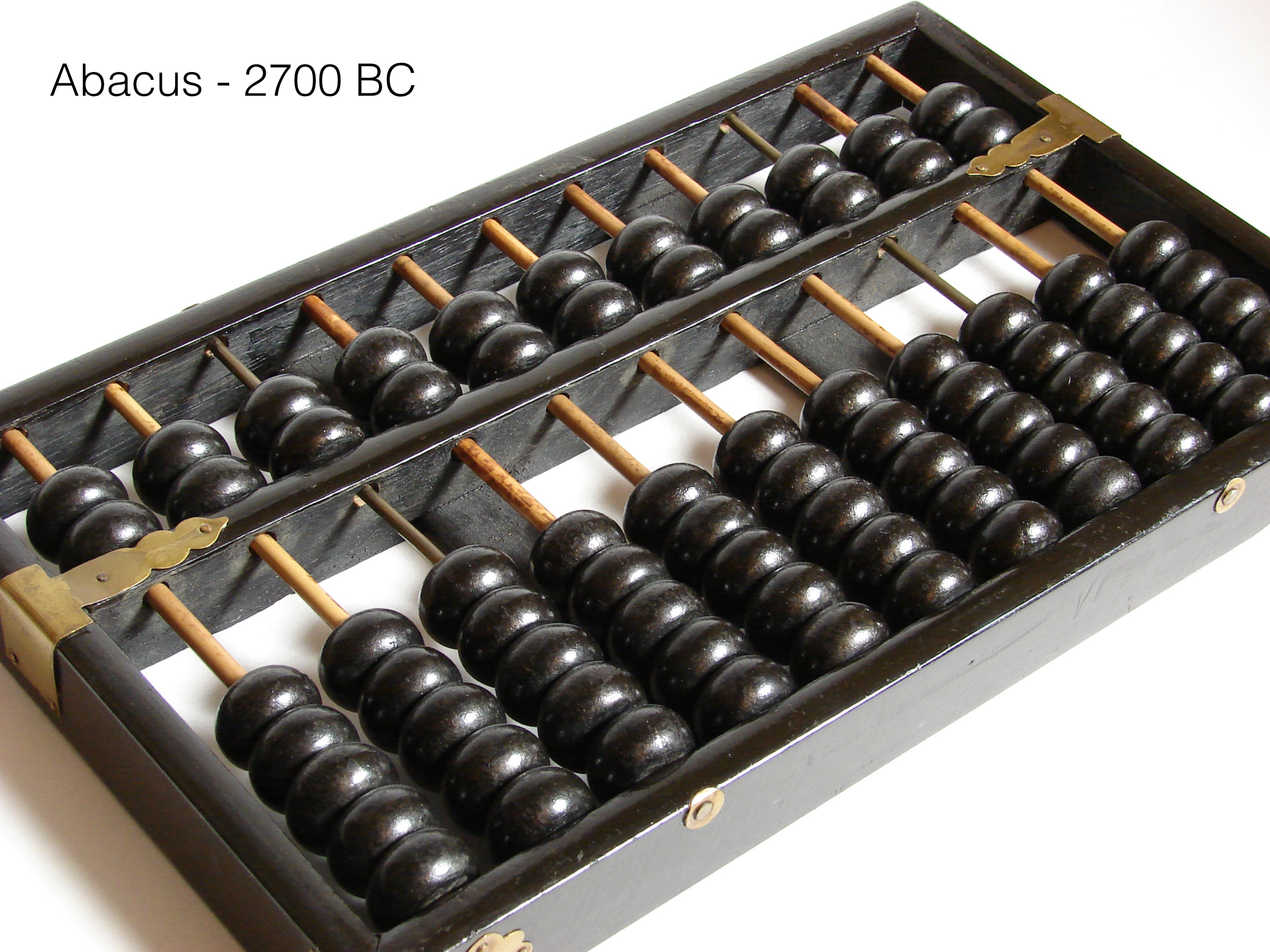
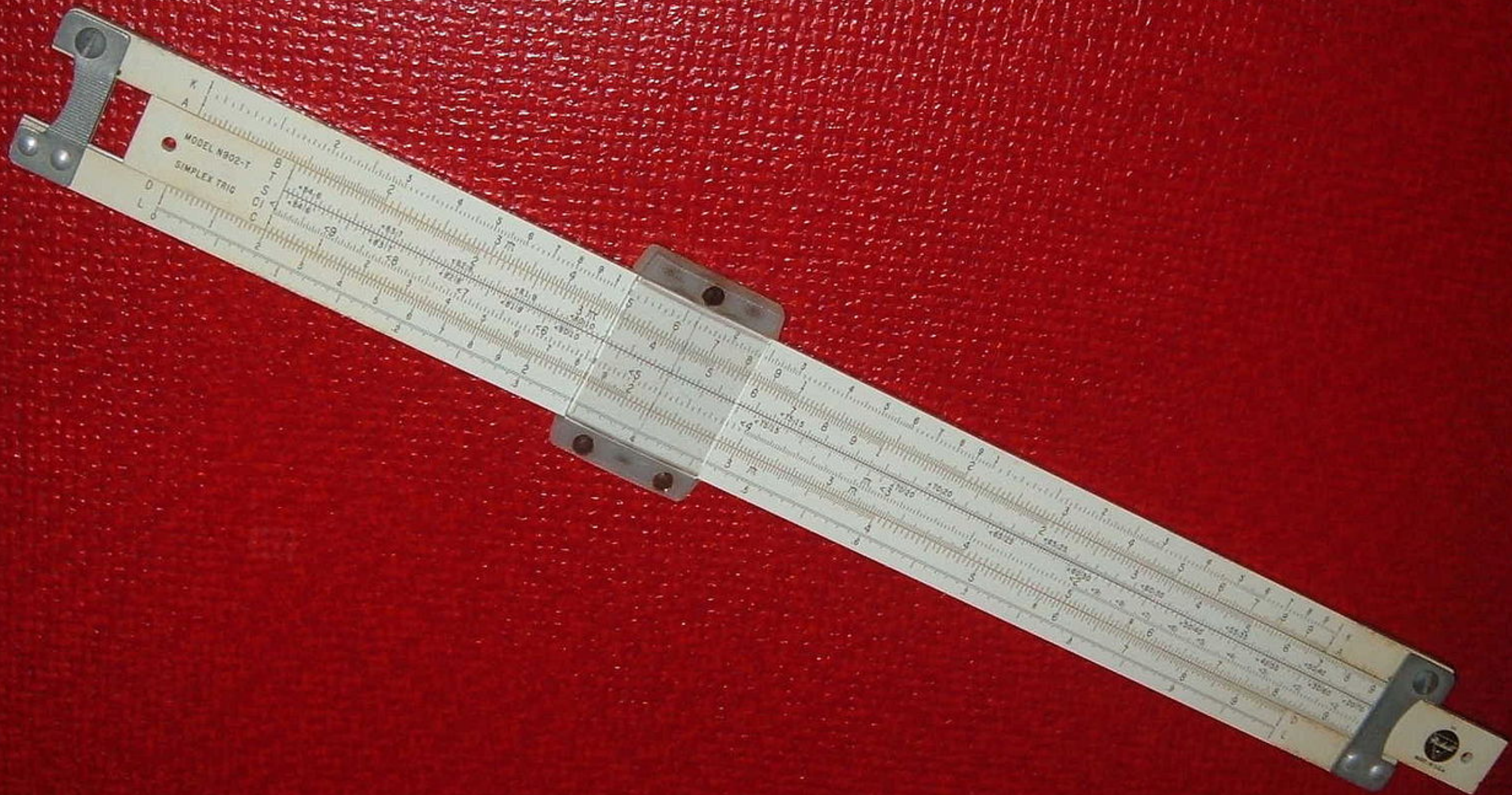


