OBITUARIES

Jack Kilby

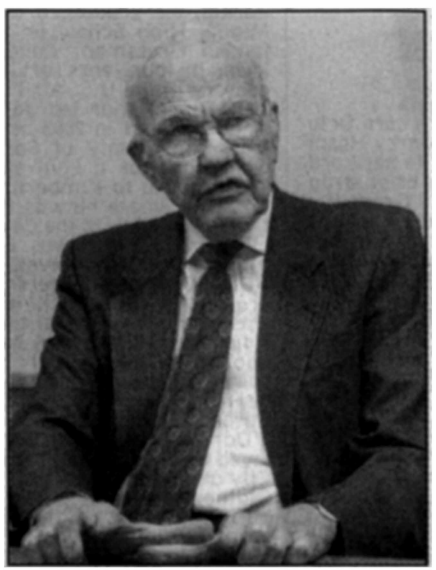
Microchip inventor was Nobel laureate

By T.R. Reid
THE WASHINGTON POST

For decades after Jack St. Clair Kilby got the revolutionary idea that has enhanced daily life for almost everybody on Earth, people used to tell the inventor of the microchip that he deserved a Nobel Prize. He always scoffed at the notion. "Those big prizes are for the advancement of understanding," he would explain in his slow, plain-spoken Kansas way. "They are for scientists, who are motivated by pure knowledge. But I'm an engineer. I'm motivated by a need to solve problems, to make something work. For guys like me, the prize is seeing a successful solution."

As it happened, Jack Kilby did eventually win the Nobel Prize, although the Royal Swedish Academy didn't award it until more than 40 years after his 1958 breakthrough and after he had received almost every other honor and award an engineer can receive.

But for Mr. Kilby, who died Monday at 81, the real prize was watching his "successful solution" to an engineering problem become a ubiquitous part of human life. In his soul, Mr. Kilby was an engineer, and proud of it. "It's quite satisfying — hell, it's incredibly satisfying — to face some important problem and find a solution that works," he said. "Yeah, scientists get the theories. But engineers make them work. And the engineer has the added challenge of



Kilby expressed amazement at devices built around the microchip.
Robin Scholz / Associated Press

cost, because if your solution works but it costs too much, there will never be any application."

Mr. Kilby expressed amazement at the vast range of applications — calculators, computers, digital cameras, pacemakers, cell phones, space travel and so forth — that have developed around the tiny circuit-on-a-chip that he devised when he was the most junior engineer at Texas Instruments.

"It's astonishing what human ingenuity and creativity can do," he said. "My part was pretty small, actually." Whenever people would mention that Mr. Kilby was responsible for the entire modern digital world, he liked to tell the story of the beaver and the rabbit sitting in the woods near Hoover Dam. "Did you build that one?" the rabbit asked. "No, but it was based on an idea of mine," the beaver replied.

What Mr. Kilby liked best about the various awards he won was the chance to take friends and family — two daughters, five grandchildren and his sister Jane — to whatever city or country was giving him the honor. He was pained, however, when he tried to hail a taxi outside the Grand Hotel in Sweden and then discovered that the Nobel Prize people had expected the new laureate to ride around town in their limousine. "An incredible waste," he mumbled under his breath.

Jack Kilby became the toast of Texas Instruments after his invention of the microchip and his key work on the first major consumer application, the pocket calculator. But he turned away from all the raises and promotions the company could shower upon him and set off on his own in the 1970s. He decided that being a real engineer required the kind of relentless focus on a single problem that no big company could support.

He spent 30 years tinkering in an office beside a freeway in Dallas, producing a few dozen patentable ideas, but nothing very lucrative. Leaving the big corporate lab, he said, "was pretty damn close to stupid as a financial matter. But there's a lot of pleasure for an engineer in picking your own problems to solve. So I've enjoyed it."

After his wife's death decades ago, Mr. Kilby became dependent on his lively, talkative sister, who moved to Dallas to help out. She was the person who could always find his car keys and hearing aid. Jane Kilby died late last year, and Mr. Kilby's health began to decline shortly thereafter.

There was a time when engineers who improved our days and spawned global industries achieved enormous prominence and public attention. Thomas Edison was probably the best-known man in the world within 10 years after he perfected the light bulb. Henry Ford and his Tin Lizzie were recognized everywhere. Alexander Graham Bell was a household name long before most households had a telephone.

But Jack Kilby and his co-inventor, the late Robert Noyce — two contemporary Americans whose invention is essential and ubiquitous — never received that kind of recognition. Outside of the engineering labs, where he was recognized as an immortal, Jack Kilby's name generally drew a blank. Which was just fine with him. When Texas Instruments started promoting the integrated circuit as "The chip that Jack built," Mr. Kilby wrote off the whole campaign as "the standard corporate baloney." When a school board member in his Kansas hometown proposed changing the name of Great Bend High to Jack S. Kilby High School, the school's most distinguished alumnus quickly scotched the idea. "The whole thing would be a lot of trouble," he said. "I'm not worth the fuss."

Mr. Kilby had a shot at big-time fame, when Diane Sawyer interviewed him for "The CBS Morning News." Sawyer was peppy and excited; Mr. Kilby was his slow, laconic self. When Sawyer noted that Mr. Kilby's invention had "kept the United States at the forefront of technology," he stewed over the idea for a moment and then said, "Well, I hadn't thought of it in those terms."

Sawyer asked, "Have you made money from this invention?" he paused again, and finally said, "Some, yeah." With that, CBS broke for a commercial and Jack Kilby's moment in the sun was over.

Except, of course, that his contribution to the modern world goes on and on. He never became famous, but he solved a problem — an engineering problem of literally cosmic dimensions. For Jack Kilby, the engineer, that was enough.