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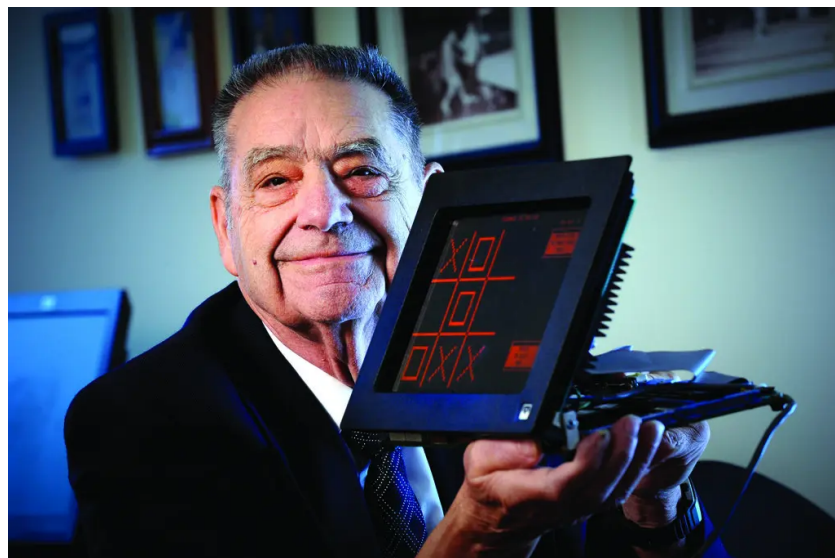
Donald Bitzer, Unsung Pioneer of Interactive Computing, Dies at 90

In the 1960s and '70s, he developed the PLATO computer system, which combined instant messaging, email, chat rooms and gaming on flat-screen plasma displays.

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Donald Bitzer was one of the inventors of a flat-panel plasma display, the same technology later used in flat-screen television sets. College of Engineering at N.C. State University

By **Michael S. Rosenwald**

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Donald Bitzer, an electrical engineer whose groundbreaking computer system PLATO, developed in the 1960s and '70s at the University of Illinois, was a telegram from the digital future that combined instant messaging, email, chat rooms and gaming on flat-screen plasma displays, died on Dec. 10 at his home in Cary, N.C. He was 90.

His son, David, confirmed the death.

Unfashionably attired and prone to performing magic tricks during lectures, Dr. Bitzer was a charismatic and overlooked character in the history of computing — an industry whose stories about inventive Silicon Valley prodigies has sometimes overshadowed the contributions of the industrious university professors who came first.

"The level to which PLATO, its people and its history have been ignored is extraordinary given not only how seminal the innovations were and how early its online community flourished, but also how recently it all happened," the tech entrepreneur Brian Dear wrote in "The Friendly Orange Glow: The Untold Story of the Rise of Cyberculture" (2018).

Dr. Bitzer, a professor of electrical and computer engineering at the University of Illinois, began developing PLATO in 1960 as a tool for educators to create interactive, individualized coursework. It swiftly evolved into "a culture, both physical and online," Mr. Dear wrote, "with its own jargon, customs and idioms."
PLATO, an acronym for Programmed Logic for Automated Teaching Operations, initially ran on television-like screens connected to the university's ILLIAC I computer, a five-ton machine powered by 2,800 vacuum tubes.

To increase interactivity, in 1964 Dr. Bitzer, along with a fellow professor, H. Gene Slottow, and a graduate student, Robert Willson, invented a plasma display illuminated by gas-infused pixels — the same technology that would later power flat-screen televisions.

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Thousands of PLATO terminals, radiant with bright orange text and graphics, were installed around the University of Illinois campus and eventually at other universities and high schools throughout the country.

Connected via phone lines, the touch-screen terminals were a kind of first draft of social networking that presaged the way digital devices now dominate daily life. Students learned math, Spanish and other subjects on them during the day, and at night they played games against one another, communicated in chat rooms and became pen pals.

"It was kind of crazy," Ray Ozzie, a former student of Dr. Bitzer's who later became Microsoft's chief technology officer, said in an interview. "It was a little peak into what the internet would later become, and it was all fostered by Don's vision, by him creating an environment for innovation."

Dr. Bitzer was an eccentric and disruptive professor who occasionally used magic tricks during lectures to explain complicated topics. He worked at the Computer-Based Education Research Laboratory, which was across the street from the university's Digital Computer Laboratory. The two labs were fierce rivals charting divergent visions of computing.