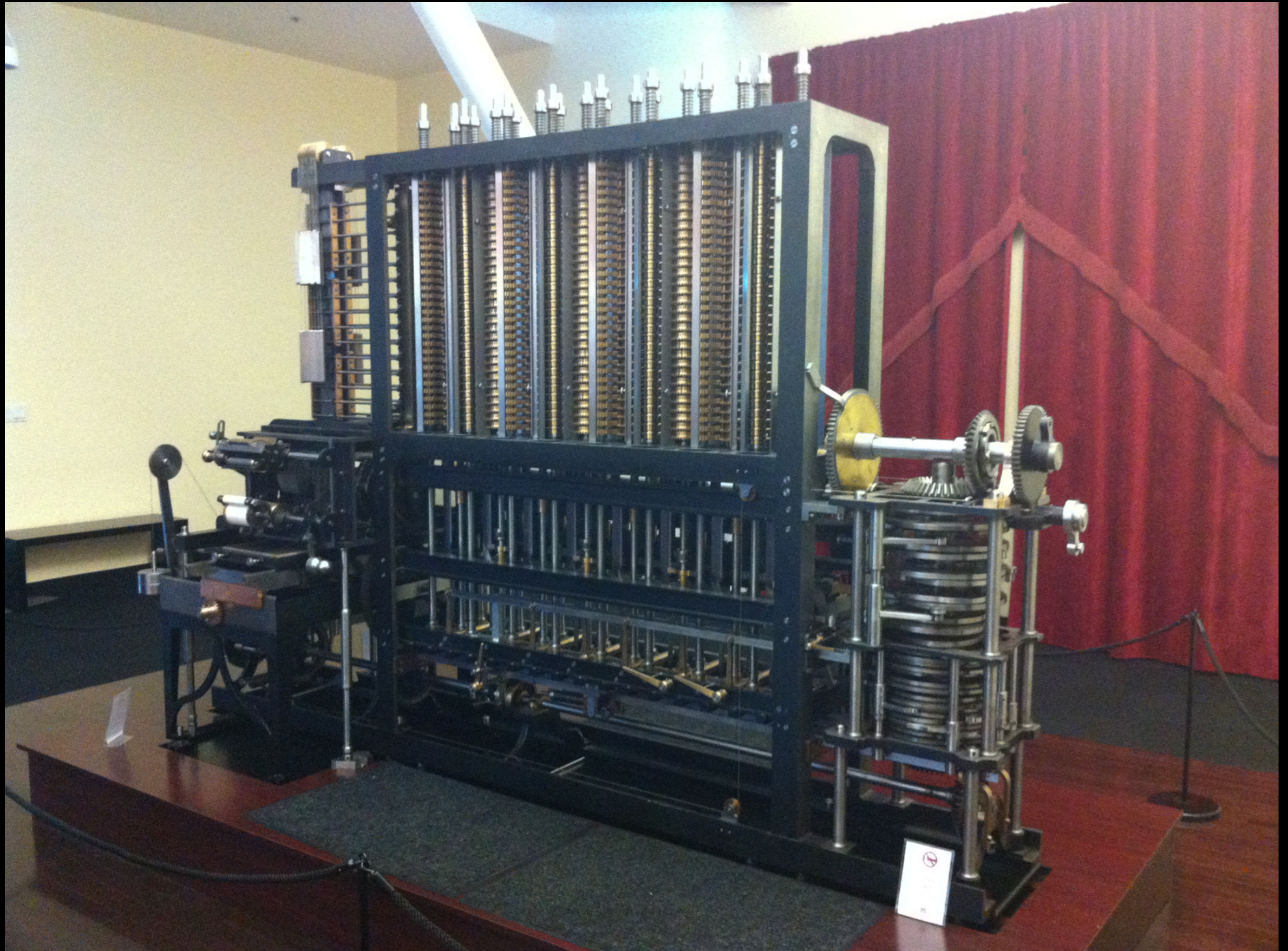
Abacus - 2700 BC



Slide Rule - 1650, in use until 1974!!



