

ABC News This Week, 16 October 2011

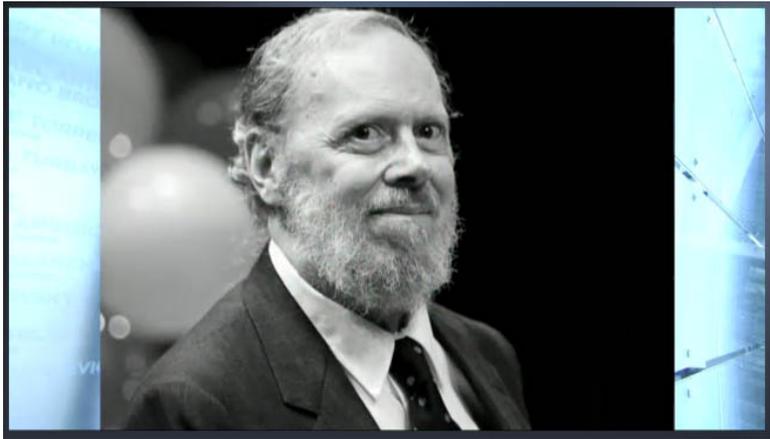


Lives of Note
Dennis Ritchie, Franklin Kameny, and Laura Pollan.
01:13 | 10/16/2011

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Dennis Ritchie, 70
Computer scientist at Bell Laboratories, he created the computer programming language C and co-invented the Unix operating system



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Dennis Ritchie, Programming Trailblazer, Dies at 70

By [STEVE LOHR](#)

Published: October 13, 2011

Dennis M. Ritchie, who helped shape the modern digital era by creating software tools that power things as diverse as search engines like Google and smartphones, was found dead on Wednesday at his home in Berkeley Heights, N.J. He was 70.

Mr. Ritchie, who lived alone, was in frail health in recent years after treatment for prostate cancer and heart disease, said his brother Bill.



Victoria Will/Associated Press Images for Japan Prize Foundation
Dennis Ritchie received the 2011 Japan Prize in May.

In the late 1960s and early '70s, working at Bell Labs, Mr. Ritchie made a pair of lasting contributions to computer science. He was the principal designer of the C programming language and co-developer of the Unix operating system, working closely with Ken Thompson, his longtime Bell Labs collaborator.

The C programming language, a shorthand of words, numbers and punctuation, is still widely used today, and successors like C++ and Java build on the ideas, rules and grammar that Mr. Ritchie designed. The Unix operating system has similarly had a rich and enduring impact. Its free, open-source variant, Linux, powers many of the world's data centers, like those at Google and Amazon, and its technology serves as the foundation of operating systems, like Apple's iOS, in consumer computing devices.

"The tools that Dennis built — and their direct descendants — run pretty much everything today," said Brian Kernighan, a computer scientist at Princeton University who worked with Mr. Ritchie at Bell Labs.

Those tools were more than inventive bundles of computer code. The C language and Unix reflected a point of view, a different philosophy of computing than what had come before. In the late '60s and early '70s, minicomputers were

moving into companies and universities — smaller and at a fraction of the price of hulking mainframes.

Minicomputers represented a step in the democratization of computing, and Unix and C were designed to open up computing to more people and collaborative working styles. Mr. Ritchie, Mr. Thompson and their Bell Labs colleagues were making not merely software but, as Mr. Ritchie once put it, "a system around which fellowship can form."

C was designed for systems programmers who wanted to get the fastest performance from operating systems, compilers and other programs. "C is not a big language — it's clean, simple, elegant," Mr. Kernighan said. "It lets you get close to the machine, without getting tied up in the machine."

Such higher-level languages had earlier been intended mainly to let people without a lot of programming skill write programs that could run on mainframes. Fortran was for scientists and engineers, while Cobol was for business managers.

C, like Unix, was designed mainly to let the growing ranks of professional programmers work more productively. And it steadily gained popularity. With Mr. Kernighan, Mr. Ritchie wrote a classic text, "The C Programming Language," also known as "K. & R." after the authors' initials, whose two editions, in 1978 and 1988, have sold millions of copies and been translated into 25 languages.

Dennis MacAlistair Ritchie was born on Sept. 9, 1941, in Bronxville, N.Y. His father, Alistair, was an engineer at Bell Labs, and his mother, Jean McGee Ritchie, was a homemaker. When he was a

child, the family moved to Summit, N.J., where Mr. Ritchie grew up and attended high school. He then went to Harvard, where he majored in applied mathematics.

While a graduate student at Harvard, Mr. Ritchie worked at the computer center at the Massachusetts Institute of Technology, and became more interested in computing than math. He was recruited by the Sandia National Laboratories, which conducted weapons research and testing. “But it was nearly 1968,” Mr. Ritchie recalled in an interview in 2001, “and somehow making A-bombs for the government didn’t seem in tune with the times.”

Mr. Ritchie joined Bell Labs in 1967, and soon began his fruitful collaboration with Mr. Thompson on both Unix and the C programming language. The pair represented the two different strands of the nascent discipline of computer science. Mr. Ritchie came to computing from math, while Mr. Thompson came from electrical engineering.

“We were very complementary,” said Mr. Thompson, who is now an engineer at Google. “Sometimes personalities clash, and sometimes they meld. It was just good with Dennis.”

Besides his brother Bill, of Alexandria, Va., Mr. Ritchie is survived by another brother, John, of Newton, Mass., and a sister, Lynn Ritchie of Hexham, England.

Mr. Ritchie traveled widely and read voraciously, but friends and family members say his main passion was his work. He remained at Bell Labs, working on various research projects, until he retired in 2007.

Colleagues who worked with Mr. Ritchie were struck by his code — meticulous, clean and concise. His writing, according to Mr. Kernighan, was similar. “There was a remarkable precision to his writing,” Mr. Kernighan said, “no extra words, elegant and spare, much like his code.”

A version of this article appeared in print on October 14, 2011, on page A22 of the New York edition with the headline: Dennis Ritchie, 70, Dies, Programming Trailblazer

<http://www.nytimes.com/2011/10/14/technology/dennis-ritchie-programming-trailblazer-dies-at-70.html>

Dennis Ritchie, Trailblazer in Digital Era, Dies at 70

BY STEVE LOHR
OCTOBER 13, 2011

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Dennis Ritchie received the 2011 Japan Prize in May. (Victoria Will/Associated Press Images for Japan Prize Foundation)

While a graduate student at Harvard, Mr. Ritchie worked at the computer center at the Massachusetts Institute of Technology, and became more interested in computing than math. He was recruited by the Sandia National Laboratories, which conducted weapons research and testing. "But it was nearly 1968," Mr. Ritchie recalled in an interview in 2001, "and somehow making A-bombs for the government didn't seem in tune with the times."

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WSJ Online, OCTOBER 13, 2011, 7:32 P.M. ET

DENNIS RITCHIE 1941-2011 Pioneer Programmer Shaped The Evolution of Computers

By STEPHEN MILLER

Dennis Ritchie invented C, the computer-programming language that underlies Microsoft Windows, the Unix operating system and much of the other software running on computers around the world.

