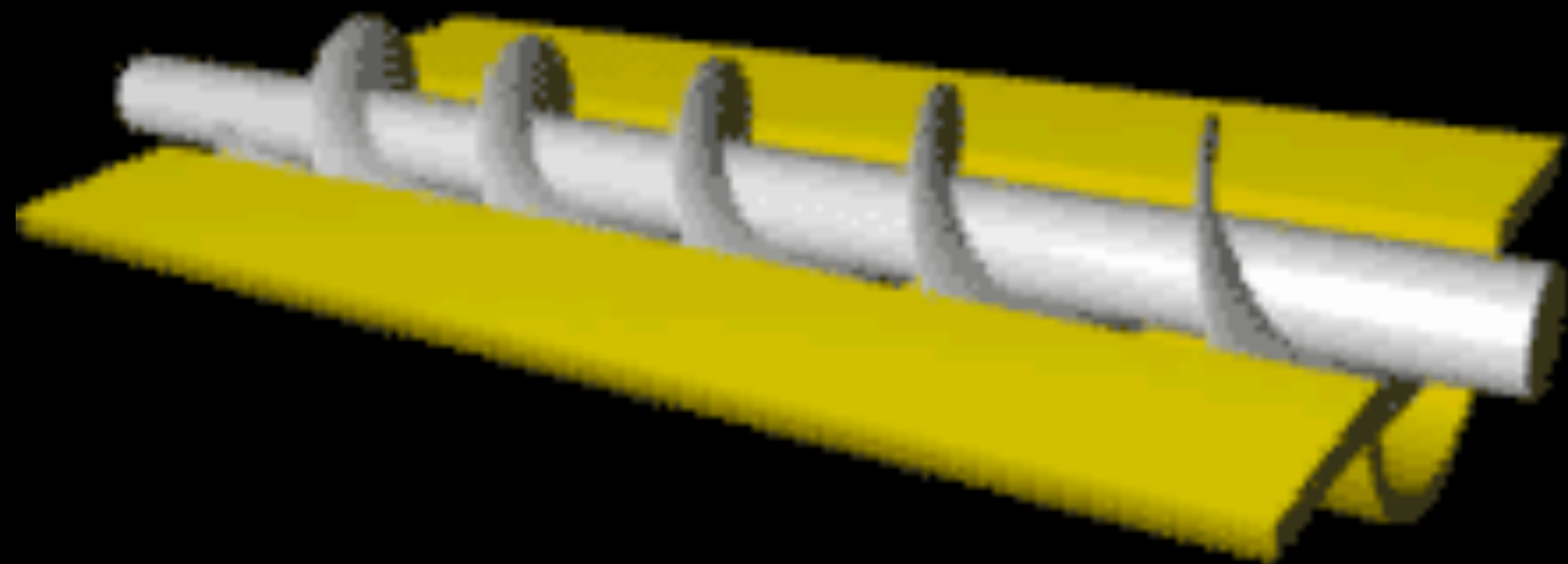
SCOTT KLEMMER

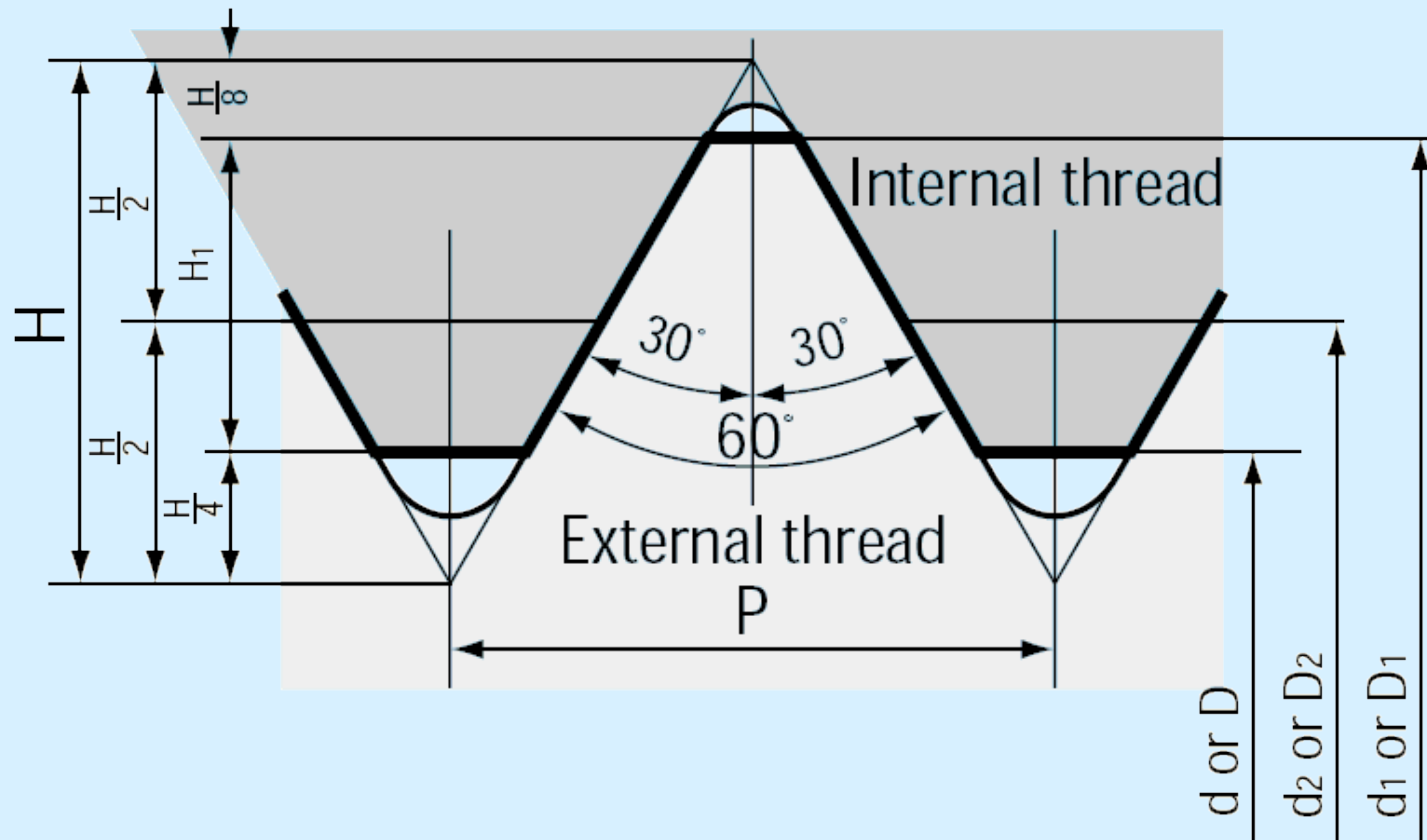
FALL 2010

cs147.stanford.edu









