

The Journey of Mobile Computing

Anthony Yung

November 2, 2011



My Experience



Product Marketing / Planning
PCs, Devices



Market Research Consulting
IT Markets



Design / Product Engineering
Workstations, Servers



MBA

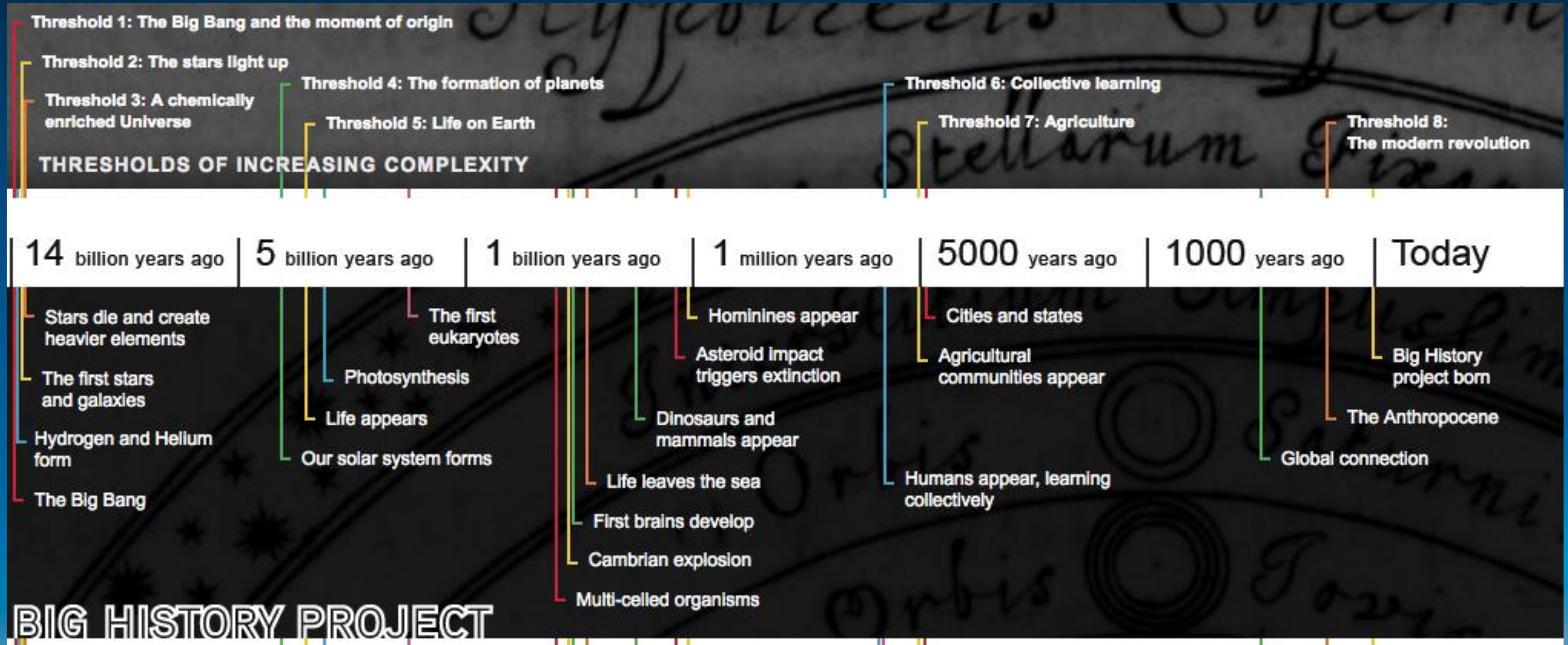


EECS

Today's Plan

- Share Observations
- Look at Case Studies
- Spot Common Themes
- Consider Possibilities

“Big History”