Babbage's Computer - 1830



Harvard / IBM Mark II (1937) - Relay

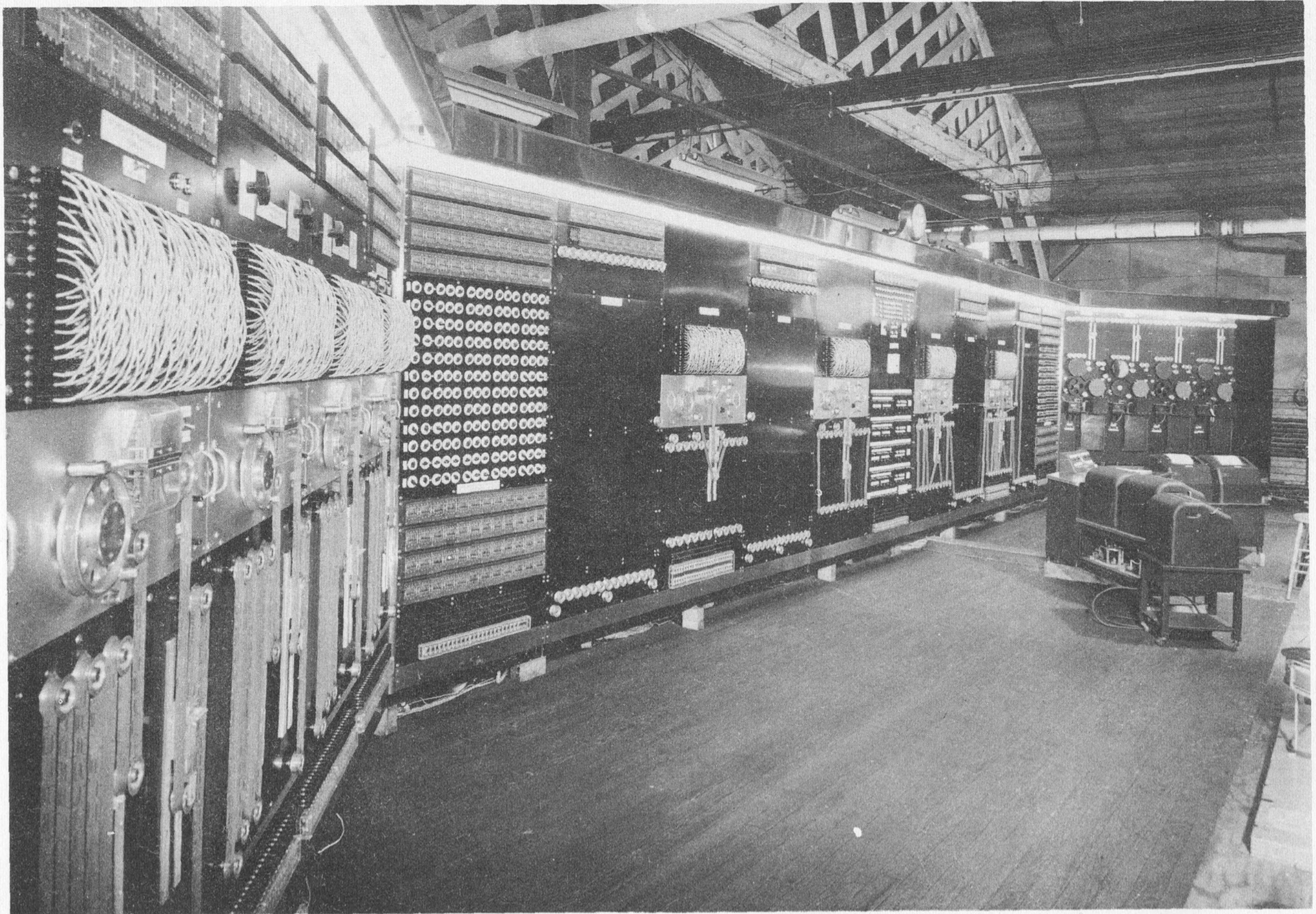


Plate I Main Control Board and Wings

From the Harvard Mark II - Computer Bug 1947

9/9

0800 Antan started
1000 " stopped - antan ✓

13" VC (032) MP - MC ~~1.982147000~~
(033) PRO 2 ~~2.130476715~~ (3) 4.615925059 (-2)
conv 2.130476415
conv 2.130676415

{ 1.2700 9.037 847 025
9.037 846 995 conv

Relays 6-2 in 033 failed special speed test
in Relay " 10.000 test.

1100 Started Cosine Tape (Sine check)
1525 Started Mult + Adder Test.

1545

Relay #70 Panel F
(moth) in relay.

First actual case of bug being found.
incident started.