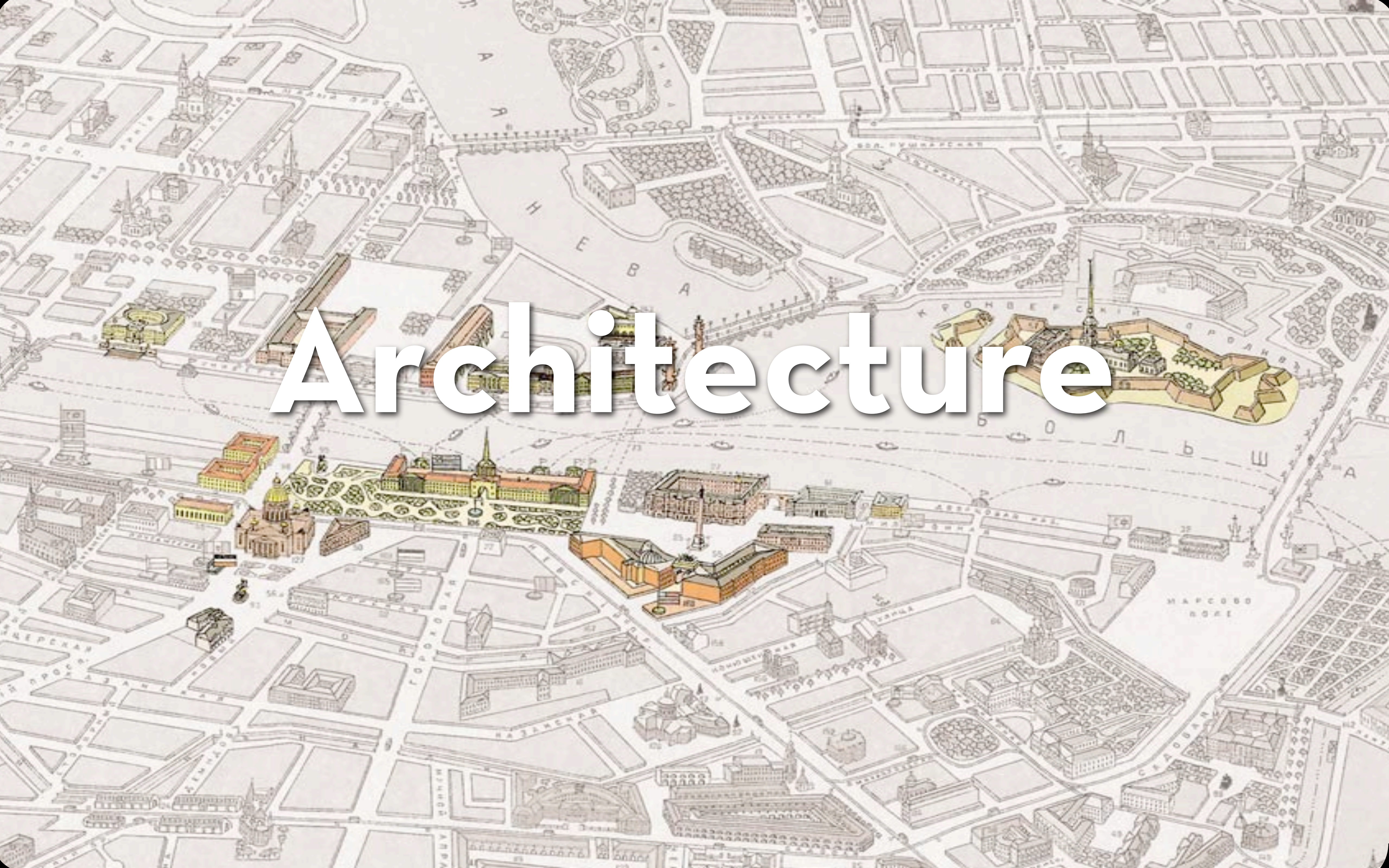
Standards Change *Where*
Innovation Happens

What Toolkits Are



Library

Architecture



Why use toolkits?

What should tools *do*?