Mr. Ritchie was a longtime research scientist at Bell Labs, originally AT&T's research division. Bell Labs announced that he died at age 70 last weekend.

Working there in the late 1960s with another programmer, Ken Thompson, Mr. Ritchie developed C while Mr. Thompson developed the original version of Unix, which is the foundation for the operating software of many mainframe computers, Web servers and Apple Macintoshes. Mr. Ritchie also made contributions to Unix.

"It's hard to overstate his influence," said Rob Pike, a former Bell Labs and Microsoft programmer now at Google Inc. "The tech community is in deep mourning today."

Despite receiving the National Medal of Technology and, earlier this year, the Japan Prize, Mr Ritchie wasn't well known outside technical circles.

But his influence on the evolution of computers since the 1960s was profound. The Internet essentially runs on Unix, and much commercial software is written in C and its descendents such as C++ and Java.

Mr. Ritchie also was co-author of "The C Programming Language," a foundational text for student and professional programmers that remains in print more than 30 years after it first appeared.

A native of Bronxville, N.Y., Mr. Ritchie was the son of Alistair Ritchie, also a Bell Labs scientist who did important work on switching theory before the transistor era. Mr. Ritchie majored in physics at Harvard University and then earned a doctorate there in applied mathematics.

He joined Bell Labs in 1967 and began working on operating systems. At that time, operating systems tended to be designed for specific computers. Mr. Ritchie gave Mr. Thompson the lion's share of credit for Unix, but said in interviews that making it portable—able to run on many different kinds of computers—was his key contribution.

Mr. Ritchie's C, so named because it was a follow-on to a prior programming language by Mr. Thompson called B, was likewise portable, making the Unix/C package a versatile and powerful tool set.

After releasing Unix and C in the late 1960s, Mr. Ritchie worked at translating the system to function on other machines and then turned to a series of other programming projects, including an operating system designed as a Unix successor, called "Plan 9 from Bell Labs."

He retired in 2007 after many years as head of the system-software research department at Bell Labs, now part of Alcatel-Lucent.

Mr. Ritchie's sense of humor can be seen on YouTube in an elaborate prank he helped design called "Lab Scam" in 1989. He enlisted friends, the magicians Penn & Teller, to fool then-Bell Labs director Arno Penzias into thinking he had developed sophisticated voice-recognition software.

Twitter and other online forums crackled with tributes to Mr. Ritchie after his death was announced.

One came from James Grimmelmann, a former Microsoft programmer who now is an associate professor at New York Law School.

"If [Steve] Jobs was a master architect of skyscrapers, it was Ritchie and his collaborators who invented steel," Mr. Grimmelmann wrote.

Long-haired and often working late into the night in a chaotic office, Mr. Ritchie fulfilled in some ways the computer-nerd stereotype. He was given to gnomish pronouncements on his creations.

"Unix is very simple, it just needs a genius to understand its simplicity" was one. Another: "C is quirky, flawed and an enormous success."

http://online.wsj.com/article/SB10001424052970204774604576629354123067080.html?mod=googlenews_wsj

The Washington Post (Blog), 13 October 2011

Dennis Ritchie, father of C programming language and Unix, dies at 70



Dennis Ritchie poses after receiving the 2011 Japan Prize at Bell Labs headquarters in Murray Hill, N.J., in May. (Victoria Will - AP Images for Japan Prize Foundation)

By [Elizabeth Flock](#) Posted at 11:54 AM ET, 10/13/2011

Dennis Ritchie, the inventor of C programming language and co-developer of Unix, died after a long, unspecified illness Wednesday. He was 70.

Ritchie is likely to be best remembered for his famous “hello, world” program, which is used in programming textbooks as an example of a very simple computer program, and has spread to ordinary folks as a phrase to use when starting something new.

After news of Ritchie’s death broke, words of remembrance came in for the man known to many as “dmr,” which was his e-mail address at Bell Labs, where he spent most of his career.

Many pointed out that Ritchie’s creation of the C programming language was a seminal moment for information technology. The technology Web site ZDNet wrote Thursday that the language is “at the heart of programming — and in the hearts of programmers.” It also remains the second most popular programming language in the world.

Ritchie’s co-development of Unix, a multitasking, multi-user computer operating system, has since inspired many descendent operation systems. Amazon’s chief technology officer, Werner Vogels, wrote in a tribute to Ritchie Thursday that although Unix works simply, “you have to be a genius to understand the simplicity — Dennis Ritchie, who was a genius, RIP.”

Rob Pike, a Google engineer and former colleague of Ritchie’s, wrote in a post Thursday that Ritchie “was a quiet and mostly private man ... but he was also my friend, colleague, and collaborator, and the world has lost a truly great mind.”

ZDNet praised Ritchie for a lifelong focus on making software that “satisfied the intellect, while freeing programmers to create their dreams.”

Jeong Kim, president of Alcatel-Lucent Bell Labs, released a statement that said that Bell was in mourning for Ritchie’s death, because he “was truly an inspiration to all of us.”

On Twitter, a self-described economist and “avid user” of Linux, a variant of Unix, wrote Thursday, inspiring dozens of retweets:



[@cmastication](#)
Mister Long

Dennis Ritchie was the engineer/architect
who’s chapel ceiling Steve Jobs painted.

40 minutes ago via [HootSuite](#) [Favorite](#) [Retweet](#) [Reply](#) [Storify this](#)

Many others [wrote that they owed](#) their hobbies, careers and lives to Ritchie, and then signed off with a “RIP Dennis, you were awesome.”

http://www.washingtonpost.com/blogs/blogpost/post/dennis-ritchie-father-of-c-programming-language-and-unix-dies-at-70/2011/10/13/gIQADGNbhL_blog.html

The Tech Chronicles

THURSDAY, OCTOBER 13, 2011

Dennis Ritchie, computer pioneer, dies at 70



Dennis Ritchie holds his 2011 Japan Prize.
Photo by Victoria Will/AP images for
Japan Prize Foundation

Dennis Ritchie, whose work creating the C programming language and the Unix operating system became the cornerstone of today's modern world of computing, has died. He was 70.

Ritchie's death was announced Wednesday in a staff memo from Jeong Kim, president of Bell Labs, where Ritchie worked from 1967 to 2007.

It was at Bell Labs that Ritchie and fellow computer scientist Ken Thompson began creating the Unix operating system. Ritchie became known as the "father of the C" programming language that was written in conjunction with their development of Unix.

In January, Ritchie and Thompson received word that they had been awarded a 2011 Japan Prize for their work. In an interview in January with The Chronicle, Ritchie, of Murray Hill, N.J., was humble about his accomplishments.

He, Thompson and other Bell Labs researchers began working on Unix when computers were still large and expensive. They sought to create an operating system that

was simpler and more portable than what was available at the time.

Ritchie said he was hoping make the work of he and his fellow computer scientists easier.

"It was an attempt to improve our environment," Ritchie said. "Fortunately, we improved things in way that turned out to be useful to others."

Ritchie received his award from the Japan Prize Foundation during a May 19 ceremony at Bell Labs, now owned by Alcatel-Lucent.