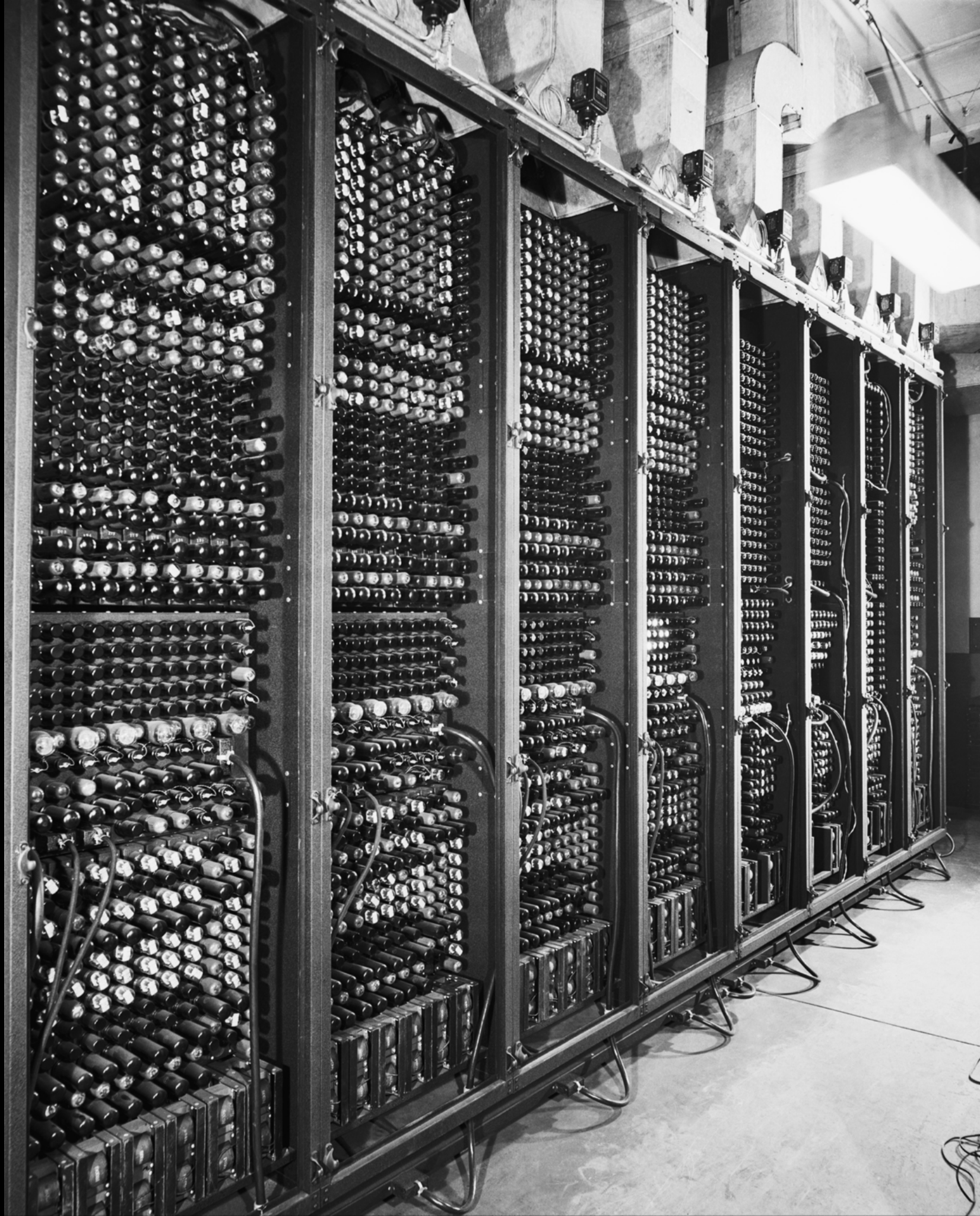
~~163~~ 1630 and tangent started.

1700 closed down.

Relay 2145
Relay 3370

1947
ENIAC -
Electronic
Numerical
Integrator
And
Computer

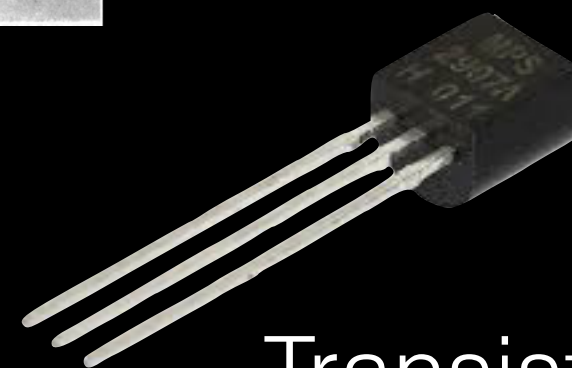
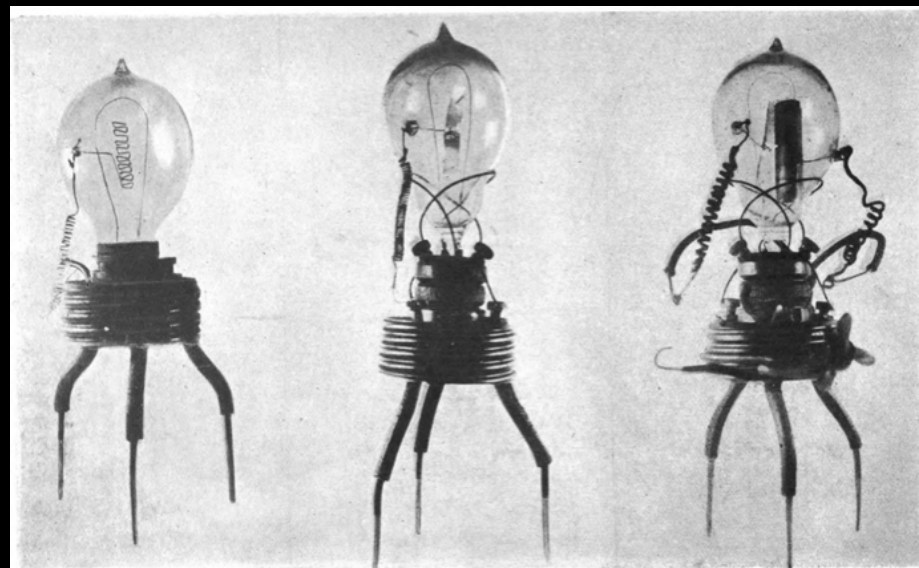
Used
Vacuum
Tubes