“Big History” of Mobile Computing

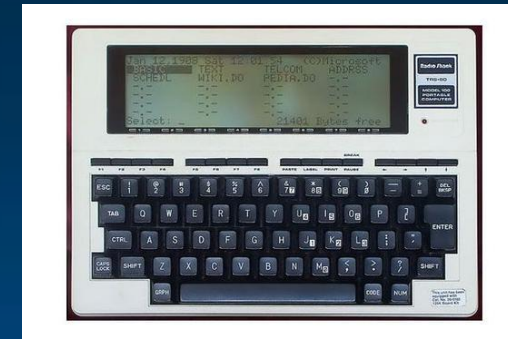
1971



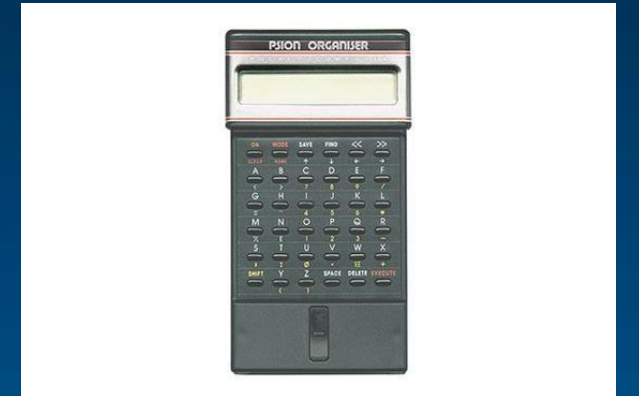
1981



1983



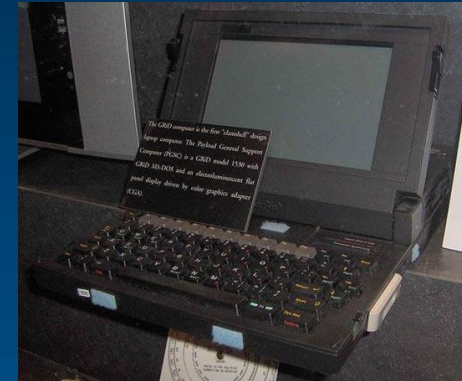
1984



1978



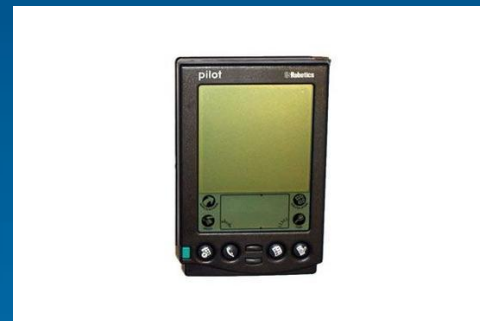
1982



1991



1996



1999



2002



2006



2007



2010 /2011



"Big History" of Mobile Computing

Computing in pocket
1971



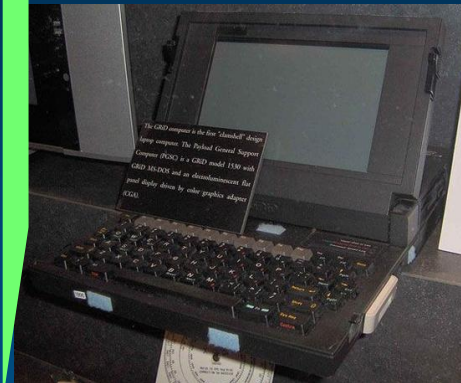
Mass market
computer toy
1978



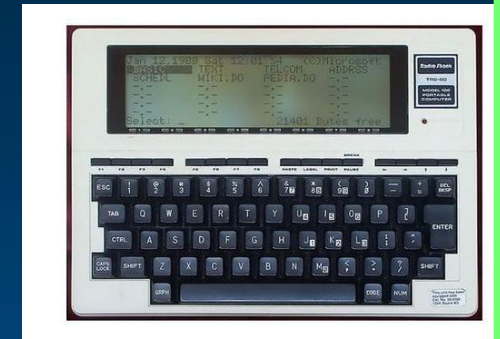
1981 First portable
computer



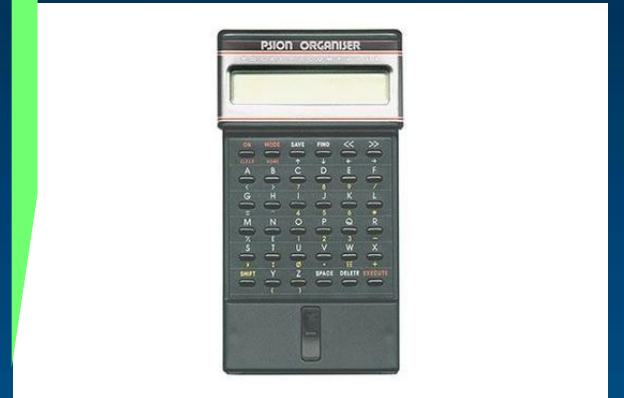
First clamshell
1982



1983



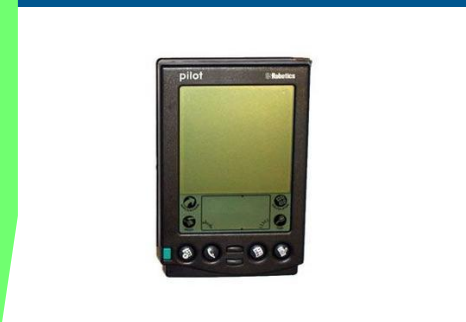
Computer on-the-go
Handheld computer
1984



