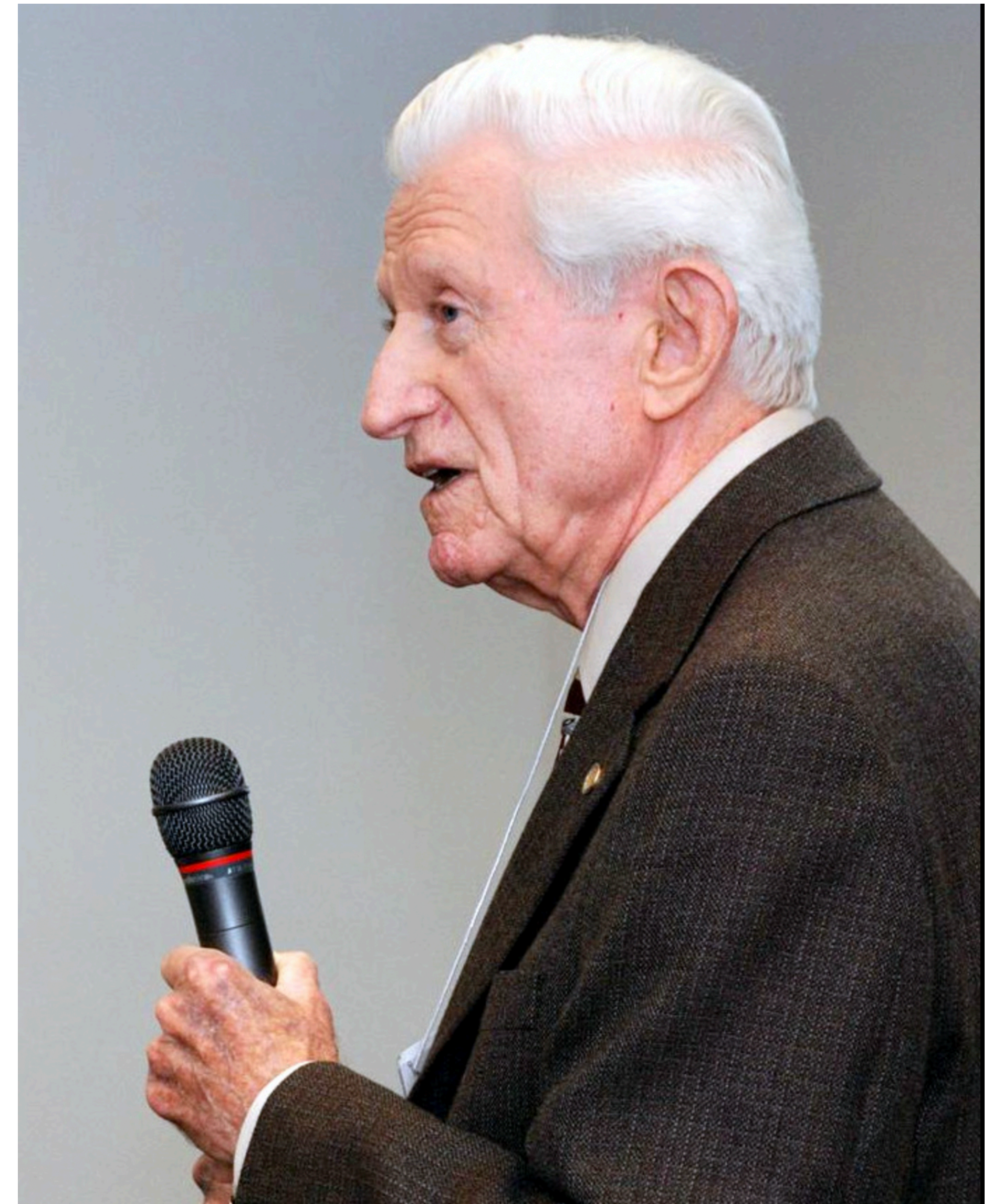


Gene Myron Amdahl

Computer Architect and Entrepreneur

February 19, 2022

- Born in 1922 to immigrant Norwegian parents in Flandreau, South Dakota
- Served in the Navy during WWII
- Degree in Engineering Physics in 1948 from South Dakota State University
- PhD in Theoretical Physics in 1952 from University of Wisconsin-Madison
- Created Wisconsin Integrally Synchronized Computer (WISC)