Tools Can Yield Better

Tools Can Lower Maintenance Costs

Arose from HCI Research

Different Tools for Different Genres

Different Tools for Different Stages

Brainstorming

Flash

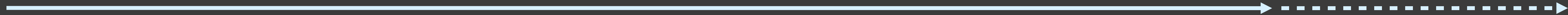
IDE

Paper

UI Builder

Deployment

**Analytics &
Revision**



Tools Can Discourage Change

Moving Targets: When Platforms Change

FOR USERS

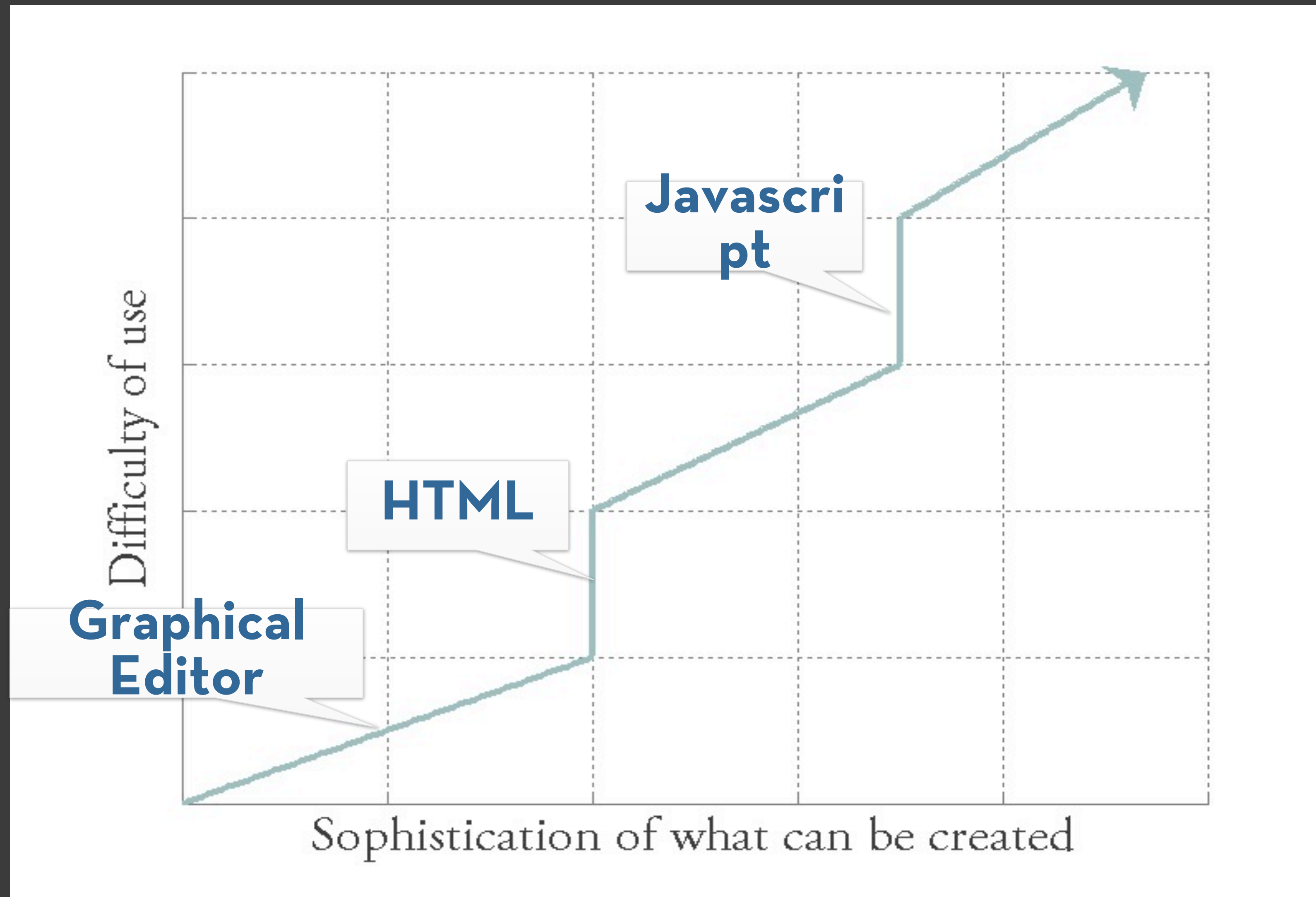
Predictability

FOR DEVELOPERS

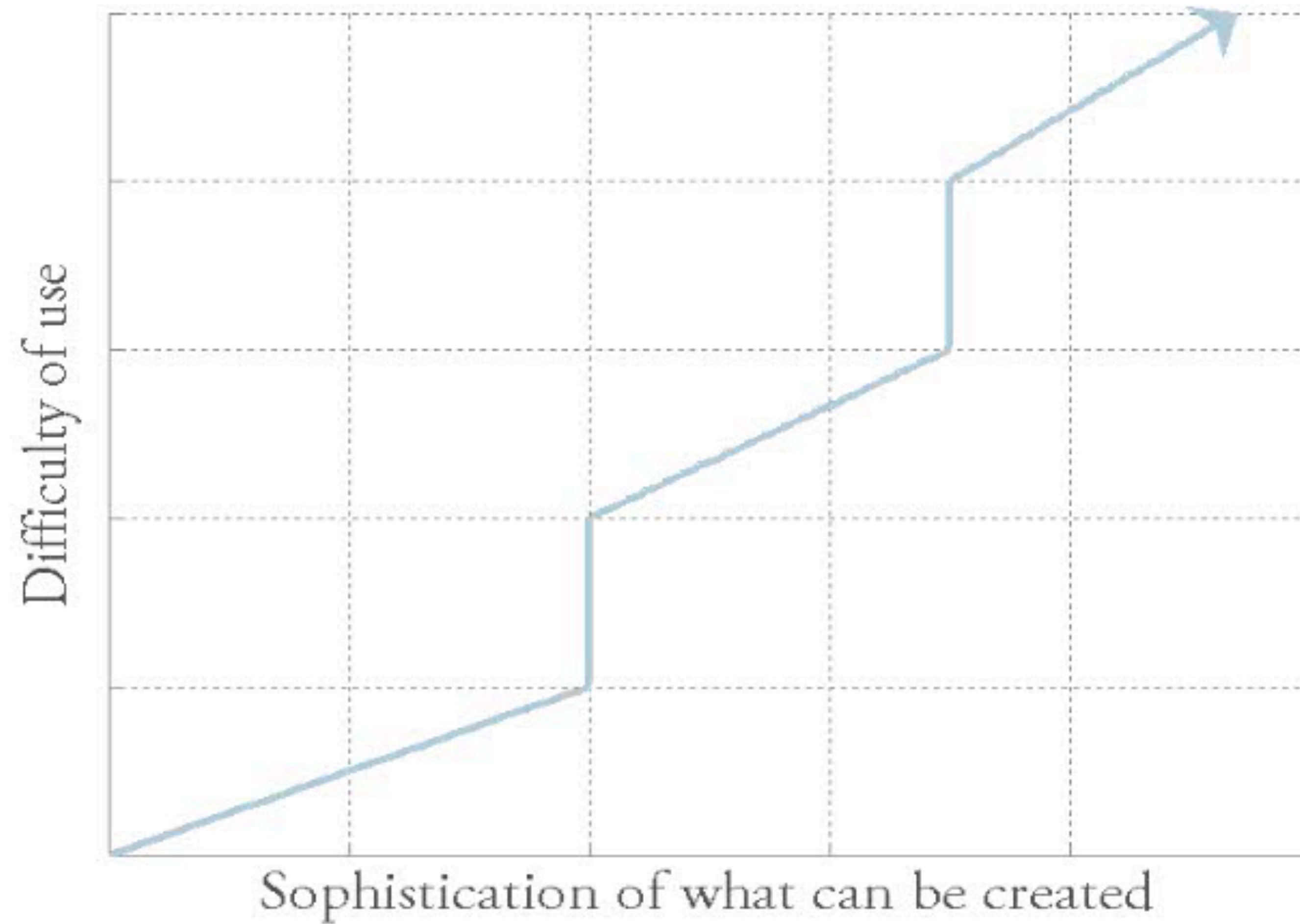
Path of Least Resistance

Programmers are *People*
(really)

