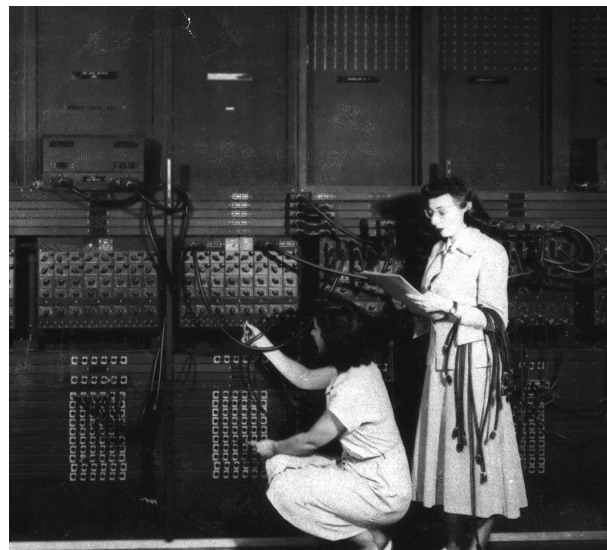


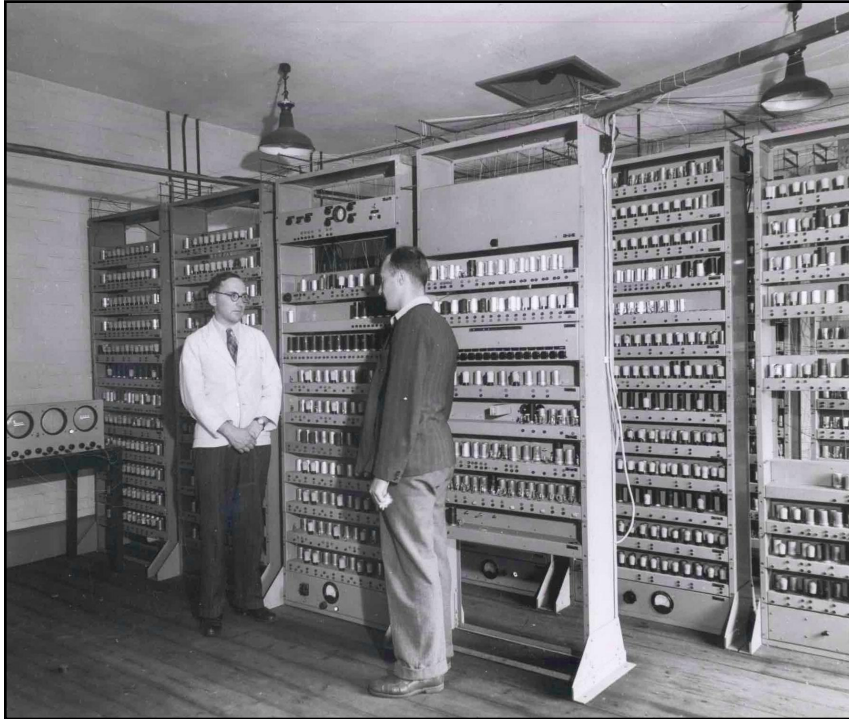
History of Computing 2 Electric Boogaloo

Presented by El' Dominick and El' Phong

War Makes the Machine

- Increasingly complex ballistics calculations caused a demand for an all-electronic calculating machine.
- The ENIAC was developed by J. Presper Eckert and John Mauchly to answer this call to war
- Up until its execution by lightning strike, ENIAC ran more computations than the rest of history combined



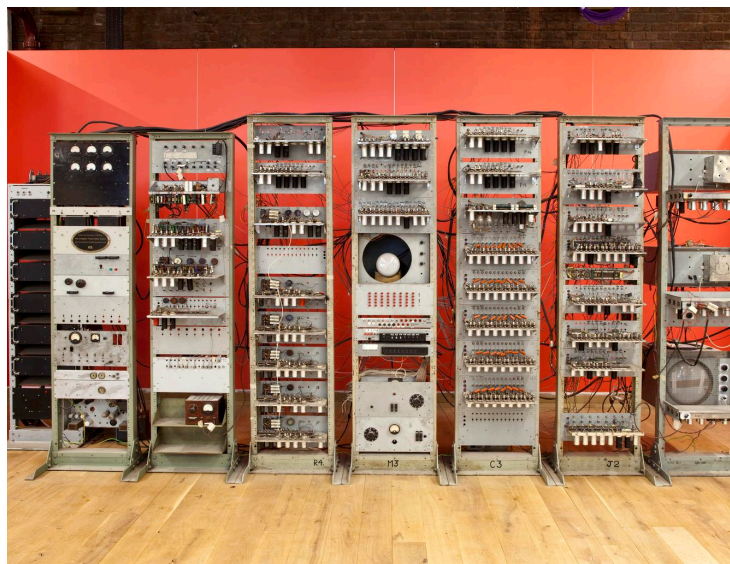


EDVAC

- Reprogramming the ENIAC required actual physical modifications, and this was a hassle.
- Eckert and Mauchly collaborated with Mathematician John von Neumann to create the EDVAC which pioneered the stored program.
- This led to the publication that programs could be stored electronically.

