

**an Educated
Guess**

Dedicated to Kate



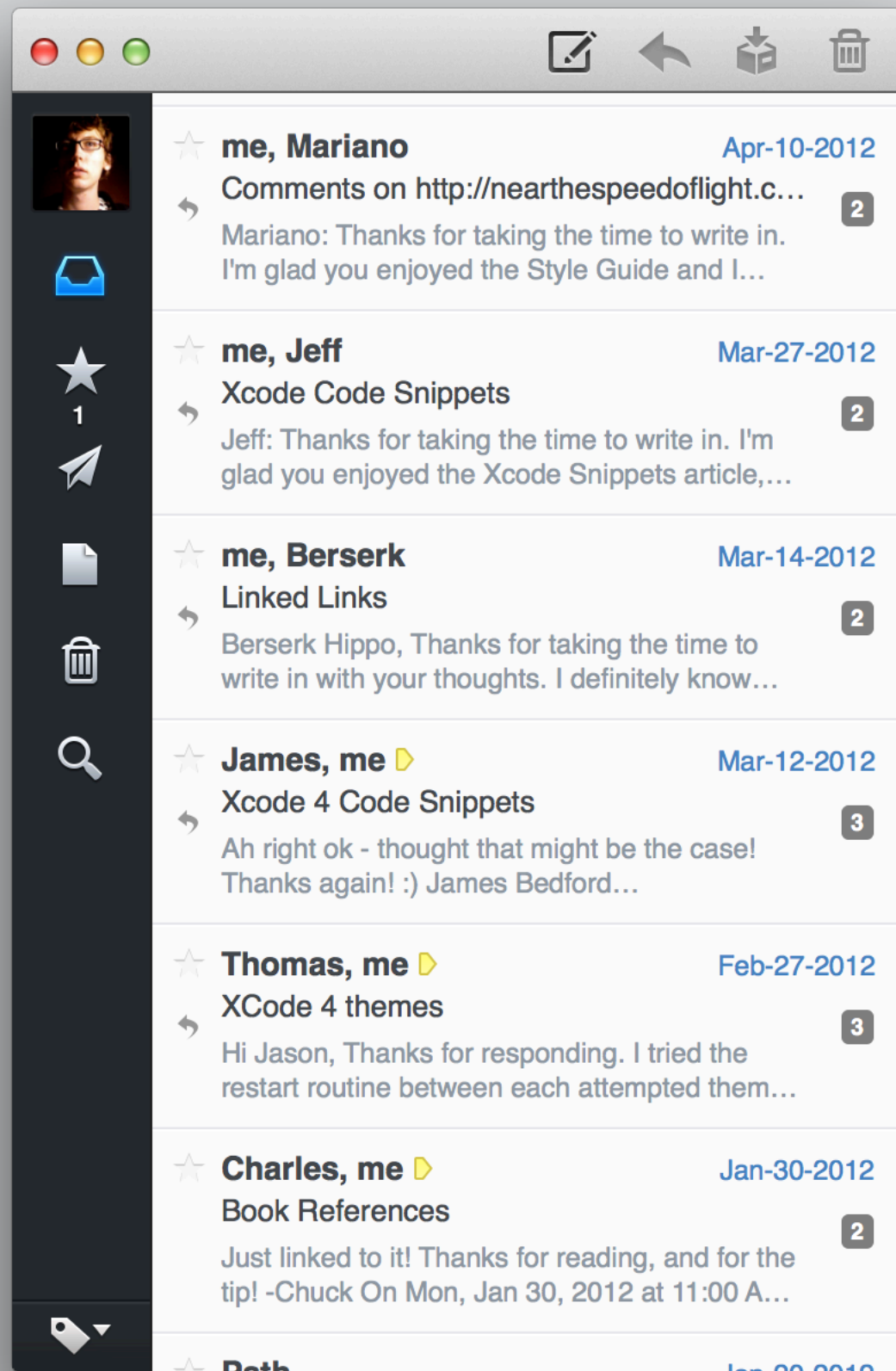
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