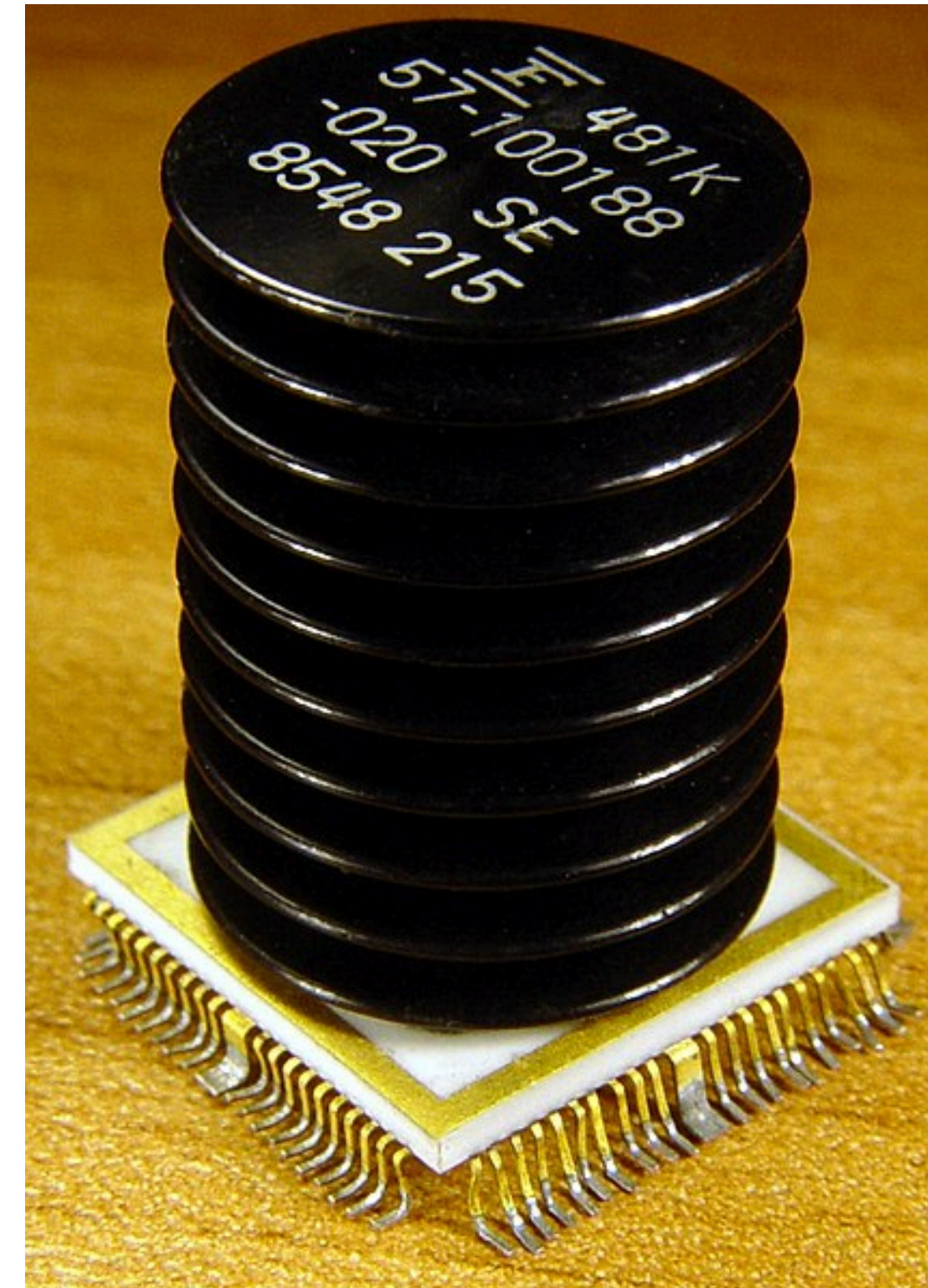


- Joined IBM in 1952. Left in 1955. Returned in 1960.
- Became Chief Architect of IBM System/360
- Named IBM Fellow in 1965
- Served as head of the ACS Laboratory in Menlo Park, CA
- Developed idea of using ECL technology for mainframes
- Left IBM in 1970 after his ECL idea was rejected



