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Who is the Real Dennis Ritchie?

"I'm a private person. I'm quiet.

I'm more steady than brilliant"

**—Dennis Ritchie,
AT&T Bell Labs**

By Gary Andrew Poole

One afternoon at around five o'clock, I felt a little desperate. My assignment was to write a "personal" profile of Dennis Ritchie, one of the fathers of UNIX. The AT&T Bell Labs PR person was supposed to have set up an interview with Ritchie weeks earlier. Hoping she was in, I called her. No answer. I had Dennis Ritchie's phone number. Well, I thought, I'll just call him directly. The phone rang. A man answered. It was Dennis Ritchie!

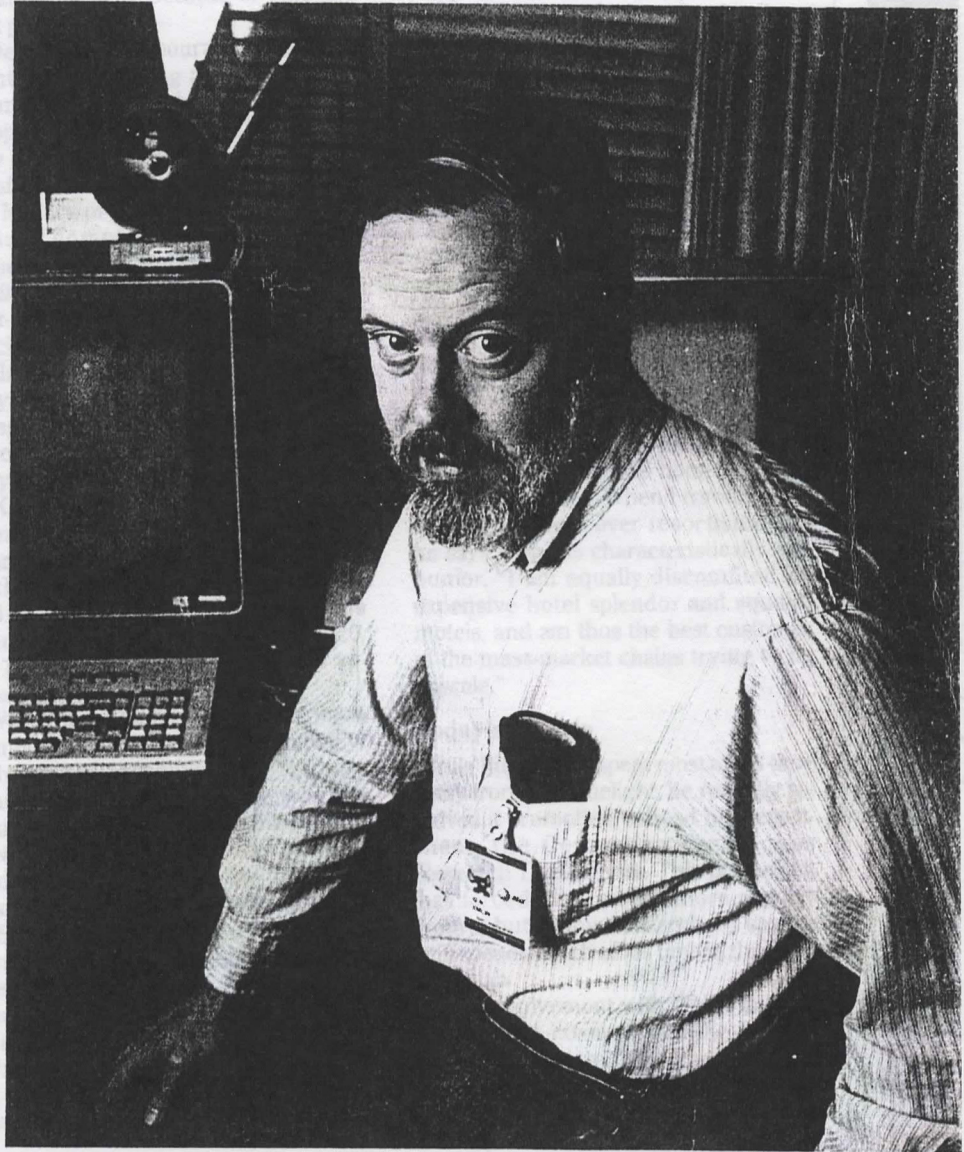
Unfortunately, he didn't sound too thrilled to talk with me. He sounded like he was deep in thought and I had disturbed him. You see, Dennis Ritchie is a

night owl. He typically goes to work at noon and stays until the wee hours of the morning. It was 8:00 p.m. his time—the middle of his work day.

Ritchie sounded meek. "Why do you want to talk with me?" he said. I told him our readers want to know what he's like, what he's been doing lately. After much cajoling on my part, he consented.

"Okay," he said quietly, "I'll talk."

I was excited. This was a great coup. Dennis Ritchie, along with researcher Ken Thompson, developed the first version of UNIX. Ritchie doesn't grant many interviews. And here I was about ready to have a long chat with him. A day later as I was researching my subject, his PR person called me. "I'm sorry,"



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she said. My heart dropped. "I tried to get you an interview with Dennis, but he hasn't returned my phone calls. Looks like you're going to have to get someone else."

Whew. I was relieved. "Don't worry," I said, "I've already set it up." "You did what?" she said. "I set up the interview," I said slowly. She was irate. "Dennis Ritchie is a very private man," she said in a controlling tone. "Don't ever call him directly."

