

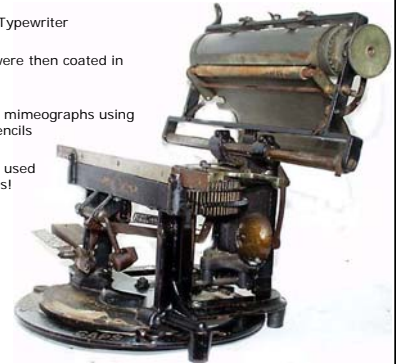
## History of Interactive Product Design

Jon Kolko  
Savannah College of Art & Design

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## 1894 : Mimeograph

- Edison Mimeograph Typewriter
- Cut stencils, which were then coated in ink by rollers
- Ditto machines were mimeographs using carbon instead of stencils
- Ditto machines were used up through the 1980s!



## 1946 : The Microwave Oven

- Raytheon introduced the first commercial microwave oven in 1946-47
- The 1161 Radarange was 6 feet tall and weighed 750 pounds
- Percy Spencer, lead inventor
- Raytheon was founded by Vannevar Bush!



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## 1950 : Remote Control

### Now! Zenith Adds **LAZY BONES** Remote Control to Black Magic Television

Complete automatic program selection in the palm of your hand...from anywhere in the room. Another Zenith "Wow!"

*All New!*  
Zenith's New Black Magic Television...  
Model 22-1000...  
Only Zenith Television Shows You All Stars

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## 1955 : Wireless Remote Control

### YOU HAVE TO SEE IT TO BELIEVE IT! **FLASH-MATIC TUNING** BY ZENITH ONLY ZENITH HAS IT!

A flash of magic light from across the room (no wires, no cords) turns set on, off, or changes channels...and you remain in your easy chair!

**YOU CAN ALSO SHUT OFF LONG, ANNOYING COMMERCIALS WHILE PICTURE REMAINS ON SCREEN!**

Here is a truly amazing new television development...and only Zenith has it! Just click! Without leaving your easy chair you can tune your new Zenith Flash-Matic set on, off, or change channels. You can even shut off annoying commercials while the picture remains on the screen. Just a flash of light does it. There are no wires or cords. This is not an gimmick! It is a built-in part of several new Zenith television models. Stop at your Zenith dealer's store. Zenith quality television begins at \$149.95!

**ZENITH**

The quality of TELEVISION and radio products by 38 years of leadership in television engineering. Some models on floor models, see Zenith Radio Corporation, Chicago, Ill., 60642.

**If it's new...it's from Zenith!**  
**YOU HAVE TO SEE IT TO BELIEVE IT!**

## 1962 : Touchtone Telephone

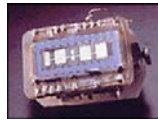
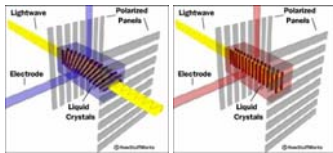
- Premiered at World's Fair
- Shape clearly mimics original pulse dial telephones
- Where is # and \* ?



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### 1968 : Liquid Crystal Display [LCD]

- RCA invented the first LCD panel in 1963
- They didn't know what to do with it, so they invented the Digital Clock in 1968!



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### 1972 : TI Calculators

- TI-2500, TI-3000, TI-3500
- \$99 in 1972 dollars = \$415.00, in 2002 dollars
- Add, Subtract, Divide, Multiply



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### 1974 : Pagers

- Motorola's Pageboy I
  - Alerted the carrier that they had messages
  - No display
- By 1994, 61 million pagers in use



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### 1976 : CCD Scanner

- First CCD (charge coupled device) flatbed scanner
- Had OCR!
- Used 64k of RAM, scanned one line at a time
- determined the pronunciation of the resultant words according to pre-programmed phonological rules
- articulated those words through a speech synthesizer



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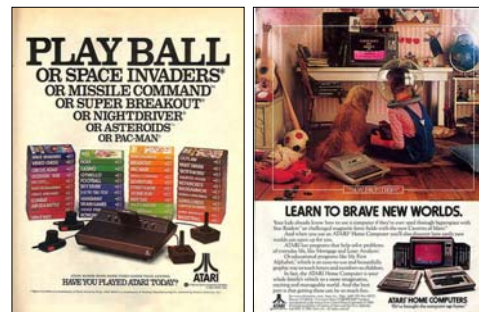
### 1982 : GRID Compass

- GRID Compass 1100
- 8 pounds, the weight a user was "just able to tolerate"
- \$8150
- Company was purchased by Tandy in 1989



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### 1982 : Atari



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### 1983 : Commercial Cell Service

- First cell phone actually invented in 1947 (1), Bell Labs
- FCC did not allow commercial service until early 1980s
- Early phones called "car phones", had no batteries, and ran off the car cigarette lighter



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### 1989 : Gameboy

- Gumppei Yokoi (1941-1997), Nintendo



- 8bit (4.19mhz)
- 8kb RAM
- 4 colors
- 160x144 pixel display



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### 1991 : Digital Cameras

- Kodak used a 1.3 megapixel CCD on a Nikon camera body, creating the first truly digital camera
- The DCS 100 cost \$20,000!
- Ironic, considering Kodak has almost been driven out of the digital marketplace ...