Palmtop computer
1991



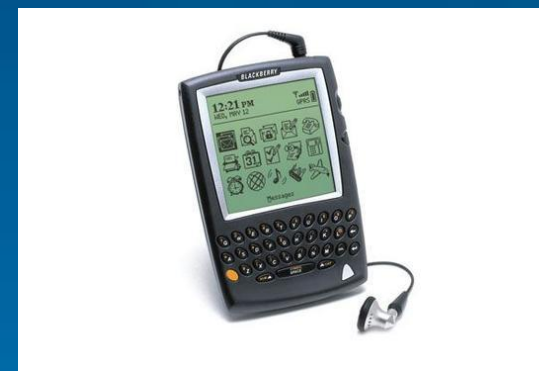
Mass Market PDA
1996



Wi-Fi Consumer laptop
1999



Early
Smart
phone



Convertible
2002



Ultraportable
2006



Netbook
2007



Touch Smartphone
2010 /2011



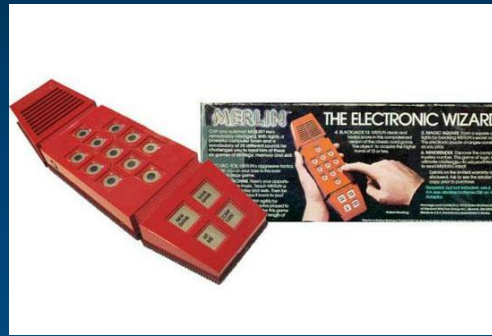
Mass Market
Tablet

“Big History” of Mobile Computing

1971



1978

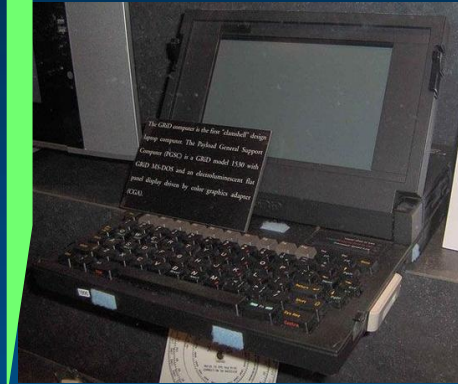


1981

\$4480

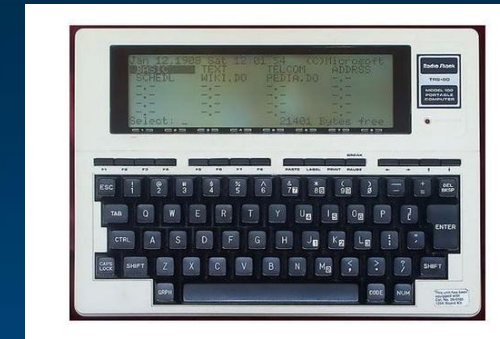


\$19160
1982

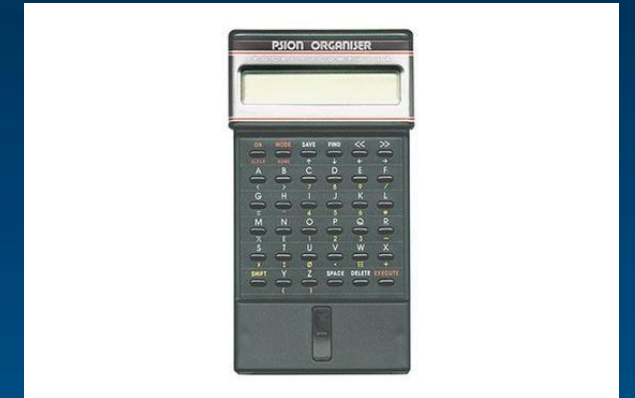


1983

\$3186



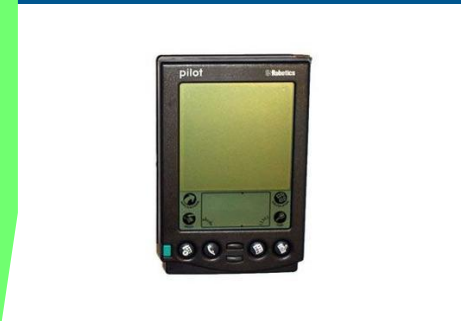
1984



1991