The award ceremony was originally scheduled for April 20 in Tokyo, but was moved because of the country's earthquake, tsunami and nuclear disaster.

"Dennis was well loved by his colleagues at Bell Labs, and will be greatly missed," Kim said in his memo. "He was truly an inspiration to all of us, not just for his many accomplishments, but because of who he was as a friend, an inventor, and a humble and gracious man."



Dennis Ritchie receives 2011 Japan Prize from Japan Prize Foundation Chairman Hiroyuki Yoshikawa during May 19 ceremony at Bell Labs headquarters in Murray Hill, N.J. Photo by Victoria Will/AP Images for Japan Prize Foundation

<http://blog.sfgate.com/techchron/2011/10/13/dennis-ritchie-computer-pioneer-dies-at-70/?gtac=commentlistpos#commentlistpos>

Dennis Ritchie (1941 - 2011)

POSTED BY: DAVID SCHNEIDER

Dennis Ritchie, the Bell Labs computer scientist who created the immensely popular C programming language and who was instrumental in the construction the well-known Unix operating system, died last weekend after a protracted illness. Ritchie was 70 years old.



Ritchie, who was born in a suburb of New York City, graduated from Harvard and later went on to earn a doctorate from the same institution while working at Bell Labs, which then belonged to AT&T (and is now part of the Alcatel-Lucent). There he joined forces with Ken Thompson and other Bell Labs colleagues to create the Unix operating system. Although early Unix evolved without the naming of progressively advanced versions, the birth of this operating system can be marked by the first edition of the Unix programmers' manual, which was issued in November of 1971, almost 40 years ago.

Although AT&T had been engaged in the development of an advanced computer operating system called Multics in the late 1960s, corporate managers abandoned those efforts, making Thomson and Ritchie's work on Unix that much more impressive. These researchers threw themselves into the development of Unix *despite*, rather than in response to, their employer's leanings at the time. We should be thankful that Ritchie and his colleagues took such initiative and that they had the foresight and talent to build a system that was so simple, elegant, and portable that it survives today. Indeed, Unix has spawned dozens if not hundreds of direct derivatives and Unix-like operating systems, including Linux, which can now be found running everything from smartphones to supercomputers. Unix also underlies the current Macintosh operating system, OS X.

Ritchie's work creating the C programming language took place at the same time and is closely tied to the early development of Unix. By 1973, Ritchie was able to rewrite the core of Unix, which had been programmed in assembly language, using C. In 1978, Brian Kernighan (another Bell Labs colleague) and Ritchie published *The C Programming Language*, which essentially defined the language ("K&R C") and remains a classic on the C language and on good programming practice in general. For example, *The C Programming Language* established the widespread tradition of beginning instruction with an illustrative program that displays the words, "Hello, world."

For their seminal work on Unix, Ritchie and Thompson received in 1983 the Association of Computing Machinery's Turing Award. In 1990, the IEEE awarded Ritchie and Thompson the Richard W. Hamming Medal. Ritchie and Thompson's work on Unix and C was also recognized at the highest level when President Bill Clinton awarded them the 1998 National Medal of Technology. And in May of this year, Ritchie and Thompson received the 2011 Japan Prize (which was also awarded to Tadamitsu Kishimoto and Toshio Hirano, who were honored for the discovery of interleukin-6).

Spectrum attended the Japan Prize awards ceremony and had an opportunity to ask Ritchie to reflect on some of the high points of his impressive career. During that interview, Ritchie admitted that Unix is far from being without flaws, although he didn't attempt to enumerate them. "There are lots of little things—I don't even want to think about going down the list," he quipped. In December, *Spectrum* will be publishing a feature-length history of the development of the Unix operating system.

Rob Pike, a former member of the Unix team at Bell labs, informed the world of Ritchie's death last night on Google+. There he wrote, "He was a quiet and mostly private man, but he was also my friend, colleague, and collaborator, and the world has lost a truly great mind." A charming illustration of some of those qualities comes from David Madeo, who responded to Pike's message by sharing this story:

I met Dennis Ritchie at a Usenix without knowing it. He had traded nametags with someone so I spent 30 minutes thinking "this guy really knows what he's talking about." Eventually, the other guy walked up and said, "I'm tired of dealing with your groupies" and switched the nametags back. I looked back down to realize who he was, the guy who not only wrote the book I used to learn C in freshman year, but invented the language in the first place. He apologized and said something along the lines that it was easier for him to have good conversations that way.

<http://spectrum.ieee.org/tech-talk/computing/it/dennis-ritchie-1941-2011>

Denverpost.com, 13 October 2011

Home > Business > Technology

Dennis Ritchie, computer-programming pioneer, dies

The Associated Press

PRINT EMAIL
0 COMMENTS

POSTED: 10/13/2011 12:56:21 PM MDT
UPDATED: 10/13/2011 05:34:57 PM MDT

SAN FRANCISCO—Dennis Ritchie, a pioneer in computer programming, has died at age 70, according to his longtime employer.

Ritchie created the popular C programming language and helped create the Unix operating software. He died a month after his birthday, according to his biography on a webpage of Alcatel-Lucent's [Bell Labs](#). Ritchie joined Bell Labs in the late 1960s.

The company confirmed his death to The Associated Press but would not disclose the cause of death or when Ritchie died. A spokeswoman said the company was trying to contact his family.



FILE - In this May 19... ((AP Photo/Victoria Will, AP Images for Japan Prize Foundation, File))

Ritchie is best known for his contributions to computer programming and software. The C programming language, which Ritchie developed in the early 1970's, is still popular. It has gone through a number of upgrades, and it is commonly used for website development and other computer tasks. The Unix operating software also surged in popularity. It and its offshoots, including the open-source Linux, are widely used today, in corporate servers and even cellphones.

Ritchie's biography on the Bell Labs site says that he was born on Sept. 9, 1941 in Bronxville, N.Y., and studied physics and math at Harvard University.

"My undergraduate experience convinced me that I was not smart enough to be a physicist, and that computers were quite neat," Ritchie wrote. "My graduate school experience convinced me that I was not smart enough to be an expert in the theory of algorithms and also that I liked procedural languages better than functional ones."

Jeong Kim, president of Bell Labs, wrote in a blog post Thursday that Ritchie was "truly an inspiration to all of us, not just for his many accomplishments, but because of who he was as a friend, an inventor, and a humble and gracious man."

http://www.denverpost.com/technology/ci_19105524



Dennis Ritchie, Father of C and Co-Developer of Unix, Dies

By [Ars Technica](#) October 13, 2011 | 1:47 pm |



Sean Gallagher, *Ars Technica*

Linus Torvalds once said, in reference to the development of Linux, that he “had hoisted [himself] up on the shoulders of giants.” Among those giants, Dennis Ritchie (aka dmr) was likely the tallest. Ritchie, the creator of the C programming language and co-developer of the Unix operating system passed away on October 8 at the age of 70, leaving a legacy that casts a very long shadow.

I got my start with technology because of Ritchie’s work on the Unix GENIE time-share system. It made it possible for my high school to time-share the PDP-11 at SUNY-Stony Brook—the same model computer that Ritchie, Kenneth Thompson and their team used to create Unix—and for me to write my first lines

of code on a DECwriter II TTY terminal.