Manchester Baby

- In 1948, Freddie Williams invented the world's first stored-program computer.
- The Manchester Baby is archaic by today's standards but contains all the elements essential to a modern electronic computer.



The Computer Business

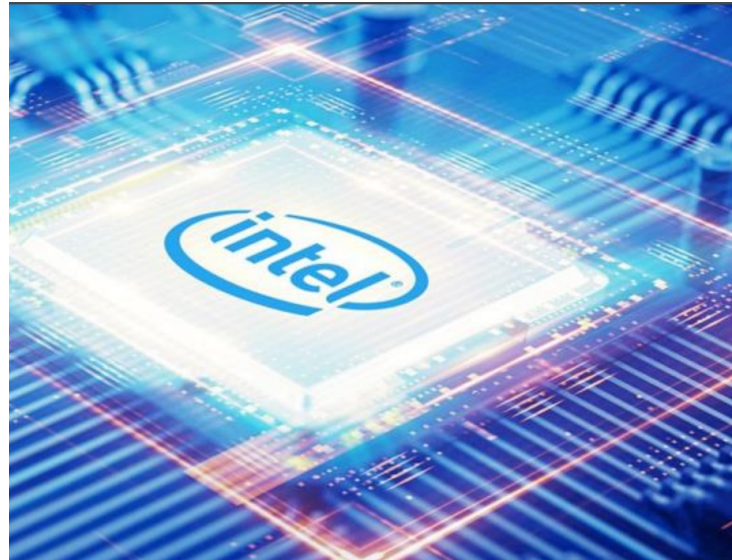
- Eckert and Mauchly set up their own company and their first product was the UNIVAC computer.
- Another company, IBM, started developing and selling more computers than UNIVAC and grew dominant through its inventions such as the ATM, floppy disk, and hard disk drive
- UNIVAC fell into financial problems and was then sold at a loss.




- IBM hired an unknown firm called Microsoft to provide software for their personal computers in 1980.
- Microsoft raked in the big beaucoup bucks and rose to dominate the personal computer operating system market.
- PC compatible systems have been able to thrive since the the most popular OS system was sold by a third party company (Microsoft)

Intel and the Microprocessor

- The first microprocessor was developed by Intel in 1971 as they made a contract with Japanese manufacturer Busicom to develop and produce 12 custom calculator chips.
- Intel employee Ted Hoff proposed developing a general-purpose computer chip that could be reprogrammed for different tasks. Busicom agreed, but Intel took too long to develop the chip and Busicom pulled the contract.
- Intel made the Intel 4004, 8008 and then the 8080. It made big beaucoup bucks.
- Busicom went bankrupt.

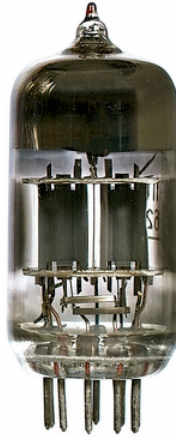


This time it's personal (kid)

- Altair 8800 is the first computer to be called a "personal computer"
- In 1977 the Apple II is introduced, sold as a complete package and producing color graphics, sold millions.
- 2012 ushers in the Raspberry Pi, promoting science education.

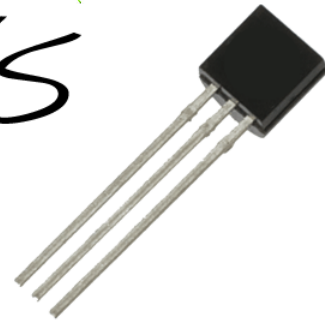
Transistors Baby

- Transistors were invented in 1947 by Bell Laboratory engineers John Bardeen and Walter Brattain.
- Early all-electronic computers used vacuum tubes as switches and consumed too much electrical power and gave off enormous heat which made them fail often.
- Transistors replaced tubes as they were much smaller, cheaper and consumed much less power.



Winner

VS



Moore's Law Holds True



Moore's Law states that the number of transistors on an IC every two years and as a result overall processing power would rise exponentially over brief periods while also lowering in cost.

In 1971 the 4004 processor had 2300 transistors and in 2010 the six-core versions of the Core i-series processors had 1.17 billion transistors

Resources

<http://www.computersciencelab.com/ComputerHistory/HistoryPt4.htm>

<https://www.britannica.com/technology/computer>

<https://plato.stanford.edu/entries/computing-history/>

<https://blog.adafruit.com/2018/01/01/on-the-history-of-edvac-the-electronic-discrete-variable-automatic-computer-retrocomputing-history/>

<https://www.tomshardware.com/reviews/upgrade-repair-pc,3000-2.html>