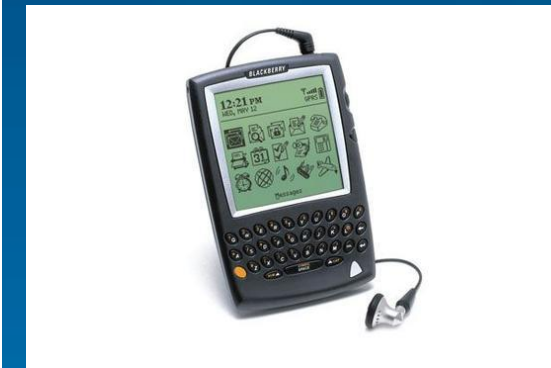


\$432
1996



\$2179

1999



2002



2006



2007



2010 /2011



Early TV = Radio with Visual



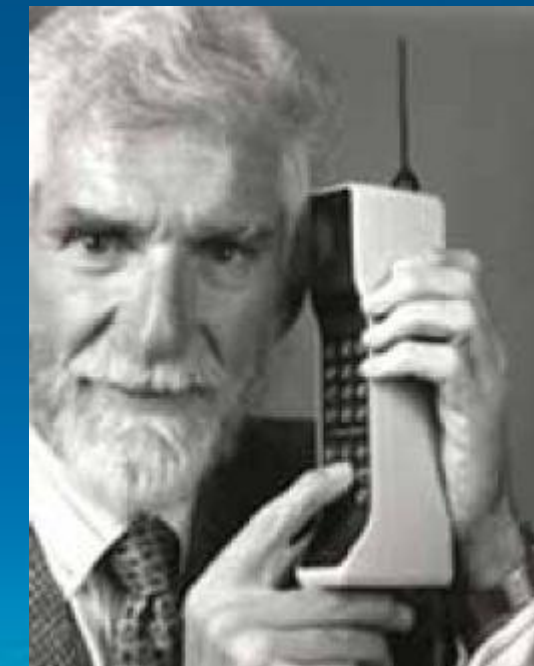
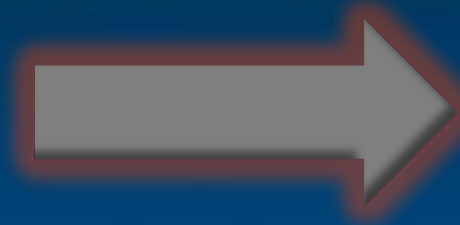
Radio Experience



Early TV Experience



Early Mobile Devices = Fixed Devices That Can Move



Same Basic Experience, with Compromises

Then What?

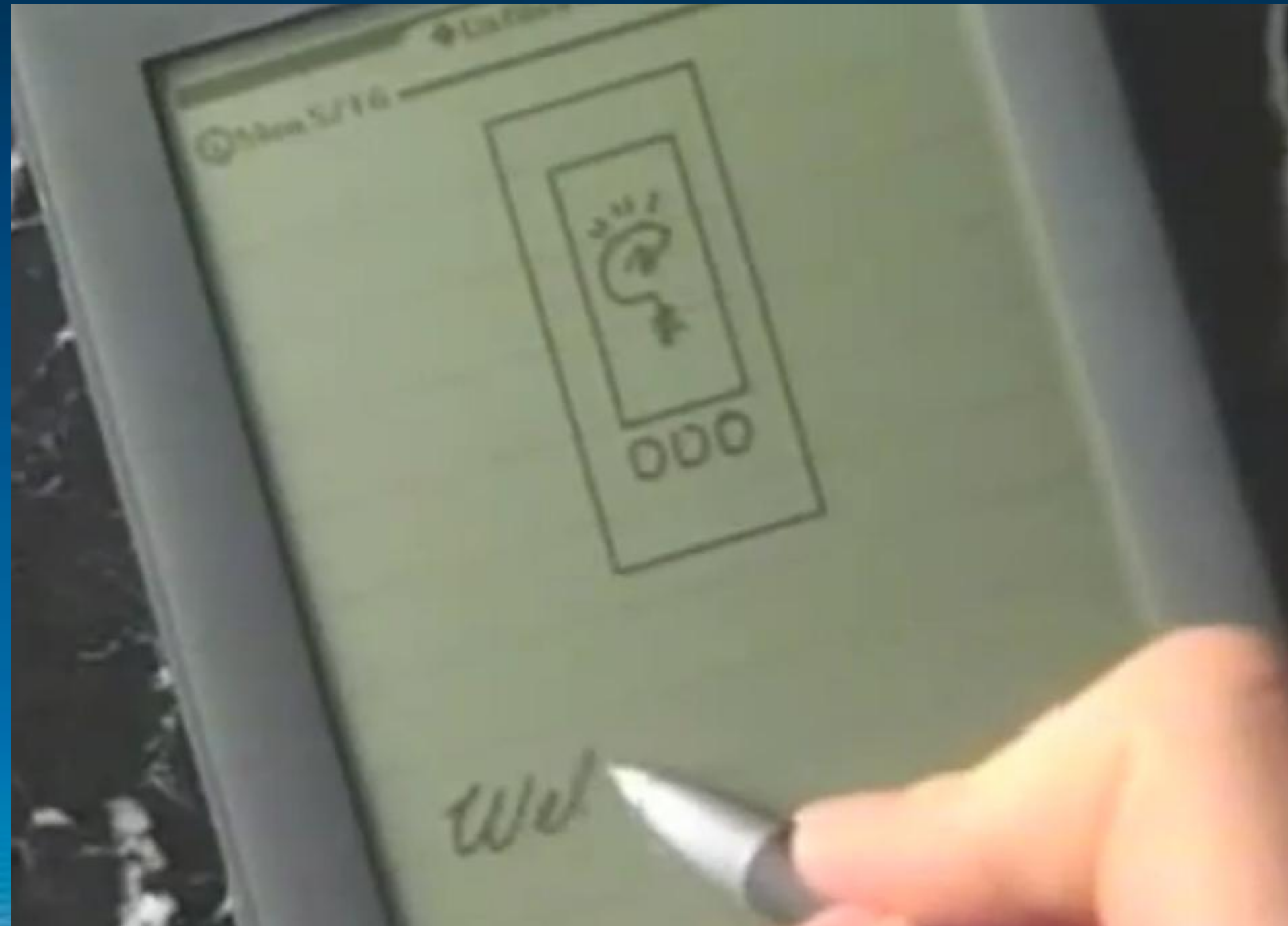
- Mitigate / Eliminate Compromises
- Add Functionalities that Exists in (and Cannibalize?) Other Devices
- Add New Functionalities
- Evolve / Revolutionize