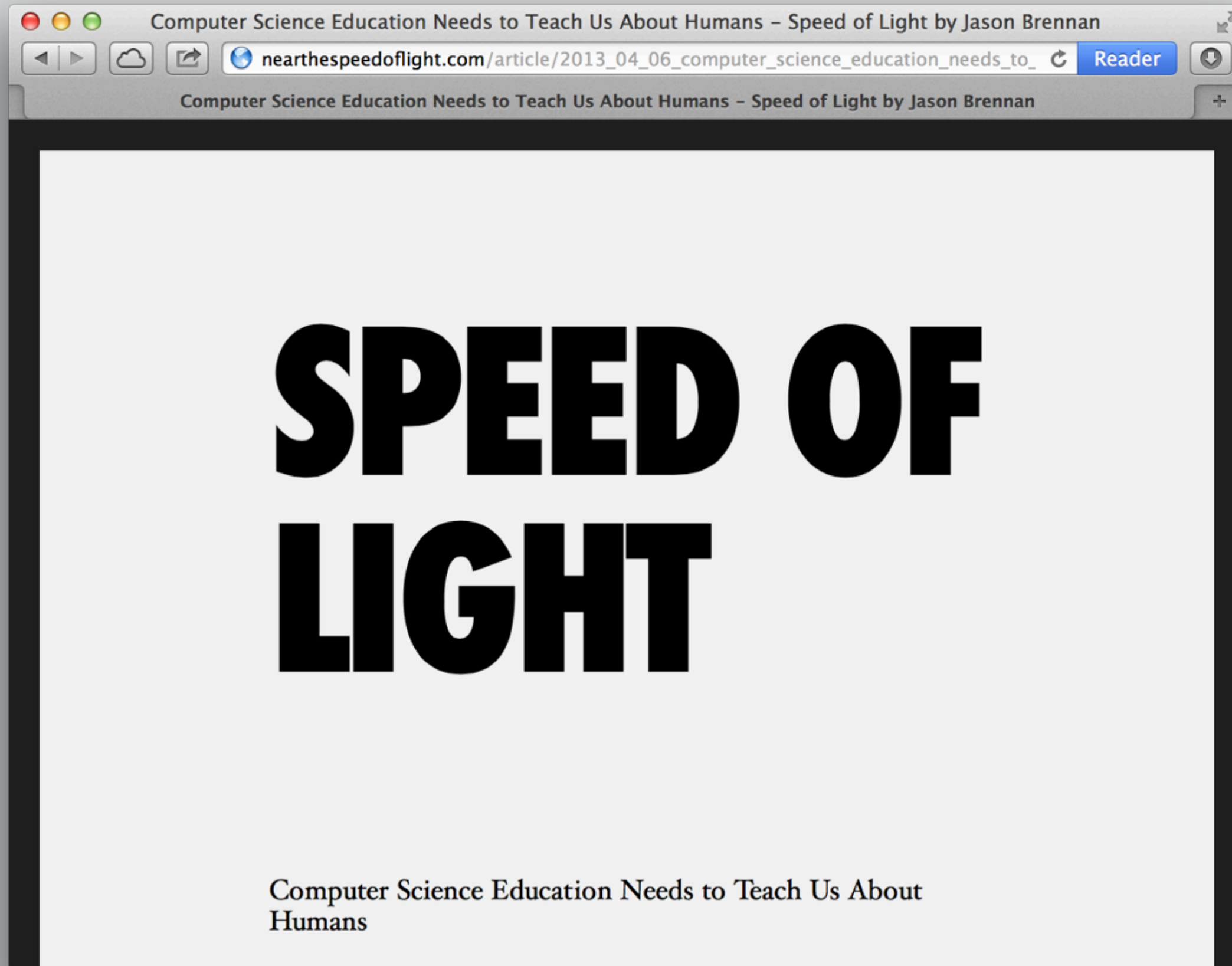
Traditional-style woodblock prints of video game characters

