

# Robert N. Noyce

*Born 1927, Denmark, Iowa; died June 3, 1990, Austin, Texas; with Gordon Moore, the developer of the integrated circuit (or microchip) and semiconductor chips; chairman (of the board of Intel Corp.*



*Education:* BS, Grinnell College, 1949; PhD, physical electronics, MIT, 1953.

*Professional Experience:* Philco Corp., Philadelphia, 1953-1956; research assistant, Shockley Semiconductor Laboratories, 1956-1957; Fairchild Semiconductor Corp., 1957-1968; cofounder and vice chairman, Intel Corp., 1968-1990.

*Honors and Awards:* Ballantine Medal, Franklin Institute, 1966; Medal of Honor, IEEE; Faraday Medal, IEEE, 1979; National Medal of Science, 1979; National Medal of Technology, 1987; IEEE Computer Society Pioneer Award, 1980; member, National Academy of Science; member, National Academy of Engineering; member, American Academy of Arts and Sciences.

The son of a Congregational minister, Noyce attended Grinnell College, graduated Phi Beta Kappa in 1949, and continued his education at MIT, receiving a PhD in physical electronics in 1953. Noyce's co-invention of the integrated circuit in 1959 transformed Santa Clara Valley's orchards into the world center of high-tech industry, and launched what some people call the second industrial revolution. Fairchild Semiconductor Corporation was the first successful semiconductor company in the valley, and was the training ground for many of the entrepreneurs who later founded other valley companies.

Soon after Noyce and other Shockley engineers founded Fairchild Semiconductor Corporation, his patent application on behalf of the chip was challenged by the Texas Instruments application with Jack Kilby. In 1969 the courts ruled in favor of Noyce. It is generally agreed, in hindsight, that Kilby built the first integrated circuit while Noyce provided a practical implementation that could be commercialized.

## BIBLIOGRAPHY

### Biographical

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## **UPDATES**