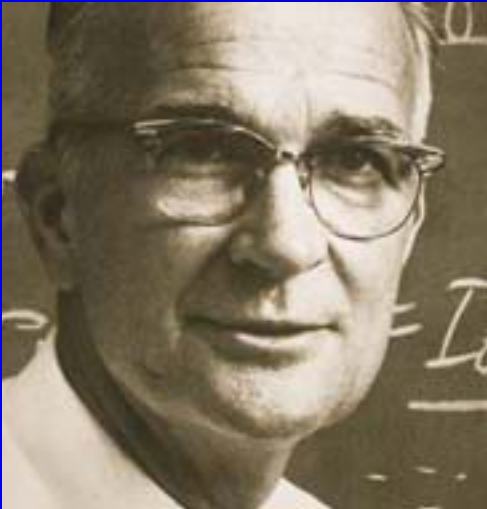


Fairchild Semiconductor

A History of Innovation

Shocking Shockley



- William Shockley, co-inventor of the transistor seven years earlier, founds Shockley Semiconductor Laboratories in Santa Clara Valley. He recruits 12 young scientists dedicated to the use of germanium and silicon for transistors -- his “Ph.D. production line.” Shockley wins the Nobel Prize for Physics in 1956

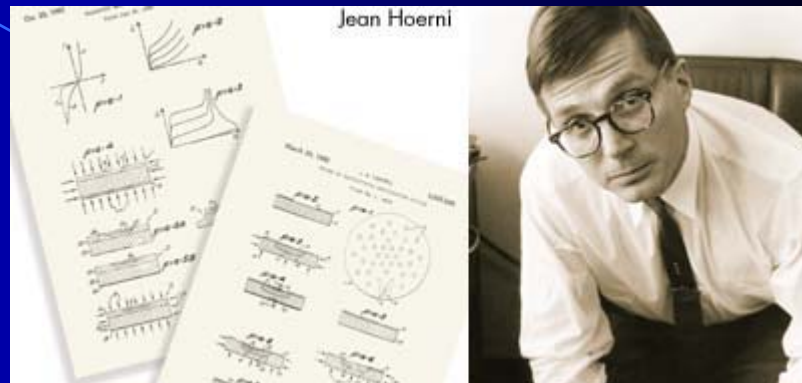
The “Traitorous Eight”



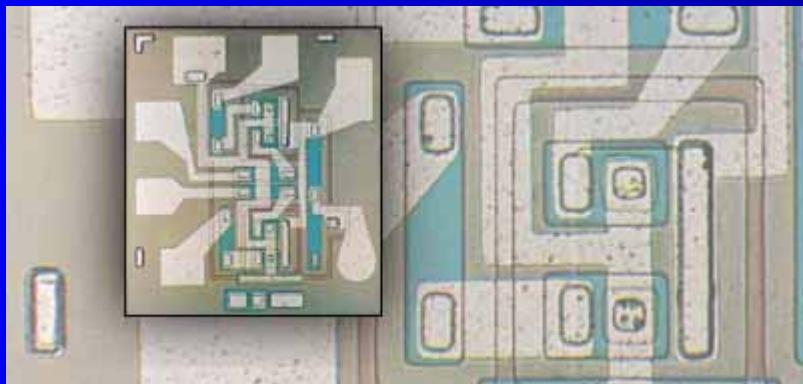
- In 1957 eight scientists leave Shockley Semiconductor Laboratories
- Use \$3500 of their own money to develop a method of producing multiple transistors on a single wafer
- They needed financial backing, so they struck a deal with Fairchild Camera and Instrument Corporation for \$1.5 million, in which Fairchild has the option of buying the company in eight years
- Profitable with first sale to IBM of 100 transistors for \$150 a piece

Early Innovations

- Robert Noyce develops the monolithic integrated circuit, leading to the planar transistor in 1958



- The dual-gate device was the first to incorporate buried-layer isolation technology in 1963

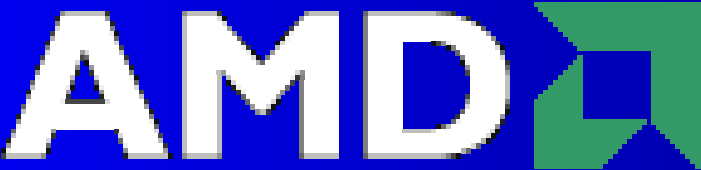


- In 1965 Fairchild introduced the first commonly used OpAmp.

Successful Spin-offs

The Intel logo is displayed in white lowercase letters on a blue square background.

intel.

The AMD logo consists of the letters 'AMD' in white, followed by a green square icon containing a white stylized 'A' shape.

AMD

- In 1968, Gordon Moore, one of the founders of Fairchild, co-founded the Intel Corporation
- In 1969, Jerry Sanders, an executive with Fairchild, co-founded AMD

Modern Innovations

- 1978 – Fairchild Advanced Schottky TTL
- 1986 – First CMOS non-volatile, erasable memory
- 1994 – Plug and Play controller
- 1996 – TinyLogic provides single-gate functions in very small packages
- 1998 – Arithmetic Controller Engine, flexible low-power microcontroller