Jason Kottke
kottke.org

Illustrator Jed Henry takes video game characters and **draws them in the style of Ukiyo-e woodblock prints**. Here, for example, is Mario Kart:

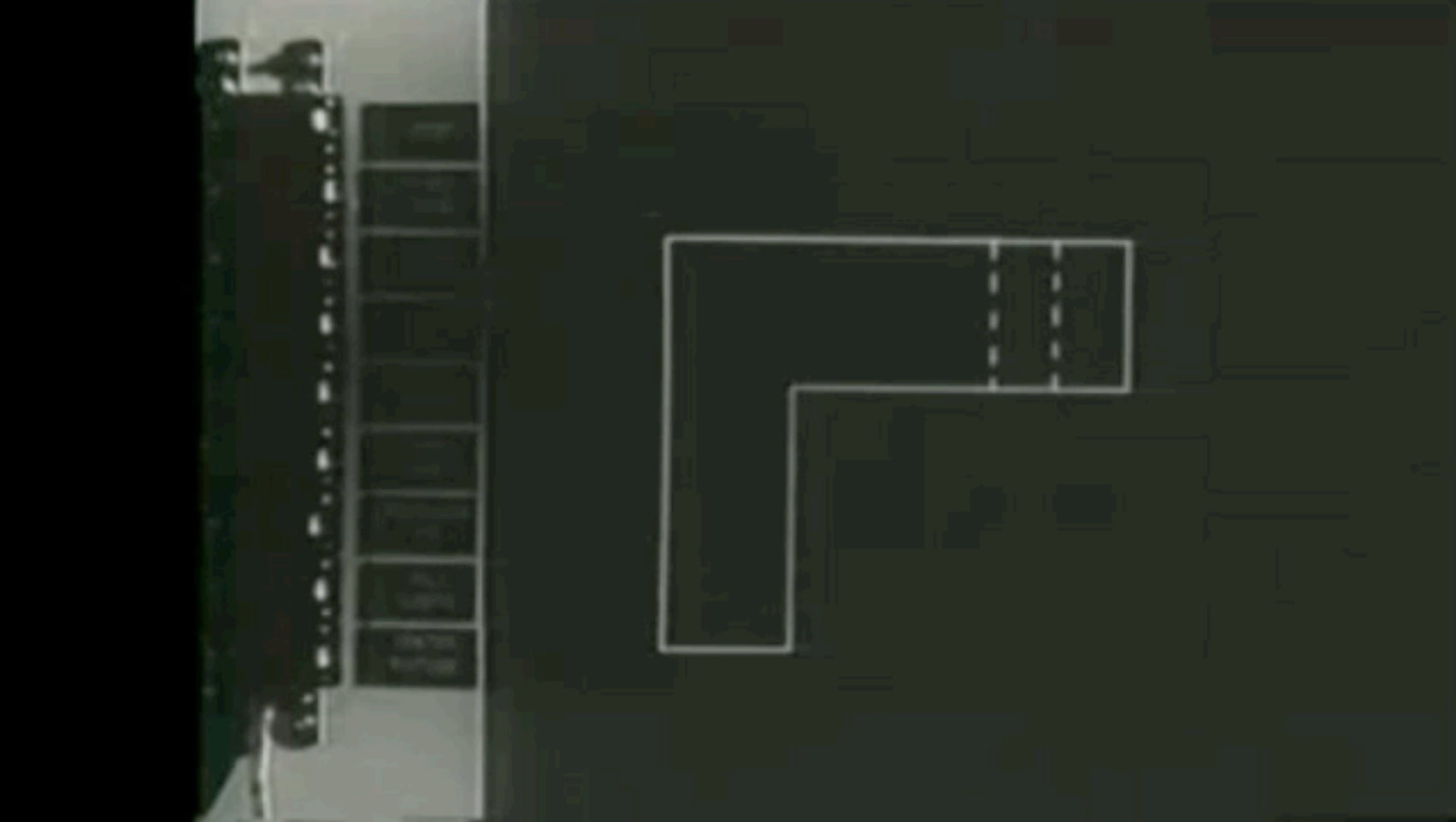






SPEED OF LIGHT

Computer Science Education Needs to Teach Us About Humans



INSERT WORD

2A3 BANANAS

2A4 CARROTS

2A5 LETTUCE

2A6 BEANS

2B CANS 1

2C CEREALS

2D COLD LOCKER

2E FROZEN LOCKER

2F MISCELLANEOUS

3 SHOE STORE

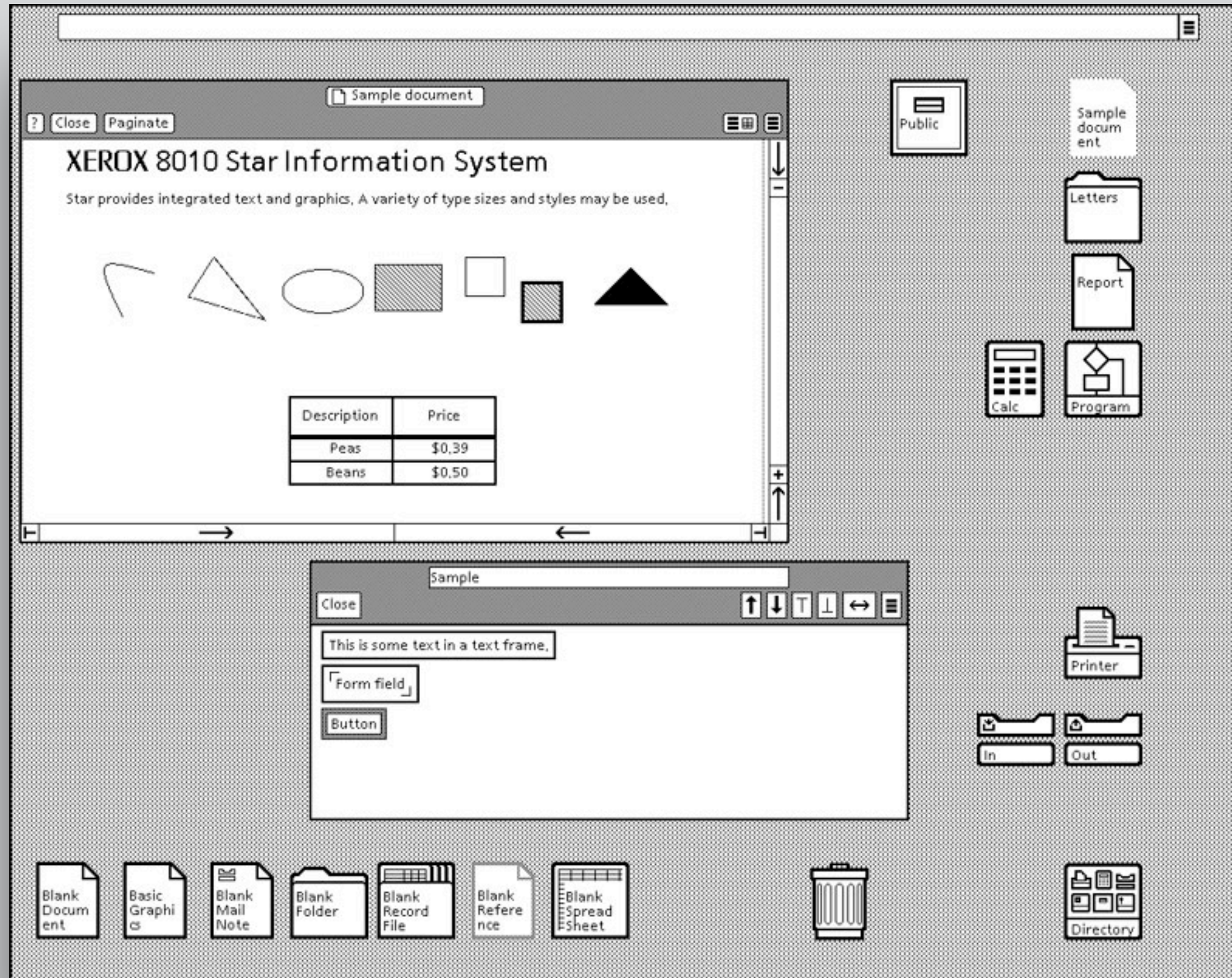
4 HARDWARE

5 ART SUPPLY

6 DRUG STORE

7 LIBRARY







OK