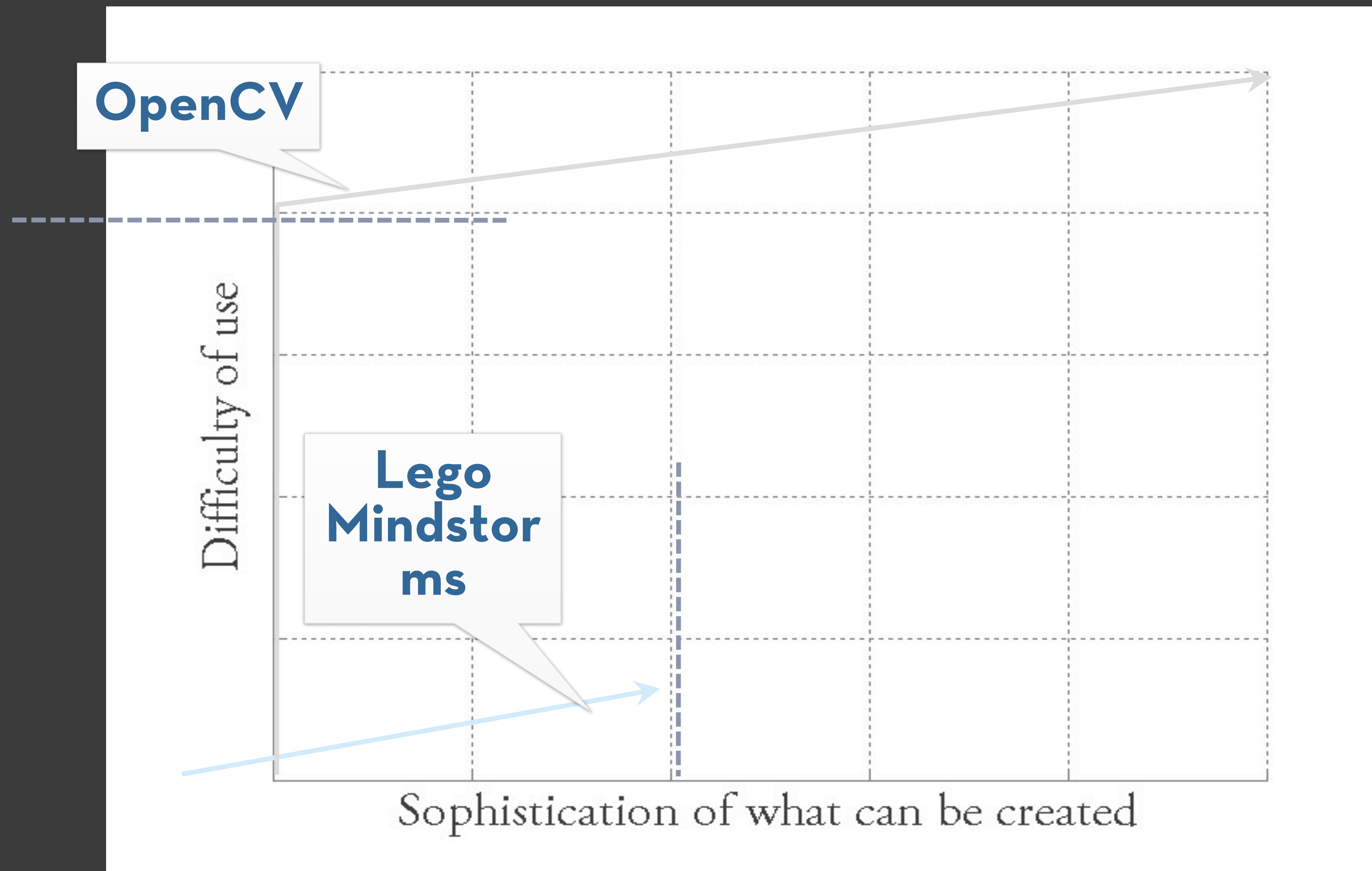
Plotting the Learning Curve



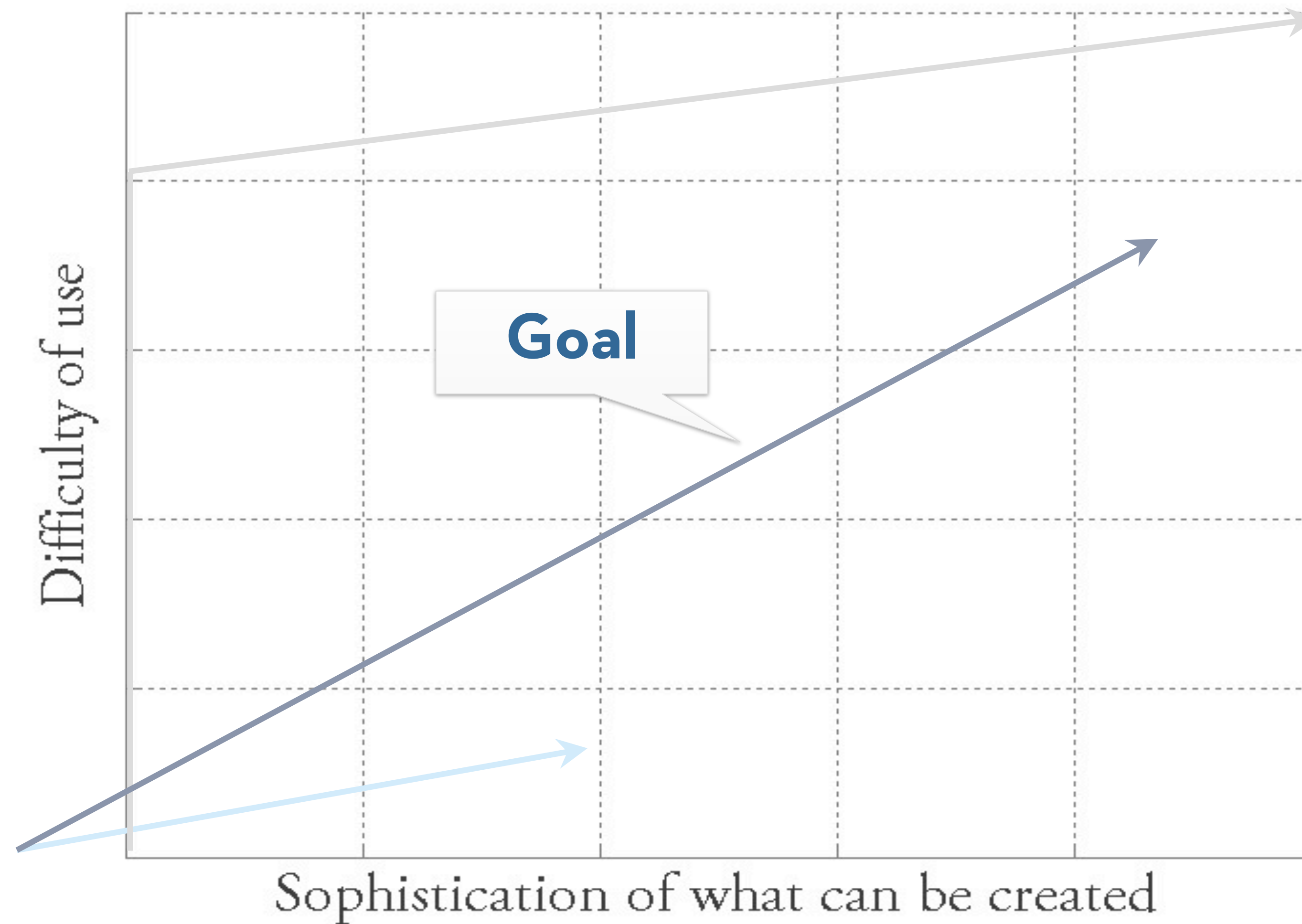
Threshold and Ceiling



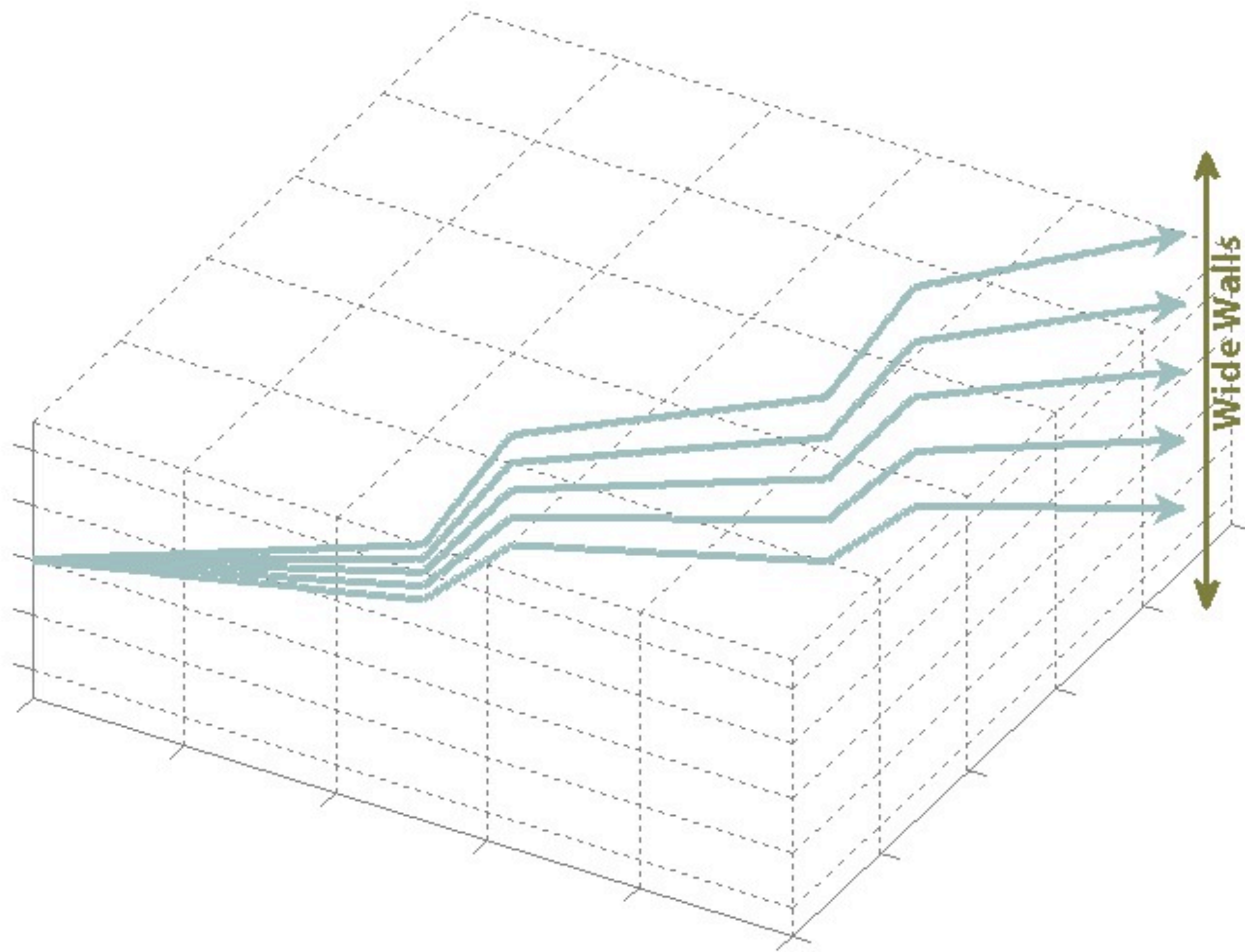