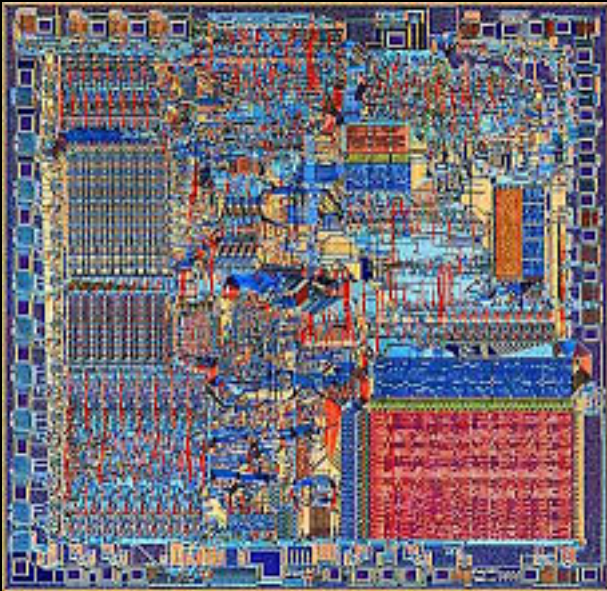
Mechanical Relays

Vacuum Tubes

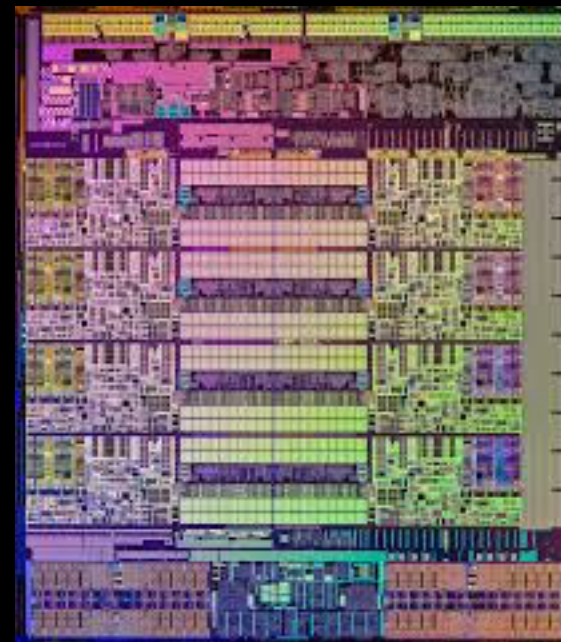
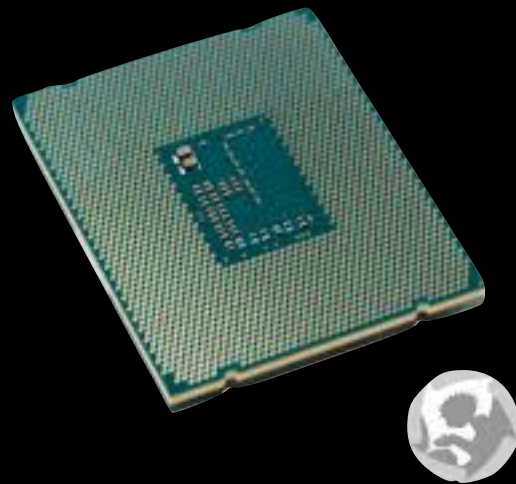