But Ritchie’s C is even more important, in many ways, than Unix. It is the fundamental building block upon which much of what we consider to be the modern world was built.

Ritchie didn’t invent the curly-bracket syntax—that came from Martin Richards’ BCPL. But the C programming language, which he called “quirky, flawed, and an enormous success,” is the basis of nearly every programming and scripting tool, whether they use elements of C’s syntax or not. Java, JavaScript, Objective C and Cocoa, Python, Perl, and PHP would not exist without dmr’s C. Every bit of software that makes it possible for you to read this page has a trace of dmr’s DNA in it.

By creating C, Ritchie gave birth to the concept of open systems. C was developed so they could port Unix to any computer, and so that programs written on one platform (and the skills used to develop them) could be easily transferred to another.

In that way, Ritchie has shaped our world in much more fundamental ways than Steve Jobs or Bill Gates have. What sets him apart from them is that he did it all not in a quest for wealth or fame, but just out of intellectual curiosity. Unix and C were the product of pure research—research that started as a side-project using equipment bought based on a promise that Ritchie and Thompson would develop a word processor.

Imagine what the world would be like if they had just stuck to that promise. What would your life be like without C or Unix? When was the first time your life was touched by dmr’s work?

Top photo: Dennis Ritchie poses after receiving the 2011 Japan Prize at Bell Labs headquarters in Murray Hill, New Jersey, on Tuesday, May 19, 2011. Ritchie was awarded the 2011 Japan Prize for his role in co-developing the UNIX operating system in 1969. (Victoria Will/AP Images for Japan Prize Foundation)



Dennis Ritchie receives National Medal of Technology from President Bill Clinton in 1999

<http://www.wired.com/wiredenterprise/2011/10/dennis-ritchie/>

TG Daily, 13 October 2011

Father of UNIX and C passes away at 70

Posted on October 13, 2011 - 11:41 by TG Daily Staff

Dennis Ritchie - the co-inventor of UNIX and C - has [passed away](#) at the age of 70.

In addition to his [work](#) on UNIX and C, Dennis contributed to the Plan 9 operating system (1995), and the Inferno operating system, which was announced in April 1996.



His final contribution to the UNIX [system](#) was a stream input-output mechanism for connecting networks, terminals and processes in a unified method.

Dennis joined the Bell Labs Computer Systems [Research](#) department in 1967 and retired in 2007.

He received numerous prestigious awards and honors for his work, including the 2011 Japan Prize for co-inventing UNIX and C; the ACM award for the outstanding paper of 1974 in systems and languages; IEEE Piore, Hamming and Pioneer medals, Bell Laboratories Fellow; Association for Computing Machinery Turing Award (1983); ACM Software Systems Award (1983); C&C Foundation award of NEC (1989); the US Medal of Technology (1999); and the U Penn Harold Pender Award (2003).

All of the above-mentioned awards were shared with Ken Thompson, co-inventor of UNIX and the C [programming](#) language and long-time friend of Dennis.

Ritchie, who was often referred to as "dmr" (his Bell Labs email address) in technical discussion groups, [was also known for a few choice quotes](#), including:

- "I am not now, nor have I ever been, a member of the demigodic party."
- "Usenet is a strange place."
- "UNIX is very simple, it just needs a genius to understand its simplicity."
- "C is quirky, flawed, and an enormous success."

RIP Dennis Ritchie.

<http://www.tgdaily.com/software-features/59034-father-of-unix-and-c-passes-away-at-70>

Software Pioneer Dennis Ritchie Dies at 70



By Damon Poeter

October 13, 2011 01:19pm EST

Software pioneer Dennis Ritchie, the inventor of the C programming language and key figure in the establishment of the founding principles of modern computer operating systems, died Wednesday after a long illness at the age of 70.



The son of Bell Labs scientist and switching circuit pioneer Alistair E. Ritchie, Ritchie joined Bell Labs in 1967, several years after graduating from Harvard with degrees in physics and applied mathematics. He also earned his Ph.D. from Harvard in 1968. It was at the Bell Labs Computing Sciences Research Center that Ritchie forged a career that included the creation of C, still perhaps the strongest pillar of application and operating system development today, and with Ken Thompson, the development of the UNIX operating system.

Ritchie's partnerships with Ken Thompson and Brian Kernighan defined the most productive and influential part of his groundbreaking career. With Kerrighan, Ritchie co-authored *The C Programming Language*, considered the Bible of C. The book is commonly referred to simply as *K&R*, in reference to its authors.

But it was the collaboration with Thompson on the design of UNIX as a portable, multi-tasking, multi-user—and ultimately wildly influential—operating system that earned Ritchie perhaps his most lasting fame in the world of computing.

UNIX, originally a "programmer's workbench" that was re-coded in C in the early 1970s, became a widely used operating system in devices and computers ranging from cell phones to enterprise servers as the architecture's flexibility, openness, and the ease of adding new software tools to the base UNIX kernel attracted users in academia and industry. The UNIX client-server model was also instrumental in the evolution of computing from stand-alone machines to massively networked computing environments, and Ritchie's work was essential to the development of the biggest computer network of them all, the Internet.

Today, many widely used operating systems and programming languages—including Google's Android, Apple's Mac OS and iOS, Linux, C++, and JavaScript—owe their existence to Ritchie's pioneering work on C and UNIX.

Ritchie and Thompson were together honored with numerous awards for their work on UNIX and the C programming language, including the Turing Award in 1983, the IEEE Richard W. Hamming Medal in 1990, the U.S. National Medal of Technology in 1999, and the Japan Prize for Information and Communications in 2011.

Ritchie also cultivated a lifestyle that broke sharply from the 9-to-5, button-down look associated with the 1950s-era computer industry. Long-haired and bearded, Ritchie was "famously more owl than lark," according to ZDNet, "start[ing] work at midday in his industry-standard chaotic office, emerging late in the evening to go home and carry on working through to the small hours at the end of a leased line connected to the Bell Labs computers."

Bell Labs was of course spun off by AT&T to form Lucent Technologies, where Ritchie worked as the head of Lucent Technology Systems' software research department through the company's merger with Alcatel in 2006, finally retiring from Alcatel-Lucent in 2007.

<http://www.pcmag.com/article2/0,2817,2394640,00.asp#fbid=T8jkmEueNTj>

TechNewsWorld, 13 October 2011

Tech World Mourns Loss of Dennis Ritchie, Father of C and Unix

By Katherine Noyes TechNewsWorld 10/13/11 3:18 PM PT



Dennis Ritchie, the computer scientist responsible for C and Unix, has passed away at age 70. His career leaves behind an operating system and programming language that form the basis of some of the world's most widely used technologies. "You've got all these operating systems, languages and programs all building on Dennis' work," Pike concluded. "It's hard to think of a bigger legacy."

Legendary computer scientist and creator of the C programming language Dennis Ritchie has died at the age of 70, leaving behind a legacy that touches virtually every aspect of modern life.

Ken Thompson and Dennis Ritchie (center) being awarded the National Medal of Technology by President Bill Clinton.