Threshold, Ceiling, and Walls



Threshold, Ceiling, and Walls



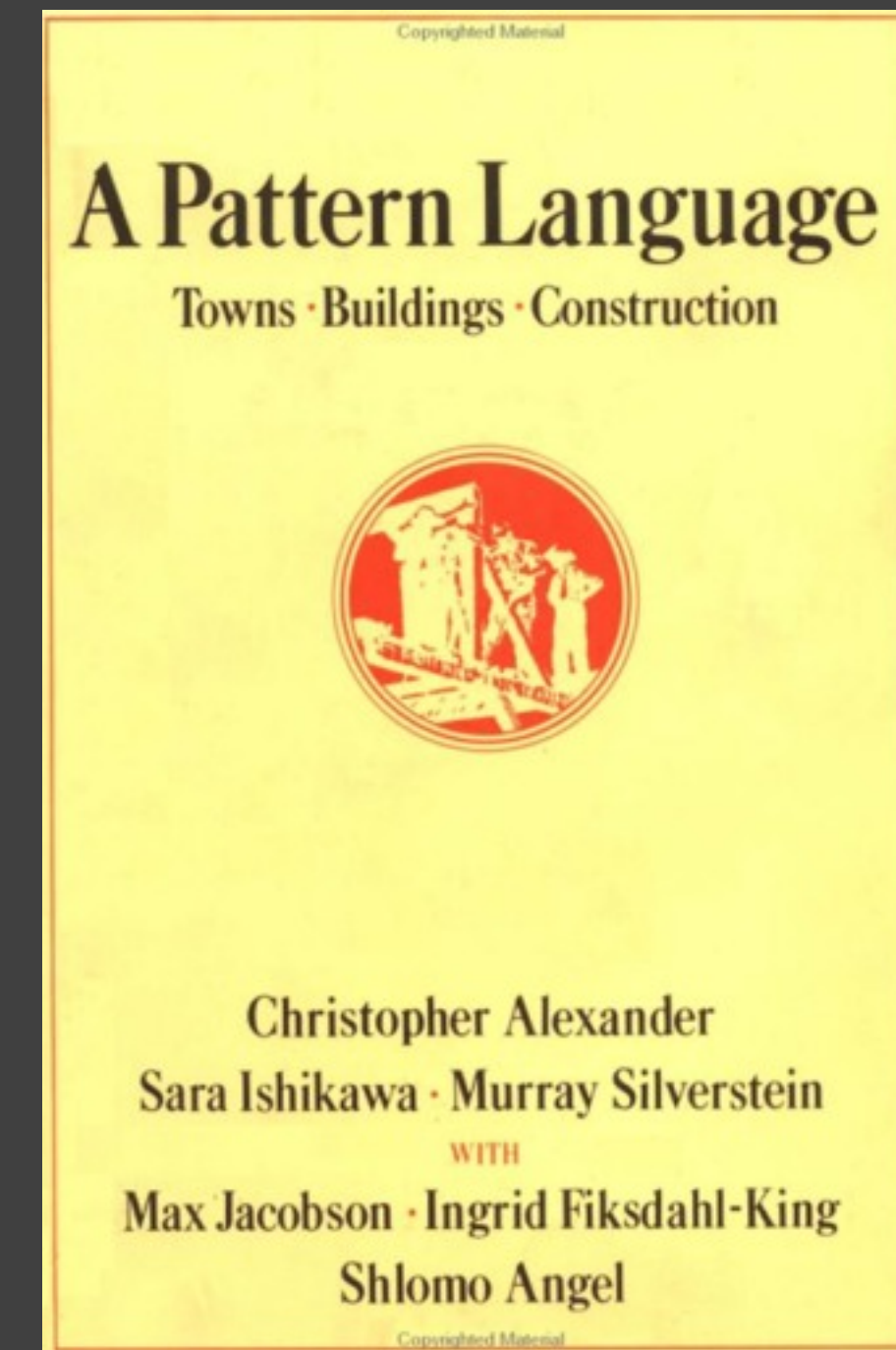
Threshold, Ceiling, and Walls



The Importance of Patterns

Key options

- Design patterns
- Designing by example
- Users will work well with UI's that build upon concepts that they are familiar with



Web Design Patterns

- Web patterns important and persistent(!)