Transistors

Integrated Circuits



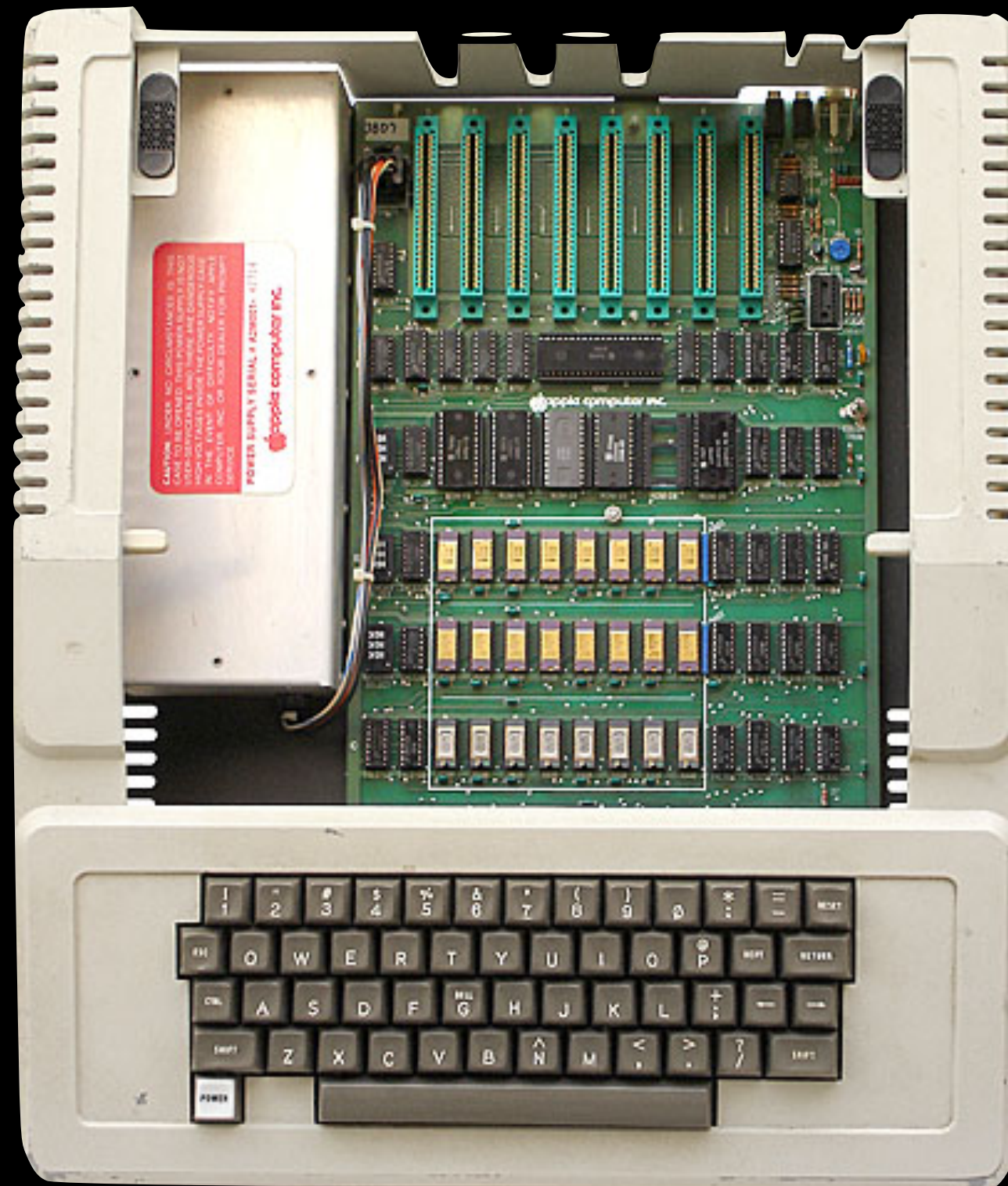
8088 vs Core i7



Altair 8800 - 1975



Apple II - 1977



IBM PC 5150 - 1981

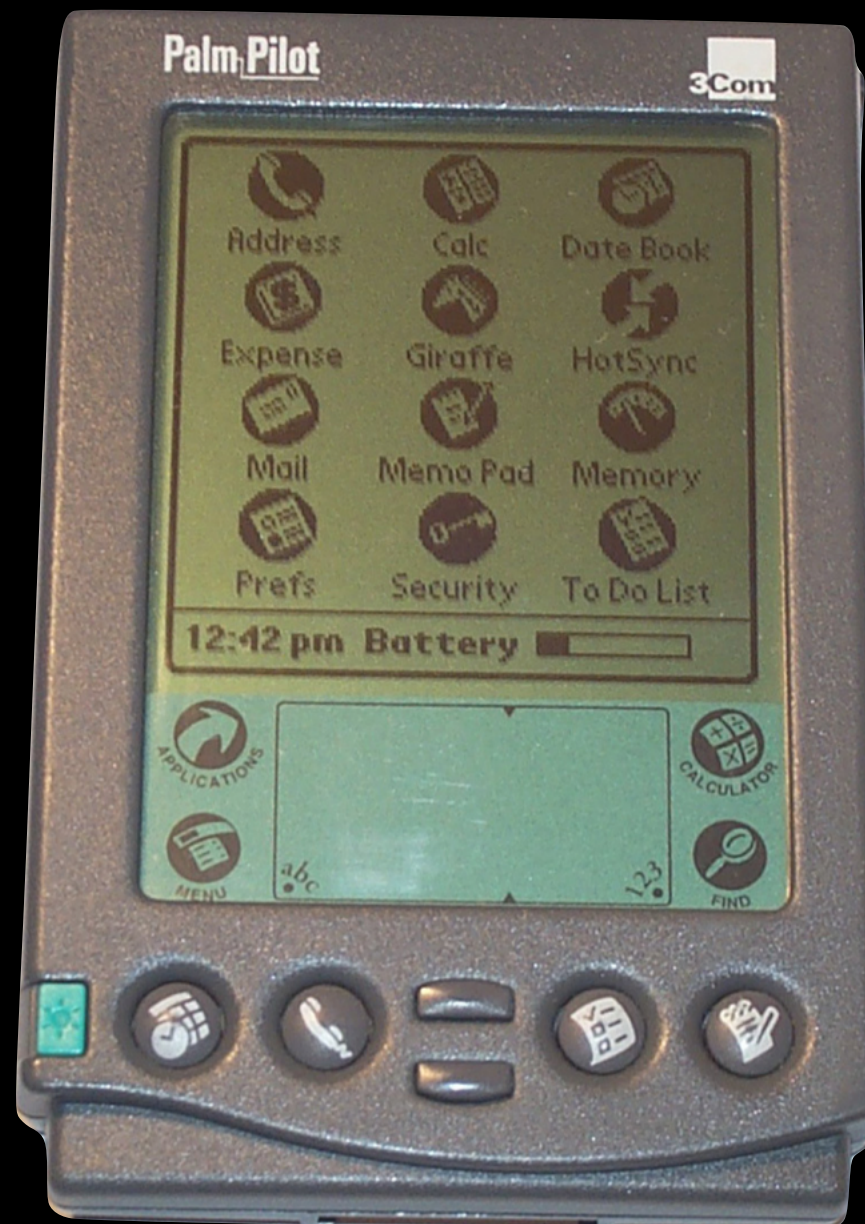
8088 - 16 or 64 kbit of RAM



Newton MessagePad - 1993



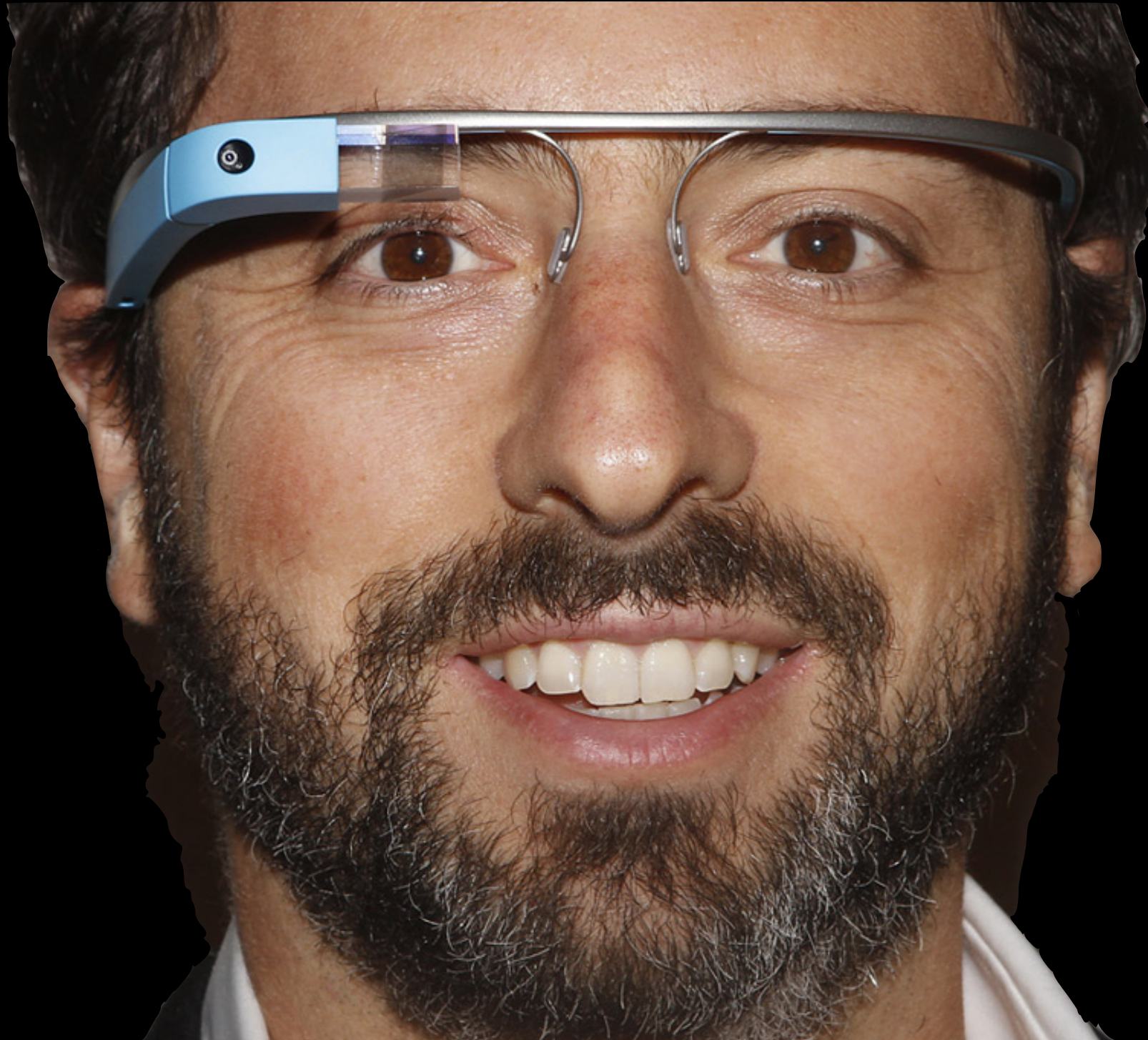
Palm Pilot - 1997



iPhone - 2007



Google Glass - 2012



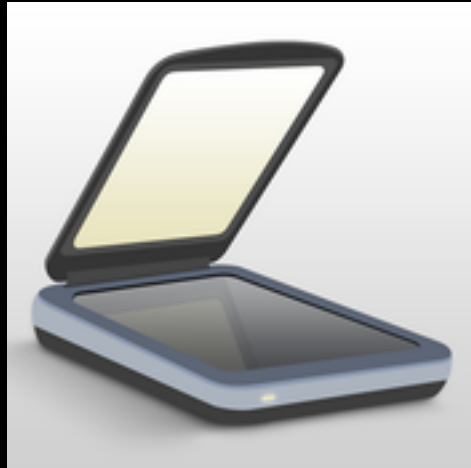
Apple Watch - 2015



What kinds of computers and devices do you think we will have in the future?

Quantum Computing?
Moore's Law?

Apps



TurboScan



Contraction Timer



Downcast



Find My iPhone

What are 4 apps
(mobile or computer)
that you or your family use?