"Dennis was well-loved by his colleagues at Bell Labs and will be greatly missed," wrote Jeong Kim, president of Alcatel-Lucent (NYSE: ALU) Bell Labs, in a statement on Thursday. Ritchie was employed at Bell Labs from 1967 to 2007, though he continued afterward in a consulting role.

Calling Ritchie "one of the most respected researchers from Bell Labs," Kim went on to list many of the scientist's key accomplishments, including not just the creation of C and coinvention of the Unix operating system with colleague Ken Thompson, but also the Plan 9 and Inferno operating systems as well.

Ritchie was awarded the 2011 Japan Prize in May, adding to a long list of other awards, including also the Association for Computing Machinery Turing Award in 1983 and the U.S. Medal of Technology in 1999.

Confirmation of the exact date of Ritchie's death was not available at press time. He had reportedly been ill for some time.

'It's Hard to Think of a Bigger Legacy'

News of Ritchie's death was apparently first revealed to the world on Google+ by Rob Pike, a distinguished engineer at Google (Nasdaq: GOOG) who worked with Ritchie on numerous occasions.

"It's pretty amazing how much of an influence [Ritchie] had," Pike told TechNewsWorld. "[Steve] Jobs died last week, which was also very sad, but I think Dennis in some ways had a bigger effect on things. All those great things Jobs and his company built were based on C and things derived from C."

The Internet, too, "is basically a C shop," Pike noted. "The Linux machines that are the bedrock of the Web and other Unix variants are all written in C; browsers are all written in C or C++; Apache is written in C."

"You've got all these operating systems, languages and programs all building on Dennis' work," Pike concluded. "It's hard to think of a bigger legacy."

'People Are Still Building on It'

Indeed, "so many of the things we use today are basically programs that are written in C or languages that derived from it," agreed Brian Kernighan, professor in the department of computer science at Princeton University and coauthor with Ritchie on the classic programming tome, *The C Programming Language*.

Operating systems, the Internet and even the phone system are "all basically building on things that Dennis did," Kernighan told TechNewsWorld. "It's sort of invisible until you start to think about it."

In some ways "it's probably surprising that the work that was done 40 some years ago is still so central and critically important, and that people are still using and building on it," Kernighan added. At the same time, "I think it's going to stay that way for some while."

'Impossible to Overstate the Importance'

It's "impossible to overstate the importance of the C programming language," agreed Randal Bryant, dean and university professor with the School of Computer Science at Carnegie Mellon University.

Today, "C, and its successor C++, are the two most important languages for writing programs that require high performance and close control over memory resources," Bryant told TechNewsWorld. "Most of the world's code for managing computers and networks and for processing database transactions is written in either C or C++."

"Compilers can generate machine code from C and C++ programs that is as good or better than hand-crafted assembly code," Bryant added. "In addition, C has had strong influence on more recent languages, including Java."

'A Unique Invention That Showed Real Genius'

Avi Rubin, professor of computer science at Johns Hopkins University, is one of the many who cut their proverbial programming "teeth" on Kernighan and Ritchie's book, and he expressed similar awe at the impact of Ritchie's work.

"Steve Jobs was such a high-profile person, but I'm a little sad that only the computer people are going to be aware of what we've lost now," Rubin told TechNewsWorld.

"He was the father of Unix, which is the core of Apple's (Nasdaq: AAPL) operating system," Rubin explained. "Without what he did, the Internet wouldn't be what it is today, servers and high-performance computing wouldn't be possible."

Furthermore, the C language "didn't have anything to model itself after -- it was a unique invention that showed real genius," Rubin pointed out. "Probably more code was written in the last 25 years in C than in any other programming language."

In short, he concluded, Ritchie was "one of key people to getting the world to where it is today."

'People Need to Know Who He Was'

Ritchie's work may be taken for granted by many, but there's been an outpouring of reaction to his death from those in the technology community.

"Dennis Ritchie was the engineer/architect whose chapel ceiling Steve Jobs painted," wrote Linux fan @cmastication on Twitter, for example.

Elsewhere, an obituary put similar sentiments into programming syntax.

Pike said he's been impressed by the strength of the tech community's response.

"He's not a household name," Pike said, "but I really think people need to know who he was."

<http://www.technewsworld.com/story/Tech-World-Mourns-Loss-of-Dennis-Ritchie-Father-of-C-and-Unix-73496.html>

GIZMODO, 13 October 2011

Dennis Ritchie, Co-Creator of Unix and Founder of C, Has Died



@grimmelm
James Grimmelm

Dennis Ritchie (1941-2011). His pointer has been cast to void *; his process has terminated with exit code 0.

In less than a week, the world has lost two tech pioneers. Last week, we mourned the passing of Steve Jobs, and now we say goodbye to computer scientist Dennis Ritchie who also recently died.

Ritchie, or dmr as he was called in programming circles, worked most of his life at Bell Laboratories where he helped create the C programming language and worked extensively on the Unix operating system. Without his work, many of the computing products we have today would not exist. Apple, whose OS X operating system is based on Unix and whose Objective C programming language is rooted in C, has benefitted greatly from Ritchie's work.

Ritchie also co-wrote the definitive bible on C programming (a must have for any programmer) and has been awarded the Turing Award, the National Medal of Technology and, recently, the Japan Prize for his work in the field of computer science. He died at home over the weekend of Oct 8/9th from an unknown illness. He was 70-years-old. [Google+ and Boing Boing]

<http://gizmodo.com/5849377/dennis-ritchie-co+creator-of-unix-and-founder-of-c-has-died>



I Programmer, 13 October 2011

Dennis Ritchie, co-creator of Unix and C, has died

Written by Historian
Thursday, 13 October 2011 07:39

Dennis Ritchie the designer and original developer of both the C programming language, and co-creator of Unix has died at age 71 after a prolonged illness.

It seems incredible from today's perspective that two people, motivated mainly by enthusiasm, should develop both an operating system and a programming language but that's exactly what Dennis Ritchie and Kenneth Thompson achieved.

They met and started working together at Bell Laboratories around 1968. At the time the Bell Labs (now Alcatel-Lucent) were famous as the home of the transistor and many other basic research projects. Ritchie and Thompson were given the brief to "investigate interesting problems in computer science".

Like all good teams, Ritchie and Thompson had different but complementary qualities. Dennis Ritchie had studied physics and then moved on to pure computer science via maths. His PhD thesis was on recursive functions, but he got bored with it and never submitted it. Ken Thompson was an electronics enthusiast. It would be too much of a simplification to say that Ritchie was the theoretician and Thompson the practitioner but the difference in their backgrounds must have helped rather than hindered their working together.

Ritchie and Thompson set out to implement an operating system but because Bell had just had a bad experience with the Multics operating system and it not the ideal time to look for official resources and so they started work with an obsolete PDP 7. The story of how the Unix project expanded and eventually saw the light of day is told in our history article, Ritchie & Thompson.

So how does C fit into this?

Ritchie and Thompson wanted to make Unix into an operating system that could be used on other hardware so rather than use assembler they decided to create a new high level language that would be close enough to the underlying machine architecture to be efficient. They would then re-write Unix using it Ritchie set off working on the language problem and the result, eventually, was C, so called because it was based on a stripped down version of BCPL, known as B. And C comes after B.