- Founded Amdahl Corp. in 1970
- First machine was 470v6
 - Plug compatible with IBM Arch.
 - Air cooled
 - Superior price/performance
 - Gene Amdahl personally designed the divide instruction
 - Savvy IBM customers had Amdahl mugs in their offices when IBM salespeople visited

amdahl



- Amdahl Corp experienced start-up birthing pains. Almost failed.
- Board lost confidence in Gene Amdahl's ability to manage day-to-day operations and hired Gene White to run the company.
- Gene Amdahl continued to have the title of Chairman of the Board, but he became a figure head. He still had the corner office.
- Dr. Amdahl continued to be a sales tool. He also had technical control over computer development.

The image shows the word "amdahl" in a bold, red, sans-serif font. The letters are stylized with a blocky, geometric appearance. The 'a' has a thick vertical stem and a horizontal top bar. The 'm' consists of two vertical stems connected by a horizontal bar. The 'd' has a vertical stem and a horizontal top bar. The 'a' is followed by another 'a', then 'h', 'l', and finally 'i'. The 'i' is a simple vertical bar with a small dot above it.

- Major funding from Heizer and Fujitsu.
- Company almost out of money so top executives used personal credit cards to buy tickets to Tokyo.
- Company had to meet sales target to get additional money.
- After going public, Fujitsu had 1/3 of stock, Heizer 1/3, public 1/3.
- Several years later, Heizer cashed in and Fujitsu bought up to 49%.

The logo for Amdahl, featuring the word "amdahl" in a bold, red, sans-serif font. The letters are stylized with a blocky, geometric appearance, characteristic of the company's branding.

- Follow-on machine was the 580.
- Gene Amdahl personally intervened in the HW architecture.
- E-Unit designed in Sunnyvale, but I-Unit and S-Unit were designed on a junket to Europe.
- Mainstore and Channels designed on a subsequent junket to Europe.
- Dr. Amdahl's divide algorithm was left out of the design.

amdahl



- Code name for 580 was “Oslo”. Code name selected because of Dr. Amdahl’s Norwegian ancestry.
- Code name for front-end processor was “Norway”.
- Code name for software used by front-end processor was “UROF”.
- Dr. Amdahl had back trouble from time to time. His back went out and while lying in bed he came up with an idea for a new company.
- Dr. Amdahl left Amdahl Corp. in August 1979

The image shows the word "amdahl" in a bold, red, sans-serif font. The letters are stylized with a blocky, geometric appearance, characteristic of the Amdahl Corporation logo.

- Increased use of word “fud”
(meaning Fear, Uncertainty, Doubt)
 - Uses letters from “uff da” 😊
- 30 Patents
 - 4,578,750 Code determination using half-adder based operand comparator
 - Gene M. Amdahl
 - Hsiao-Peng S. Lee
 - Stephen J. Rawlinson
 - Stephen F. Stuart

- Amdahl’s Law: a formula which gives the theoretical speedup in latency of the execution of a task at fixed workload that can be expected of a system whose resources are improved

- Dr. Amdahl founded **Trilogy Systems** in 1980
- Computer designed on a wafer instead of on a series of chips
- Planned to compete against IBM and Amdahl
- Raised \$230 million - a record for fundraising at that time
- Ran into manufacturing and cooling problems
- Other problems included Dr. Amdahl being in a car accident and being preoccupied with litigation; also the company president died of a brain tumor
- Largest financial failure in Silicon Valley before internet/dotcom bubble of 2001
- Dr. Amdahl left the company in 1989

- Founded **Andor International** in 1987. Company was bankrupt by 1995. Last company for which he was able to raise money from venture capitalists
- Founded Commercial Data Servers in 1996.
- Appointed to Board of Advisors of **Massively Parallel Technologies** in November 2004
- Died Nov. 10, 2015, from pneumonia. Had Alzheimer's in the last years of his life.

- Named IBM Fellow in 1965
- Became member of National Academy of Engineering in 1967
- Elected Distinguished Fellow of the British Computer Society in 1979
- Awarded Harry H. Goode Award by IEEE Computer Society in 1983
- Recognized as Centennial Alumnus of South Dakota State University in 1986
- Received Honorary Doctorates from 4 universities
- Made a Fellow of the Computer History Museum in 1998
- Recognized with the SIGDA Pioneering Achievement Award in 2007