"There was a gap that was a thousand miles wide between those buildings even though they were across the street from each other," Mr. Ozzie said. "One was formal computer science theory, with punch cards and everything else. The other had this creative eccentric who wanted nothing to do with theories. He was all about applying computer science to solutions."

To Mr. Ozzie, one of many students of Dr. Bitzer's who later worked for major technology companies, the choice was obvious.

"I could write my program on a piece of paper, go to the key punch, type it in, get the card deck, go submit it," he said. "Or across the street there was this PLATO thing, these orange glowing graphics terminals. It was absolutely insane, and I had to be a part of it."

In 1981, as personal computers began creeping into the marketplace, Dr. Bitzer appeared on "The Phil Donahue Show" with a PLATO terminal to discuss the future of computing. Dr. Bitzer touched words on the screen to reveal images and texted with someone at the University of Illinois, mesmerizing Mr. Donahue.

"Can we get a little closer?" the host said to a camera operator. "This is an electronic miracle."

In 2002, Dr. Bitzer shared an Emmy Award for technological achievement in 2002 for his work in the development of plasma screens. College of Engineering at N.C. State University

Donald Lester Bitzer was born on Jan. 1, 1934, in East St. Louis, Ill., and grew up in nearby Collinsville. His father, Jesse Bitzer, owned an automobile dealership. His mother, Marjorie (Look) Bitzer, died from cancer when he was 17.

Growing up, Donald had a chemistry set in his basement.

"Even in the first grade when the class bell rang, I used to run out," Dr. Bitzer said in a 2022 interview with the Computer History Museum. "There were a lot more interesting things going on in the basement in my home than there were in that classroom at school."

He graduated from the University of Illinois in 1955 with a bachelor's degree in electrical engineering. He received his master's the following year and his doctorate in 1960. He taught at the university for the next 29 years.

In 1990, he joined the department of computer science at North Carolina State University in Raleigh. Along with Mr. Slottow and Mr. Willson, he won an Emmy Award for technological achievement in 2002 for the development of plasma screens.

Dr. Bitzer married Maryann Drost, his high school sweetheart, in 1955. She died in 2022.

In addition to his son, he is survived by three grandchildren, two great-grandchildren and his sister, Carol Lampe.

PLATO, alas, did not survive. The Control Data Corporation, a

leading manufacturer of mainframe computers, licensed the system in the mid-1970s. As the mainframe business collapsed, so did the company's fortunes, and PLATO never became a big hit.

Mr. Dear said that in writing "The Friendly Orange Glow," he wanted to make sure that PLATO's role in the early history of computing was not forgotten. He spent more than a decade interviewing hundreds of students and software developers who used the terminals in the 1970s. They were like people living in an alternate universe.

"You're sitting there at the dinner table talking about your day at work or school," Mr. Dear said in an interview, "and then the kid who happens to be a PLATO user is describing how they chatted with somebody in Hawaii, destroyed planets and sent emails around the world. You're like, 'What in the world are you talking about?'"

The present day, it turns out.

"Everyone stares at their iPhones around the dinner table," Mr. Dear said. "We are all living the PLATO life now."

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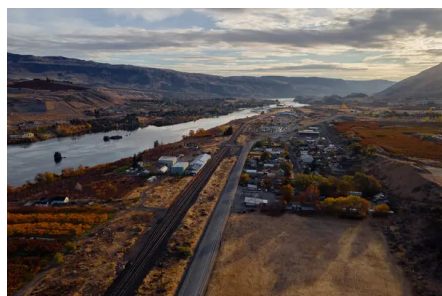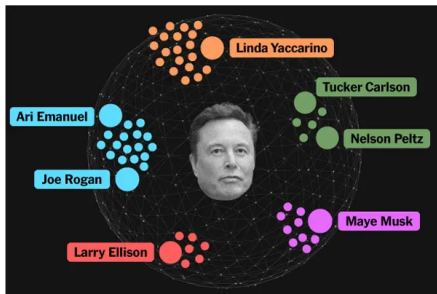🎁 Share full article   ↗   🔖

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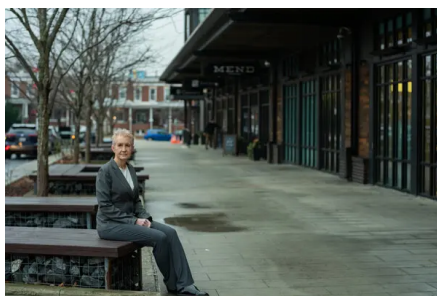The Men and Women Swirling Around Elon Musk

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