Ritchie and Brian Kernighan published the book *The C Programming Language* in 1978, following development at Bell Labs. The book was followed by a second edition, which was translated into a wide range of languages and is still read today as the bible of C programmers.

Ritchie and Thompson's achievements were repeatedly recognised. In 1983 they received the Turing Award from the ACM . The citation read:

"The success of the Unix system stems from its tasteful selection of a few key ideas and their elegant implementation. The model of the Unix system has led a generation of software designers to new ways of thinking about programming. The genius of the Unix system is its framework, which enables programmers to stand on the work of others".

In 1990 they were awarded the IEEE Hamming Medal and at the end of that decade they received the National Medal of Technology of 1998 from President Bill Clinton

"for co-inventing the UNIX operating system and the C programming language which together have led to enormous advances in computer hardware, software, and networking systems and stimulated growth of an entire industry, thereby enhancing American leadership in the Information Age".



**This year they were awarded the Japan Prize for their development of:
*"the UNIX operating system which has significantly advanced computer software, hardware and networks over the past four decades, and facilitated the realization of the Internet."***

Ritche's impact on the current state of computing is profound. Generations of students grew up knowing Unix intimately - not only its outside appearance but its internals. Unix was part of the curriculum! This had two effects. The first was that there was a steady stream of graduates entering industry and being surprised that they didn't find Unix and second was that the Unix system grew as academic exercises turned into almost usable programs.

This academic breeding ground for Unix influenced its style and way of doing things. As any Unix disciple will tell you Unix is logical and you can get a lot done in a few key presses. As any Unix beginner will tell you, Unix is logical even at the cost of usability and working out which keys to press is often difficult!

Unix and the Unix way of doing things eventually transmuted into Linux and is now the server OS that powers industry and the Internet.

C on the other hand has been the basis for all of the C-like languages we all know and use every day - Java, C# and of course C++. Whenever you write a three-parameter for loop, `for(init;test;inc)`, you owe a debt to C and should think of the fun that Dennis Ritchie had inventing it and making it all work.



<http://www.i-programmer.info/news/82-heritage/3184-dennis-ritchie-co-creator-of-unix-and-c-has-died.html>

Network World, 13 October 2011

Dennis Ritchie, Father of Unix and C programming language, dead at 70

Part of famed Bell Labs development team

By Bob Brown, Network World

October 13, 2011 10:39 AM ET



Dennis Ritchie, the software developer who brought the world the C programming language and Unix operating system, has died at the age of 70.

Ritchie (known by the username "dmr") was part of a dynamic software development duo with Ken Thompson at Bell Labs, which they joined in 1967 and 1966, respectively. Ritchie created the C programming language, which replaced the B programming language Thompson invented.

The two later went on to create Unix, initially for minicomputers and written in assembly language, in 1969, and written in C in 1973. Unix went on to become key software for critical computing infrastructure around the world, though wasn't for everyone.

Ritchie once said: "UNIX is very simple, it just needs a genius to understand its simplicity." Unix, of course, became the inspiration for newer operating systems including Linux and Apple's iOS.

UNIX AT 40: The past, present and future of a revolutionary OS

BACKGROUND: Whirlwind tour of computing and telecom's major awards, prizes and honors

In fact, Unix supporters are out in force on social media networks this week, making sure that Ritchie's accomplishments are recognized.

Jon "Maddog" Hall, executive director of Linux International, tweeted: "...all programmers owe him a moment of silence."

Rob Pike, who worked with Ritchie at Bell Labs, including on Unix descendent Plan 9, wrote on Google+: "He was a quiet and mostly private man, but he was also my friend, colleague, and collaborator, and the world has lost a truly great mind."

Many others made mention of The C Programming Language book that Ritchie and Brian Kernighan co-authored and first published in 1978, noting it's still sitting on their bookshelves for easy reference. The book is commonly referred to as K&R in honor of the authors' last names.

Ritchie during his lifetime was recognized for his accomplishments many times over. Most recently, he and Thompson won the \$600,000 Japan Prize for their work on Unix.

Ritchie and Thompson previously won the Turing Award from the Association for Computing Machinery in 1983, and the U.S. National Medal of Technology and Innovation in 1998, presented to them by President Bill Clinton. The two also were named Computer History Museum fellows in 1997.

Ritchie retired from Lucent Technologies in 2007. Bell Labs is now Alcatel-Lucent's R&D arm. Ritchie's passing marks the third death of a technology industry giant in the past week. Steve Jobs died last week at the age of 56 and former Motorola CEO and cell phone industry leader Robert W. Galvin died earlier this week at the age of 89.

<http://www.networkworld.com/news/2011/101311-ritchie-251936.html?hpg1=bn>

Gamasutra, 13 October 2011

Dennis Ritchie, Father Of C and Unix, Dies At 70

by Frank Cifaldi

October 13, 2011

Dennis Ritchie, the creator of the C programming language and one of the key figures in the development of the Unix operating system, passed away in his home this weekend. He was 70 years old.

The news was confirmed Thursday by Jeong Kim, president of Bell Labs, the company Ritchie worked for beginning in 1967.

"Dennis was well loved by his colleagues at Bell Labs, and will be greatly missed," wrote Kim. "He was truly an inspiration to all of us, not just for his many accomplishments, but because of who he was as a friend, an inventor, and a humble and gracious man."



Ritchie, along with collaborator Ken Thompson, was the recipient of numerous awards over the years.

These have included the Turing Award, the IEEE Richard W. Hamming Medal, the National Medal of Technology, and earlier this year, the Japan Prize for Information and Communications.

Ritchie was the co-author of 1978's *The C Programming Language*, a guide still widely referenced today.

http://www.gamasutra.com/view/news/37874/Dennis_Ritchie_Father_Of_C_and_Unix_Dies_At_70.php

Tech Chronicles

News and views from the digital frontier.

Dennis Ritchie, computer pioneer, dies at 70



Dennis Ritchie holds his 2011 Japan Prize. Photo by Victoria Will/AP images for Japan Prize Foundation

Dennis Ritchie, whose work creating the C programming language and the Unix operating system became the cornerstone of today's modern world of computing, has died. He was 70.

Ritchie's death was announced Wednesday in a staff memo from Jeong Kim, president of Bell Labs, where Ritchie worked from 1967 to 2007.

It was at Bell Labs that Ritchie and fellow computer scientist Ken Thompson began creating the Unix operating system. Ritchie became known as the "father of the C" programming language that was written in conjunction with their development of Unix.

In January, Ritchie and Thompson received word that they had been awarded a 2011 Japan Prize for their work. In an interview in January with The Chronicle, Ritchie, of Murray Hill, N.J., was humble about his accomplishments.

He, Thompson and other Bell Labs researchers began working on Unix when computers were still large and expensive. They sought to create an operating system that was simpler and more

portable than what was available at the time.

Ritchie said he was hoping make the work of he and his fellow computer scientists easier.

"It was an attempt to improve our environment," Ritchie said. "Fortunately, we improved things in way that turned out to be useful to others."