OK

OK?

WWMP

Windows

Icons

Menus

Pointers

	1984	2013
CPU	8MHz	1.3GHz
Memory	128k	1GB
Display	512px	Retina

**What was the
software like?**

**What is the
software like?**

Tows

Tool

Medium!

Dynamic Medium!

Let's do better

**We've been blindsided by
the Desktop metaphor**

Our Cultural Context

***"I'm really into
User Experience"***

*“UI design isn’t about how
something **looks** but it’s
about how it **works**”*

Why Interact?

Make the *software do it*

1. What needs
to be **done**?

2. How can the
software do it?

Make a Guess

an Educated Guess

Sat Jun 25	9	38	
Sun Jun 26	10	39	AM
Mon Jun 27	11	40	PM
Tue Jun 28	12	41	
Wed Jun 29	1	42	

NSNorth talk at 2:30PM on
April 20



NSNorth talk



location

all-day

☐

from

04-20-2013 02:30 PM

to

04-20-2013 03:30 PM

calendar

● Home ▾

alarm

None ▾

invitees

Add invitees...

note

None

Add Event

Let's do better

I don't want to
use my computer

**I want to make use of
my computer**

3

1. People

Me!

You!

Everybody

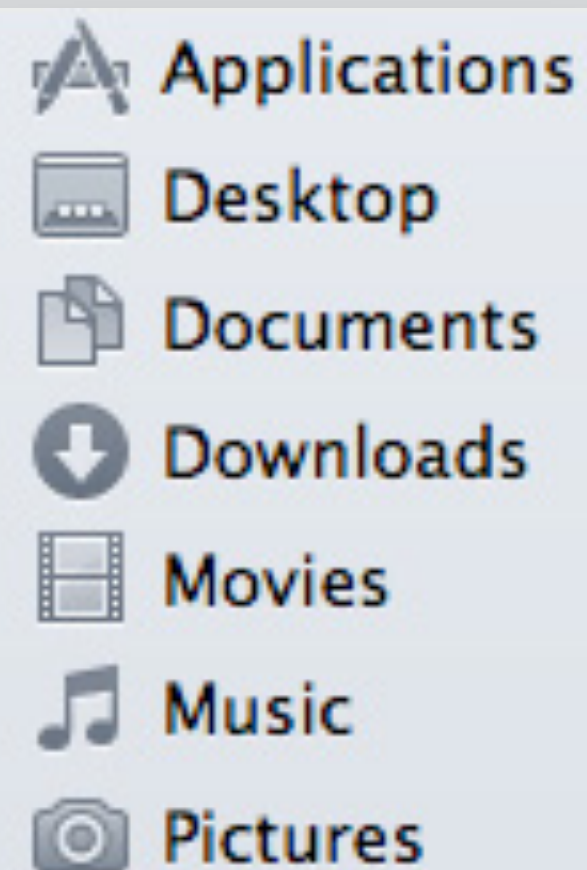
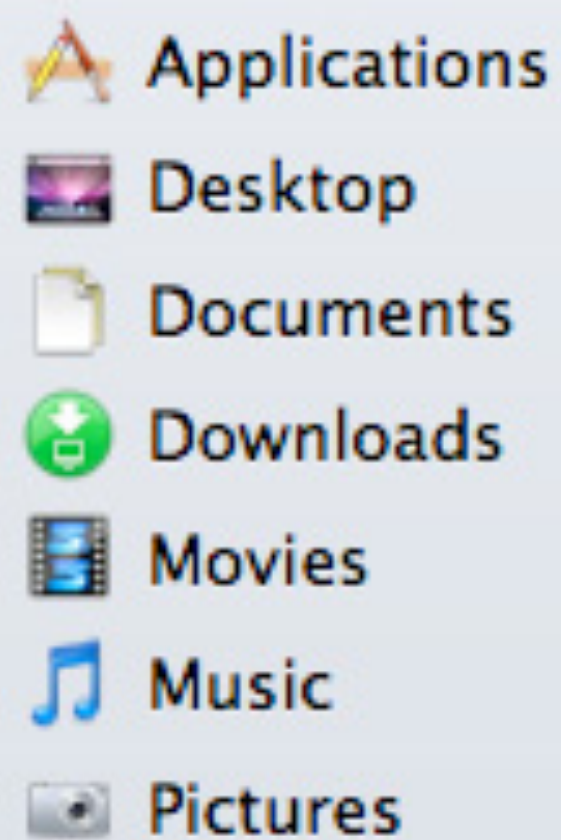
Communication