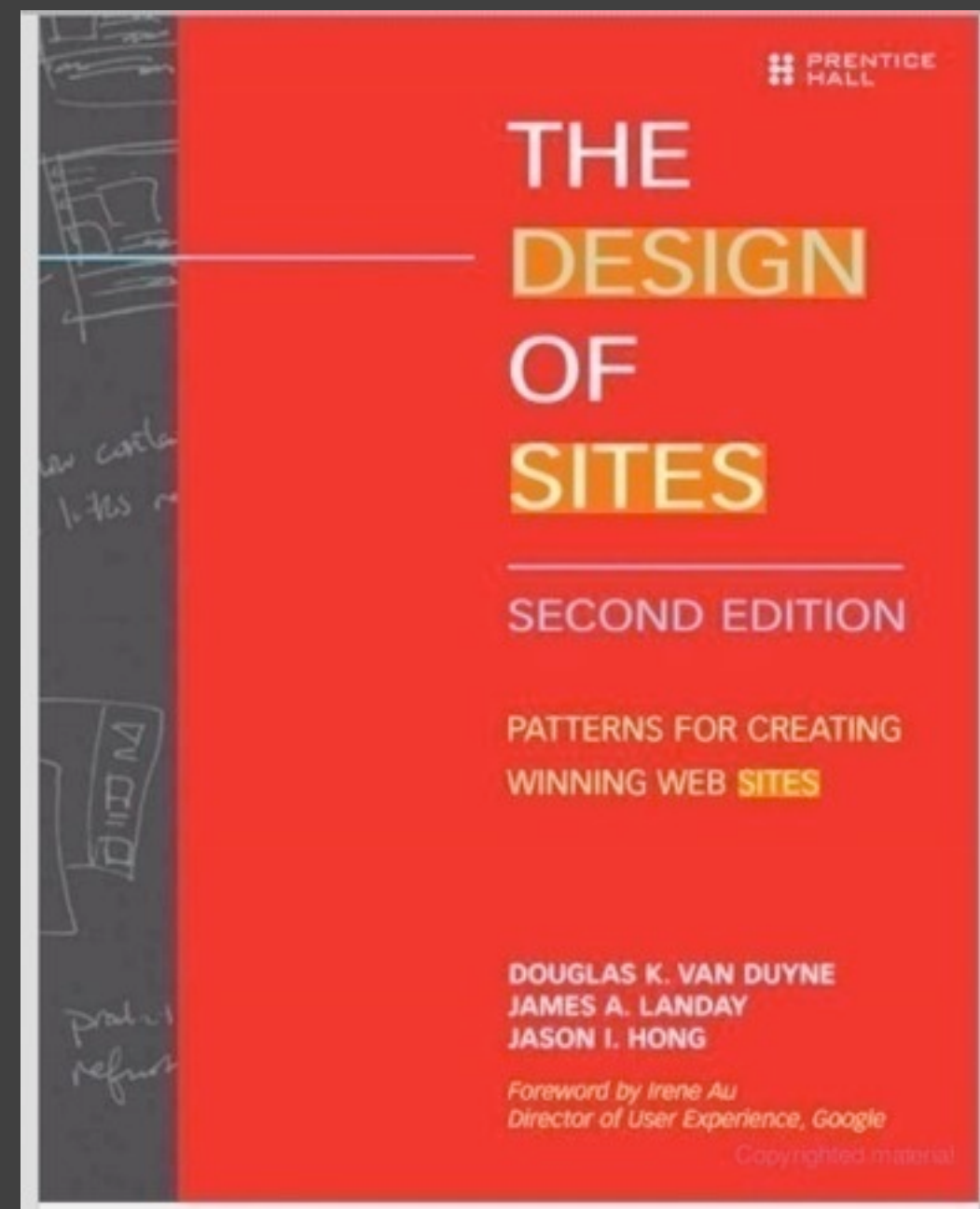


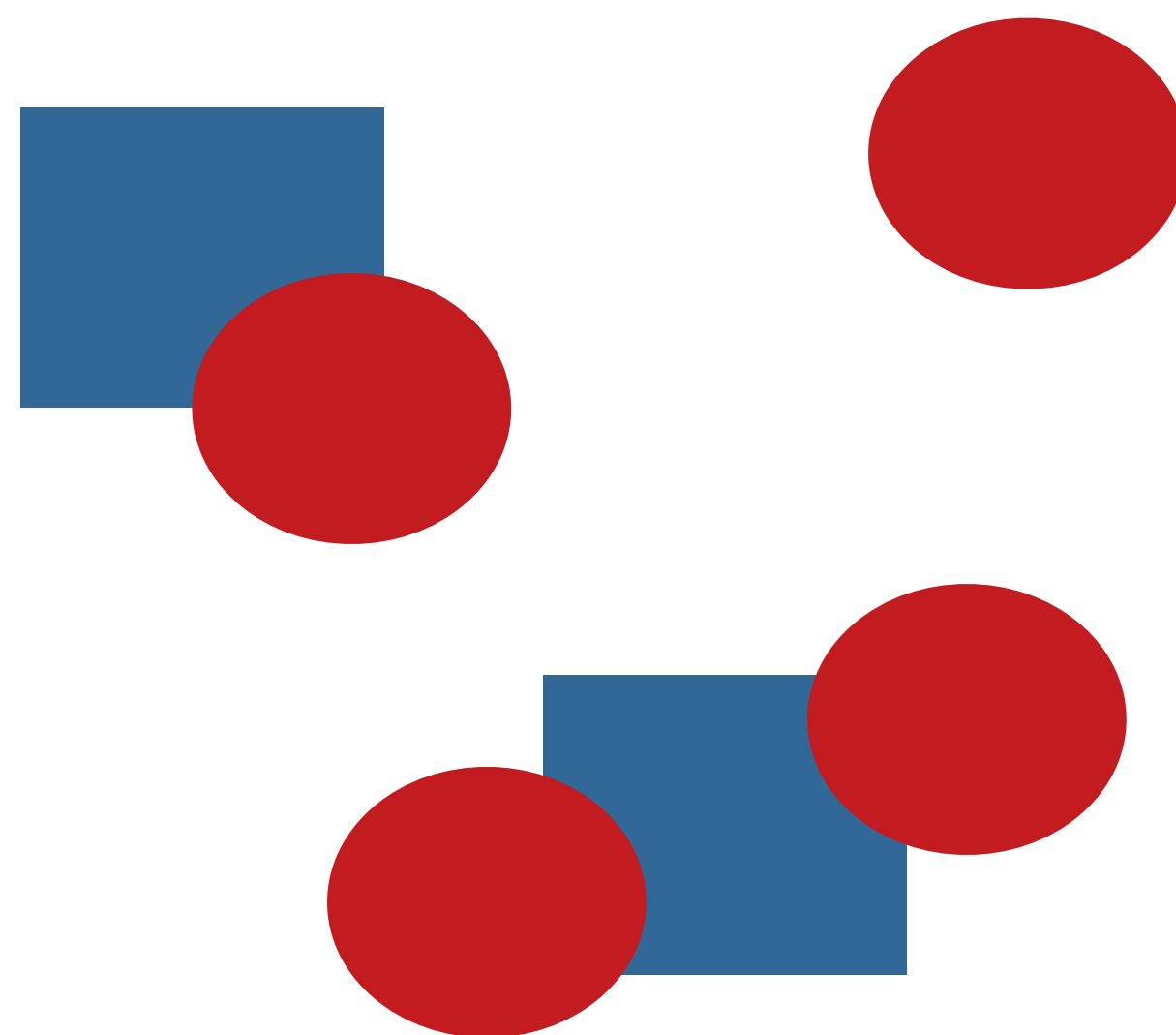
Figure 2.10

These screen shots illustrate the evolution of the home-pages of CNN, MSN, Yahoo!, and Google from 2001 to 2006. Note that the core structure and the underlying design patterns used by these Web sites have not changed over the years. For the most part, the only major change to these Web sites has been an increase in information density.



2.10

(www.cnn.com, www.msn.com, www.yahoo.com, www.google.com)