A Better and Broader Experience

Case Studies

- Focus = Mobile Computing Devices
- Experiences that the device aspires to deliver
- An analysis of the experience

Case Study 1



Analysis

**Baseline
Experience**

**Mitigate /
Eliminate
Compromises**

**Add
Functionalities
that Exist**

**Add New
Functionalities**

**Evolve /
Revolutionize**

Analysis

**Baseline
Experience**

**Mitigate /
Eliminate
Compromises**

**Add
Functionalities
that Exist**

**Add New
Functionalities**

**Evolve /
Revolutionize**

Paper Notepad

Tethered

Send fax / email

Handwrite

Feel style

Paper & Pencil

Form Factor

Peer-to-Peer
(IR)

Draw / Sketch

“Capture,
Organize,
Communicate”

Universal inbox
/ outbox

“Keep in touch”

Connect to PC
and Macintosh

Case Study 2



Analysis

**Baseline
Experience**

**Mitigate /
Eliminate
Compromises**

**Add
Functionalities
that Exist**

**Add New
Functionalities**

**Evolve /
Revolutionize**

Analysis

**Baseline
Experience**

**Mitigate /
Eliminate
Compromises**

**Add
Functionalities
that Exist**

**Add New
Functionalities**

**Evolve /
Revolutionize**

Voice Call
(Mentioned Last!)

Instant On
Form Factor

Music
Email
Full Web
Movie
GPS
Photos

None?!

Integration

Possibilities for Future -- Tops down

- What we think people want
(How often do we get that right?)

I have seen the future,

Possibilities for Future -- Bottoms Up

- How “stuff” gets into devices

| Baseline Experience | Mitigate / Eliminate Compromises | Add Functionalities that Exist | Add New Functionalities | Evolve / Revolutionize |
|---------------------|----------------------------------|--------------------------------|-------------------------|------------------------|
| Smartphone | Form Factor | Mobile Health | Stereoscopic 3D | SoLoMo |
| Laptop | HMI | Holographic Display / Keyboard | E-Wallet | Gamification |
| ... | Performance | Console Games | Context Aware | Phone Cluster |
| | ... | ... | Augmented Reality | ... |
| | | ... | ... | |

Summary

- Mobile devices start with a baseline experience, with compromise
- Deliver a better and broader experience
 - Mitigate / Eliminate Compromises
 - Add Functionalities that Exists in (and Cannibalize?) Other Devices
 - Add New Functionalities
 - Evolve / Revolutionize
- Good Execution / Good Timing, or Redo