Ritchie received his award from the Japan Prize Foundation during a May 19 ceremony at Bell Labs, now owned by Alcatel-Lucent.

The award ceremony was originally scheduled for April 20 in Tokyo, but was moved because of the country's earthquake, tsunami and nuclear disaster.

"Dennis was well loved by his colleagues at Bell Labs, and will be greatly missed," Kim said in his memo. "He was truly an inspiration to all of us, not just for his many accomplishments, but because of who he was as a friend, an inventor, and a humble and gracious man."



Dennis Ritchie receives 2011 Japan Prize from Japan Prize Foundation Chairman Hiroyuki Yoshikawa during May 19 ceremony at Bell Labs headquarters in Murray Hill, N.J. Photo by Victoria Will/AP Images for Japan Prize Foundation

<http://blog.seattlepi.com/techchron/2011/10/13/dennis-ritchie-computer-pioneer-dies-at-70/>

Boston.com, 14 October 2011

Dennis Ritchie, 70; inventor of C programming language

October 14, 2011 | Associated Press

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SAN FRANCISCO - Dennis Ritchie, a pioneer in computer programming, died Saturday at the age of 70, according to his longtime employer.

Mr. Ritchie created the popular C programming language and helped create the Unix operating system.

He died a month after his birthday, according to his biography on the website of Alcatel-Lucent's Bell Labs. Mr. Ritchie joined Bell Labs in the late 1960s.

Mr. Ritchie is best known for his contributions to computer programming and software. The C programming language, which he developed in the early 1970s, is still popular. It has gone through a number of upgrades, and it is commonly used for website development and other computer tasks.



Dennis Ritchie at Bell Labs with the Japan Prize in May. (victoria will/associated press)

The Unix operating system also surged in popularity.

It and its offshoots, including the open-source Linux operating system, are widely used today, in corporate servers and even cellphones.

Mr. Ritchie's biography on the Bell Labs website says that he was born in Bronxville, N.Y., and studied physics and math at Harvard University.

"My undergraduate experience convinced me that I was not smart enough to be a physicist, and that computers were quite neat," Mr. Ritchie wrote. "My graduate school experience convinced me that I was not smart enough to be an expert in the theory of algorithms, and also that I liked procedural languages better than functional ones."

Jeong Kim, president of Bell Labs, wrote in a blog post yesterday that Mr. Ritchie was "truly an inspiration to all of us, not just for his many accomplishments, but because of who he was as a friend, an inventor, and a humble and gracious man."

http://articles.boston.com/2011-10-14/bostonglobe/30280203_1_bell-labs-language-programming

Los Angeles Times

Los Angeles Times, 14 October 2011

Dennis Ritchie dies at 70; computer scientist helped develop Unix Dennis Ritchie also helped write the popular C programming language.

Los Angeles Times staff and wire reports

October 14, 2011



Dennis Ritchie was a pioneer in computer programming. (Victoria Will / Associated Press)

Dennis Ritchie, a computer scientist who wrote the popular C programming language and helped develop the Unix operating system, has died. He was 70.

Ritchie died a month after his birthday, according to his biography on a Web page of Alcatel-Lucent's Bell Labs. Ritchie joined Bell Labs in the late 1960s.

The company announced his death Thursday but did not give the cause or say when Ritchie died.

Ritchie is best known for his contributions to computer programming and software. The C programming language, which he developed in the early 1970s, is still popular. It has gone through a number of upgrades, and it is commonly used for website development and other computer tasks. The Unix operating software also surged in popularity. It and its offshoots, including the open-source Linux, are widely used today, in corporate servers and even cellphones.

Ritchie was born Sept. 9, 1941, in Bronxville, N.Y. His father, Alistair, was a systems engineer at Bell Labs and his mother, Jean, was a homemaker. After studying physics and math at Harvard University, Ritchie joined Bell Labs.

"My undergraduate experience convinced me that I was not smart enough to be a physicist, and that computers were quite neat," Ritchie wrote. "My graduate school experience convinced me that I was not smart enough to be an expert in the theory of algorithms and also that I liked procedural languages better than functional ones."

At Bell, Ritchie and colleague Kenneth Thompson worked closely to create Unix. In writing the C language, Ritchie built on Thompson's earlier B language. Their collaborations were intended to simplify operating systems and make the software portable and easy to move from existing hardware to new computers, resulting in the open-source movement of sharing ideas.

"I wanted to find out what things a program or operating system could make possible that you couldn't do before," Ritchie told Investors Business Daily in 2003.

Bell Labs' emphasis on research provided opportunities for Ritchie and Thompson to develop pioneering innovations.

"There are features in C that everyone takes for granted now," Doug McIlroy, a Bell colleague, told Investors Business Daily. "But when Dennis created them, they were new to the world."

Information on survivors was not available.

http://www.latimes.com/news/science/la-me-dennis-ritchie-20111014,0,2458233.story?track=rss&utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+latimes%2Fnews%2Fscience+%28L.A.+Times+-+Science%29

The Washington Post Online, 14 October 2011

Dennis Ritchie, founder of Unix and C, dies at 70



(ALCATEL-LUCENT) - Dennis Ritchie worked at Bell Laboratories for four decades, from his time as a Harvard doctoral student until his retirement in 2007.

By Emily Langer, Friday, October 14, 9:27 AM

Dennis Ritchie, 70, a computer scientist who changed modern technology by writing an elegantly simple computer programming language, was found dead at his home in Murray Hill, N.J., his former colleague Rob Pike said.

Pike received word Oct. 12 that Dr. Ritchie's body had been discovered last weekend. A cause of death was not immediately available.

As the news of his death spread throughout the computer science world, historians and computer enthusiasts compared the bearded, introverted Dr. Ritchie to media-savvy Apple co-founder Steve Jobs, who died Oct. 5.

"It's sort of 'apples' and oranges," said Paul Ceruzzi, a Smithsonian historian and expert on the history of computers. "Ritchie was under the radar. His name was not a household name at all, but ... if you had a microscope and could look in a computer, you'd see his work everywhere inside."

Dr. Ritchie worked at Bell Laboratories for four decades, from his time as a Harvard doctoral student until his retirement in 2007. He was the inventor of the programming language known as C and co-inventor of the operating system Unix, another innovation that came from Bell Labs in the late 1960s and early '70s.

When Dr. Ritchie went to Bell, computer programming language was arcane and impenetrable for many computer gurus of the era. As a young scientist, Dr. Ritchie went to work on a language that was sophisticated yet simple. Something of a night owl, he often went to the office about noon and worked into the night from his home.

He named his creation C because programming language that came before it was called B.

“C is a terse, elegant, deceptively simple language that allows programmers almost unlimited flexibility,” technology writer Charles Petzold wrote in the New York Times in 1996. “It appeals to the macho instincts of young and wild PC hackers, as well to the puzzle-solving impulses of more mature programmers because of its power and the variety of ways to solve problems.”

C was not without flaws — it was vulnerable to viruses, Petzold wrote — but it soon became the most popular programming language. It allowed programmers to do in a few months jobs that with other languages would have taken a year or more.