How to make an App:

Brainstorm

Wireframe

Spell Out Requirements

Pick your Language / IDE

Implement

Test

Fix Bugs

Test

Fix More Bugs

Polish

Test

Release

Fix More Bugs

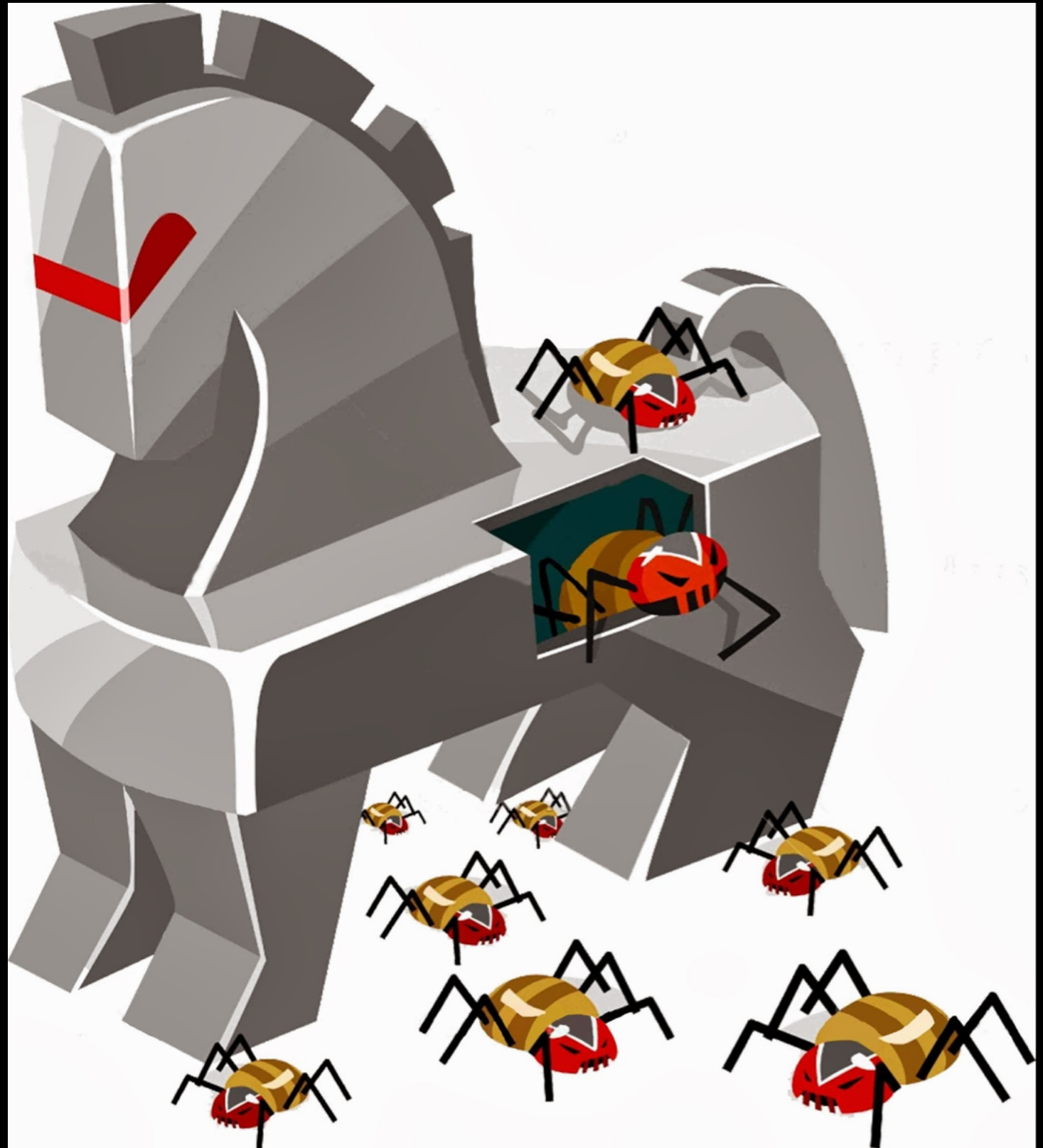
Show TwoSuperN

Malware:

Rootkits
Trojans
Worms
Spyware
Ransomware
Virus

Why?

Stealing Info
Stealing CPU Power
Stealing Money
DDoS
Intimidation



How does Malware spread?

Browser vulnerabilities
Dodgy Internet Sites / Ads
Illegal Software Downloads
Mail Attachments
Infected USB Drives

How can you prevent getting infected?

Be suspicious of anything that looks fishy.
Stay in the good part of the Internet. (A scout is **clean**)
Keep your system up to date
Run AntiVirus/Anti Malware software





E-Waste

- Many electronic devices contain dangerous chemicals.
- Lead - Found in older electronics - Abdominal Pain, Cramping, Anemia, Aggressive Behavior, Headaches, Reduced IQ, Kidney Damage
- Cadmium - Found in batteries - Flu like symptoms, Liver and Kidney Damage, Renal Failure, Death.
- Arsenic - Found in glass in screens - Posion

Banned Electronics in IL

- Televisions
- Monitors
- Printers
- Computers
(laptop, notebook,
netbook, tablet,
desktop)
- Electronic
Keyboards
- Facsimile Machines
- Videocassette
Recorders
- Portable Digital
Music Players
- Digital Video Disc
Players
- Video Game
Consoles
- Small Scale
Servers
- Scanners
- Electronic Mice
- Digital Converter
Boxes
- Cable Receivers
- Satellite Receivers
- Digital Video Disc
Recorders

How to dispose?

- Let's to a web search...