I decided to find out if Ritchie was really that private. PR people often protect their employers. So I set out to talk with his colleagues to find out what Dennis Ritchie is like. They were also protective, yet they lacked any personal insight into the man. His colleagues dotted their sentences with *I think*. "I think Dennis has a sister living in England...I think he has a cabin in the Adirondacks...I think he works at home a lot..." His colleagues simply don't know much about his personal life.

The big day came. I talked with Ritchie for 45 minutes, with the PR person listening in. After the interview I felt queasy. He is a private person. His responses to my questions seemed evasive. A sample: Dennis, why did you choose to go to Harvard? "I don't know, Harvard seemed like an interesting place to get an education," he replied. Was there a turning point in your life, a person that influenced you? "I did most everything on my own," he said.

The PR person phoned me back later. "He really opened up to you," she said. "You could win a Pulitzer."

A Father of UNIX

When Ritchie talks he dances around personal questions and emphasizes his professional career, which started in the early 1960s as an undergraduate and a graduate student at Harvard University. (He holds three degrees from Harvard: A Ph.D. in applied mathematics, an M.S. in applied mathematics, and a B.S. in physics.) As an undergraduate physics major, he didn't feel he had a lot of talent in the subject. He was more interested in computers. He had taken a class—Programming for the Univac 1—which piqued his interest. He became a teaching fellow for a course that involved some systems programming.

His interest grew. "I would go into IBM and beg for all the manuals that they could spare," he recalls.

Ritchie was also working at Bell Labs in Morristown, N.J., during the summer. His father, Alistair E. Ritchie, worked at Bell Labs as a system engineer, so Dennis had an entree for a summer job there, which he gladly took. At

the age of 27, after graduation, he went directly to work for AT&T and has never left. One of the first projects he worked on when he arrived was Multics, an operating system being developed at Bell Labs. Multics had been heralded with much fanfare because it was a "new way of running a computer," says Ritchie.

But this project was on the verge of collapse, he says, because of time and cost problems.

Despite this discouraging development, another young researcher—Ken Thompson—and Ritchie wanted to develop an operating system. The idea of a new operating system wasn't too popular at Bell Labs because of the failure of the Multics project, though.

But Thompson and Ritchie found some equipment and set to work. It was 1969. The first machine they used was a cast-off DEC PDP 7, which is an 18-bit machine with 16 kilobytes of memory.

"In the early days when we were all a lot younger and more active, incredible things happened in a short amount of time," he recalls. "The original system only took a couple of months to write."

Ken Thompson was the primary idea-man, working with fellow researchers Ritchie, Rudd Canady, Doug McIlroy, and Joe Ossana. The project gained popularity and Bell Labs bought a larger machine—a PDP-11/20. In 1973, Ritchie and Thompson rewrote the UNIX kernel in C.

What does Ritchie think of the more complex UNIX operating system today? "The growth was inevitable," he says matter-of-factly. "That's the way the market works. The reason the original UNIX operating system was so small and elegant was because we did things that we really wanted to do."

Surprisingly, the UNIX operating system isn't Ritchie's proudest achievement. He wrote the *C Programming Language*, which many programmers consider the C programmer's bible. "Until ANSI came along," Ritchie says, "it was the only definition of the language."

A Private Man

Despite his accomplishments, Ritchie is a self-effacing man. "I'm a private person," he says. "I'm quiet. I'm more steady than brilliant."

Most people who know him describe him the same way. "He doesn't indulge in anything," Ken Thompson says half-seriously. "He has no vices and has no hobbies."

Other people who should seemingly know Dennis Ritchie don't really seem to know him. "Dennis reads a lot," says Doug McIlroy, now a distinguished

member of the technical staff at Bell Labs. "At least I think he reads a lot."

It's true, reading is a passion. "I used to read science fiction but stopped when [Robert] Heinlein became insufferable (shortly after my adolescence)," Ritchie wrote to me in an e-mail message after the initial interview. "For a brief period I relaxed with westerns, but stopped even before yuppies ceased buying cowboy boots and booksellers ceased stocking anything but Louis Lamour. Mostly I buy science/nature books." Ritchie says he also reads magazines ranging from the *New Yorker* to *Natural History*.

He adds: "I love literate linguistic humor and still mourn the death of S.J. Perelman," (an American humorist, playwright, and Hollywood screenwriter whose work regularly appeared in the *New Yorker*).

Ritchie grew up in New Jersey, near Bell Labs, and now owns a home close by. Ritchie isn't married. He lives spartan-like, his colleagues say, although most of them have never been to his two-story, colonial-style home. He usually travels alone. "When I travel I favor natural wonders over resortiness," he says with his characteristically dry humor. "I am equally discomfited by expensive hotel splendor and squalid motels, and am thus the best customer of the mass-market chains trying to be upscale."

Today's Ritchie

While Ritchie has spent most of his time away from the limelight, he recently received a promotion to head his department, the Computing Techniques Research Department. This promotion has forced him to keep more regular hours, but fellow researchers say he still spends much of his time in the computer lab.

His involvement with UNIX is limited. "I'm not involved with the product anymore," he says. "I have an interest in it and I toy around with new ideas, but it's limited."

Despite what he says, Ritchie is a brilliant person too. His achievements are vast. In 1983, he and Thompson won the Association for Computing Machinery (ACM) Turing award, the ACM's highest honor for technical achievement in computer science. And in 1988 he was elected to the National Academy of Engineering. He will probably be best known for UNIX, which he helped to develop when he was right out of graduate school. He says he's content with his life. "I'm very satisfied with my work," he says quietly. "Very satisfied with my accomplishments." ■