“Let’s do better”

“The name does not imply that such writing would condemn computers any more than literary criticism condemns literature or social criticism condemns society. The purpose of computer criticism is not to *condemn* but to **understand**, to **explicate**, to place in perspective.”

—Seymour Papert on
“Computer Criticism”

Human after all



Who we're
building **with**

2. Bricks

Software Components

Open Source,

even Closed Source

“In spite of the potential advantages of reusing code, most are reluctant to do so [...] By expecting code to be discarded, it isn't worth the trouble to document it nicely.”

—Brad Cox, creator of
Objective C

“Once code is **reusable** beyond its current application it becomes an **asset**; one to be conserved, publicized, learned about, even **bought and sold**”

—Brad Cox, creator of
Objective C

Not Invented Here

Proudly Found Elsewhere

1. Treat Components as Assets

**1. Treat Components
as Assets**

**2. Empathy +
Trust**

What kinds of
Components?

“I had some ideas for an
email client so I built
one today”

—What I **want** to
be able to say!

Harder Things

Parsing **text**

Learn user habits

Reduce **interaction**

Context-Aware spelling

Endless undo

Demonstration

"If I have seen further it
is by standing on the
shoulders of giants."

—Isaac Newton

Literature

“[Pop culture] has nothing to do with cooperation, the past or the future — it’s living in the present. I think the same is true of most people who write code for money. They have no idea where [their culture came from]”

—Alan Kay on CS as
a Pop Culture



As We May Think (1945)

oNLine System (1968)

HyperCard (1987)

Don't you just want
to go out and
build on one?

“The only way that we’re going to ratchet up our species is to **take the best** and to **spread it around** to everybody, so that everybody grows up with **better things.**”

—Steve Jobs,
“Revenge of the Nerds”

3

3. Powerful Ideas

“What makes an idea “powerful” is what it allows you to do; [...] Powerful ideas are those that are richly or deeply **connected to other ideas**; these connections make it possible to make **further connections** and tell stories of greater richness and extent.”

—John W Maxwell

World Wide Web

Personal Computing

Copy and Paste

Text Copy Paste Text

“As befitting manipulation software, copy-and-paste requires explicit manipulation by the user. Information software must be able to share information implicitly and autonomously, with no user interaction.”

—Bret Victor,
“Magic Ink”

Cortex

Implicit, automatic
information sharing
between **applications**

It's a **Platform**
for objects

Demonstration

Applications
work together

For the **User**

Today we're good

Tomorrow we're **better**

We're at a Critical Point

We can make it
Medium for
Powerful Ideas

THANK YOU