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### 1991 : Lithium Ion Batteries

- Lasts longer
- Lighter
- More expensive
- More fragile
- Found in cell phones, 900mhz phones, laptops



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### 1993 : Personal Data Assistant [PDA]

- Apple Newton  
"Learned" your handwriting, but took 40 hours of usage before it learned enough

- 3Com released the Palm Pilot in 1996



Palm forced the user to learn Graffiti, a way of entering characters, instead of trying to learn your handwriting



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### 1995 : Global Positioning System [GPS]

- Developed by DoD in 1978, released to the public in 1995 in a crippled form (100 feet vs. 50 feet)
- 24 satellites, transmit radio signals, pinpoint latitude and longitude
- Huge potential for portable devices



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1995 : Microsoft Bob



1996 : Tamagotchi

"Tamagotchi is a tiny pet from cyberspace who needs your love to survive and grow. If you take good care of your Tamagotchi pet, it will slowly grow bigger, healthier, and more beautiful every day"

Spring '97, FAO Schwartz was selling 80,000 Tamagotchis a week



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1997 : 802.11b



- Spec ratified by IEEE
- Linksys, Netgear, 3com
- 11mbps, 2.4ghz

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1998 : Furby

- Were selling for over \$100
- Could "talk" to other Furbys
- Had the ability to learn what you were saying! ... or did it?



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1998 : iMac



Since they were offered on 8/15/98, Apple has sold roughly 8091 iMacs a day.

The 5,000,000<sup>th</sup> iMac was sold on 1/7/02.

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1999 : iBook



- Too big?
- People don't like looking like idiots?



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1999 : Phone-Card-Phone

- 2" x 3"
- Entire phone body, touch pad and circuit board made of paper substrate

(Dieceland Technologies)



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2000 : Motorola TalkAbout

- Over 1,000,000 sold
- Two way wireless email communication
- Comes in your choice of color, including iMac Blue



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2000 : Mac Cube

- Overpriced
- Not so powerful
- Is a cube any better than a rectangle?



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2001 : Screenfridge

- a refrigerator with a touch sensitive computer screen that acts as the "home's nerve center"
- suggests weekly menus
- orders the necessary groceries on the Internet
- reads radio tags that are replacing bar codes on goods, inside fridge



*"You'll be able to phone your fridge when you're in the supermarket and ask it how much milk you need to buy," said Mikael Klein, project manager for the Electrolux screenfridge. "Radio tags embedded in product packaging will also bring an end to checkout queues. When you walk out of the store, a sensor will detect the contents of your trolley and present you with a bill."*

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2001 : Micro-Optical Head Mount

- First "affordable" head mount
- 640x480 VGA graphics



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2002 : Segway



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2002 : BodyMedia SenseWear Armband



- Wearable body monitor
- Measures:
  - movement
  - heat flow
  - skin temperature
  - ambient temperature
  - galvanic skin response

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2002 : Smart Display

- Introduced by Microsoft
- Touch screen
- Integrated wireless card
- Light, Fast, Portable

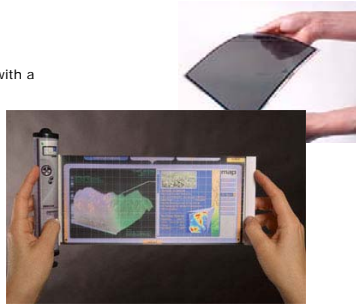


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2002 : Toshiba (and Phillips, later) Flexible LCD

- Full color
- High resolution
- .4mm thick
- Flexes in all directions
- Bends to form a curve with a radius as high as 20cm

[Phillips talks about it...](#)



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2003 : iPod



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2003 : Wearables From frog & Motorola



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2004 : Connected Household Appliances



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2004 : Phone/PDA/Camera/Computers/ ...



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2004 : Apple Apple Apple



2004 : Computers Everywhere



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2005 : Gaming



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2006+ : What's Next?

.. What do you think *is* next?

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