Cardinal circles: 4
Blue squares: 2

Model-View-Controller

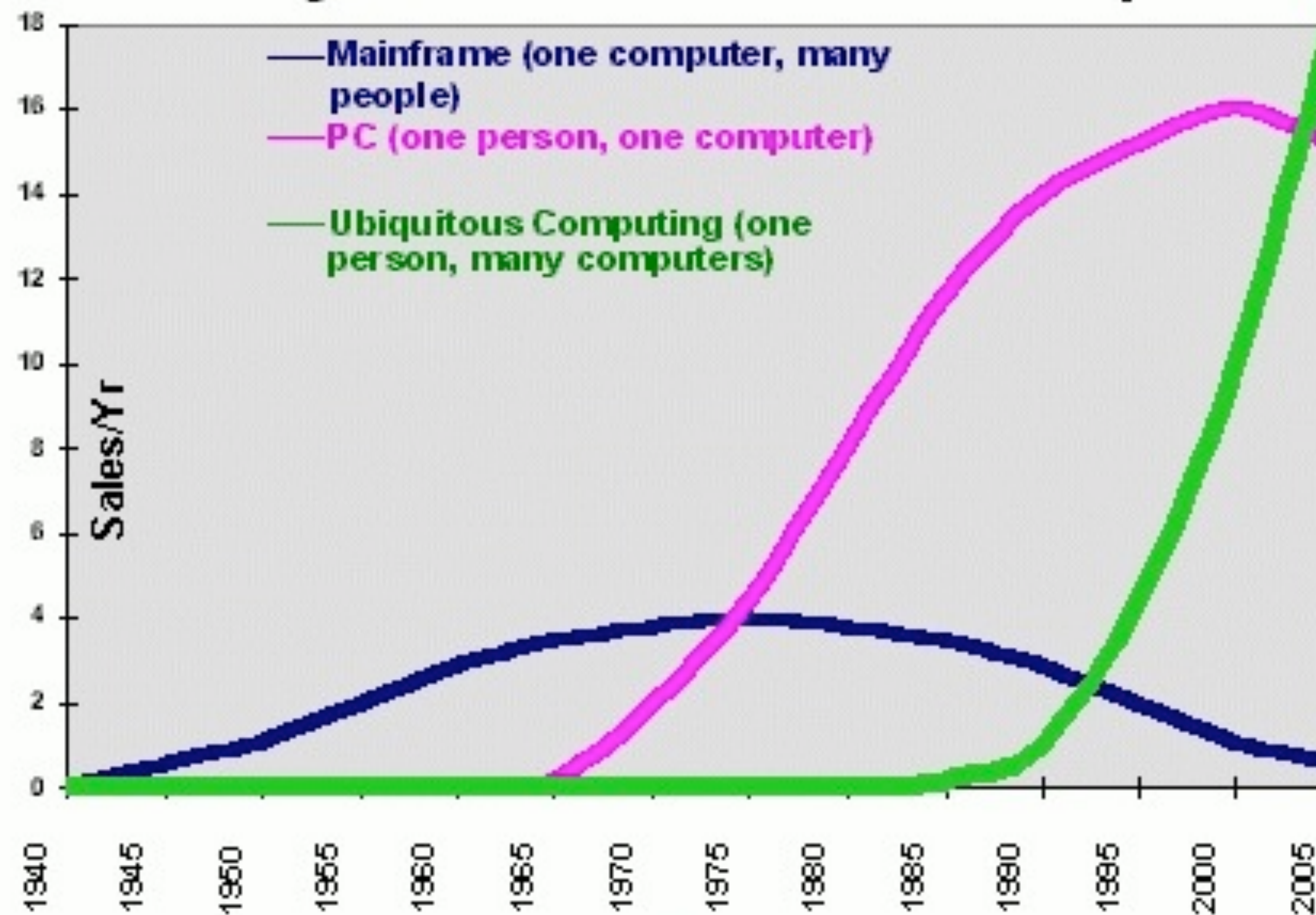
Model-View-Controller

Model-**View**-Controller

Model-View-Controller

Model-(ViewController)

The Major Trends in Computing

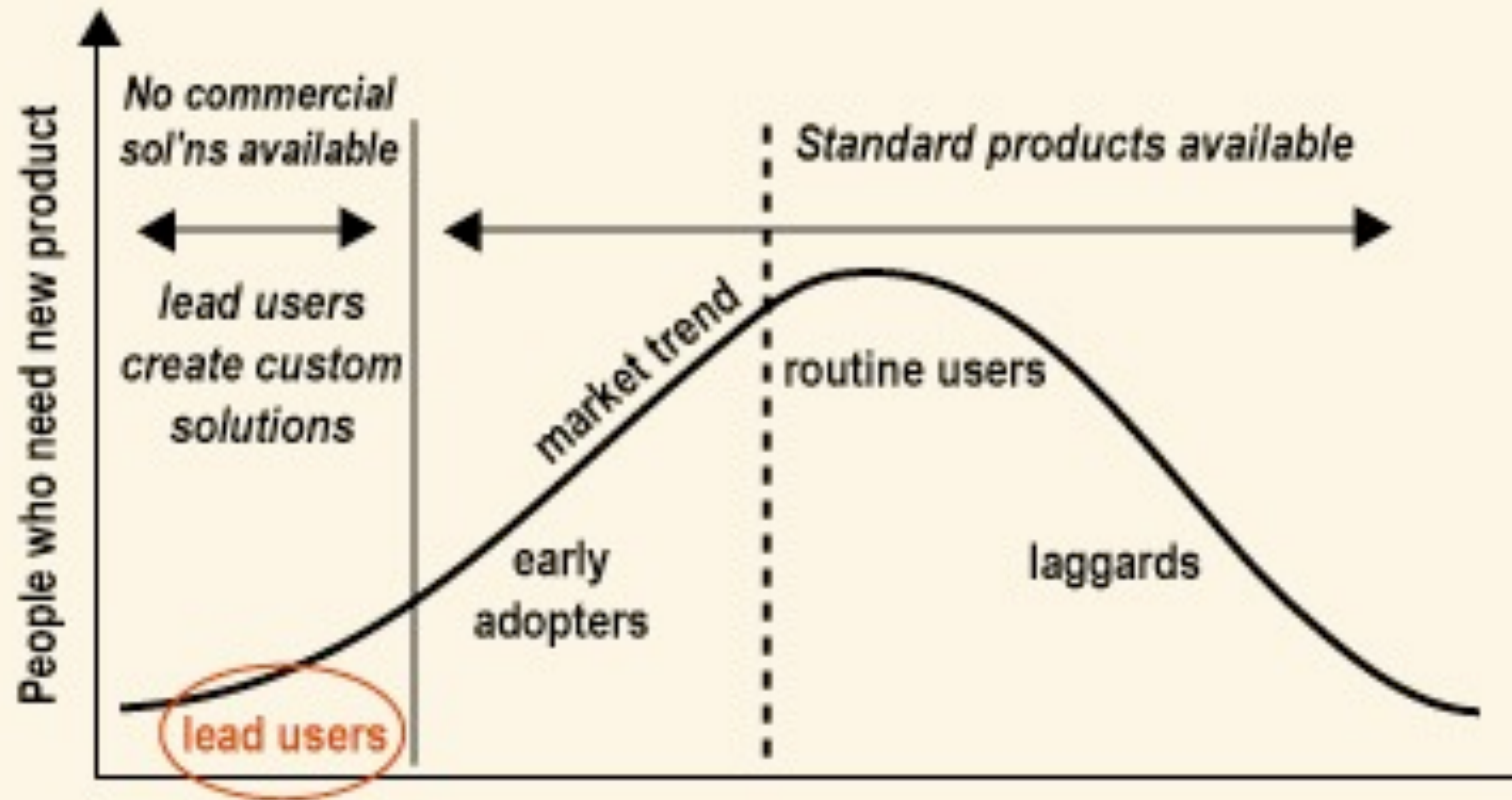


The Future is
Already Here, it's
just not evenly
distributed

Additional Strategy: Lead Users



Lead User Innovation



Preview: Final Project Presentations

- Friday 12/9 4p-6p in the d.school
- Jurors include Peter Norvig (Google), Don Norman (author), Julie Zhuo (Facebook)
- Each group gets 60 seconds to introduce their app (then another minute to demo it in the recording booth)
- Demo fair with taco truck -- bring your friends! (lots of folks visiting from industry; great demo --> great job)