C language was the foundation for Unix, the operating system Dr. Ritchie helped develop with Bell colleague Kenneth Thompson. Microsoft Windows-based personal computers and many Apple products run on its descendents. It is the ancestor of “most of the infrastructure of our wired society,” Ceruzzi said.

Dr. Ritchie and Thompson received the Turing Award from the Association for Computing Machinery in 1983 — an early recognition of what would be an enduring contribution to technology, said Tim Bergin, a computer language historian and professor emeritus at American University.

More honors followed. In 1998, President Bill Clinton awarded the two men the National Medal of Technology and Innovation “for their invention of UNIX operating system and the C programming language, which together have led to enormous growth of an entire industry, thereby enhancing American leadership in the Information Age.” Early this year, they received the prestigious Japan Prize for science and technology.

Dennis MacAlistair Ritchie was born Sept. 9, 1941, in Bronxville, N.Y., to a scientific family. His father, Alistair Ritchie, worked at Bell and co-wrote a book on switching circuits. The younger Ritchie attended Harvard, where he earned a bachelor’s degree in physics in 1963 and a doctorate in applied mathematics in 1968.

“My undergraduate experience convinced me that I was not smart enough to be a physicist, and that computers were quite neat,” he wrote in a biography for Bell Labs. “My graduate school experience convinced me that I was not smart enough to be an expert in the theory of algorithms and also that I liked procedural languages better than functional ones.”

Survivors include two brothers, William Ritchie of Alexandria and John Ritchie of Newton, Mass., and one sister, Lynn Ritchie of Hexham, England.

Dr. Ritchie co-wrote the book “The C Programming Language,” a volume on the order of a technological Oxford English Dictionary.

He had a lighter side, too. With Pike, he lined up the magician duo Penn and Teller for a practical joke on his boss, Nobel Prize-winning physicist Arno Penzias. In the stunt, videotaped in 1989 and available on YouTube, the two scientists convinced Penzias that they had invented fancy voice-recognition technology. “It took him days to recover,” the voice-over says.

http://www.washingtonpost.com/local/obituaries/dennis-ritchie-founder-of-unix-and-c-dies-at-70/2011/10/13/gIQAXsVXiL_story.html

MiamiHerald.com, 14 October 2011

Dennis Ritchie, computer-programming pioneer, dies



FILE - In this May 19, 2011 file photo taken by AP Images for Japan Prize Foundation, Dennis Ritchie, Bell Labs Fellow, poses after receiving the 2011 Japan Prize at Bell Labs headquarters in Murray Hill, N.J. Ritchie, a pioneer in computer programming, is dead at age 70, according to his longtime employer. Ritchie created the popular C programming language and helped create the Unix operating software. VICTORIA WILL, AP IMAGES FOR JAPAN PRIZE FOUNDATION, FILE / AP PHOTO

SAN FRANCISCO -- Dennis Ritchie, a pioneer in computer programming, has died at age 70, according to his longtime employer.

Ritchie created the popular C programming language and helped create the Unix operating software. He died a month after his birthday, according to his biography on a webpage of Alcatel-Lucent's Bell Labs. Ritchie joined Bell Labs in the late 1960s.

The company confirmed his death to The Associated Press but would not disclose the cause of death or when Ritchie died. A spokeswoman said the company was trying to contact his family.

Ritchie is best known for his contributions to computer programming and software. The C programming language, which Ritchie developed in the early 1970's, is still popular. It has gone through a number of upgrades, and it is commonly used for website development and other computer tasks. The Unix operating software also surged in popularity. It and its offshoots, including the open-source Linux, are widely used today, in corporate servers and even cellphones.

Ritchie's biography on the Bell Labs site says that he was born on Sept. 9, 1941 in Bronxville, N.Y., and studied physics and math at Harvard University.

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Jeong Kim, president of Bell Labs, wrote in a blog post Thursday that Ritchie was "truly an inspiration to all of us, not just for his many accomplishments, but because of who he was as a friend, an inventor, and a humble and gracious man."

The Miami Herald is pleased to provide this opportunity to share information, experiences and observations about what's in the news. Some of the comments may be reprinted elsewhere in the site or in the newspaper. We encourage lively, open debate on the issues of the day, and ask that you refrain from profanity, hate speech, personal comments and remarks that are off point. Thank you for taking the time to offer your thoughts.

We have introduced a new commenting system called Disqus for our articles. This allows readers the option of signing in using their Facebook, Twitter, Disqus or existing MiamiHerald.com username and password.

<http://www.miamiherald.com/2011/10/13/2452534/dennis-ritchie-computer-programming.html>

County News

Computer scientist Dennis Ritchie, 70; N.J. resident gave simplicity to complex tech language

Emily Langer; WASHINGTON POST

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Dennis Ritchie, a computer scientist who changed modern technology by writing an elegantly simple computer programming language, was found dead at his home in Murray Hill in Union County, his former colleague Rob Pike said. He was 70.

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"It's sort of apples and oranges," said Paul Ceruzzi, a Smithsonian historian and expert on the history of computers. "Ritchie was under the radar. His name was not a household name at all, but if you had a microscope and could look in a computer, you'd see his work everywhere inside."

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When Ritchie went to Bell, computer programming language was arcane and impenetrable for many computer gurus of the era. As a young scientist, Ritchie went to work on a language that was sophisticated yet simple. Something of a night owl, he often went to the office about noon and worked into the night from his home.

He named his creation C because programming language that came before it was called B. "C is a terse, elegant, deceptively simple language that allows programmers almost unlimited flexibility," technology writer Charles Petzold wrote in the New York Times in 1996. "It appeals to the macho instincts of young and wild PC hackers, as well to the puzzle-solving impulses of more mature programmers because of its power and the variety of ways to solve problems."

C was not without flaws -- it was vulnerable to viruses, Petzold wrote -- but it soon became the most popular programming language. It allowed programmers to do in a few months jobs that with other languages would have taken a year or more.

C language was the foundation for Unix, the operating system Ritchie helped develop with Bell colleague Kenneth Thompson. Microsoft Windows-based personal computers and many Apple products run on its descendents. It is the ancestor of "most of the infrastructure of our wired society," Ceruzzi said.

Ritchie and Thompson received the Turing Award from the Association for Computing Machinery in 1983 -- an early recognition of what would be an enduring contribution to technology, said Tim Bergin, a computer language historian and professor emeritus at American University. More honors followed. In 1998, President Bill Clinton awarded the two men the National Medal of Technology and Innovation "for their invention of UNIX operating system and the C programming language, which together have led to enormous growth of an entire industry, thereby enhancing American leadership in the Information Age." Early this year, they received the prestigious Japan Prize for science and technology. Dennis MacAlistair Ritchie was born Sept. 9, 1941, in Bronxville, N.Y., to a scientific family. His father, Alistair Ritchie, worked at Bell and co-wrote a book on switching circuits. The younger Ritchie attended Harvard, where he earned a bachelor's degree in physics in 1963 and a doctorate in applied mathematics in 1968.

"My undergraduate experience convinced me that I was not smart enough to be a physicist, and that computers were quite neat," he wrote in a biography for Bell Labs. "My graduate school experience convinced me that I was not smart enough to be an expert in the theory of algorithms and also that I liked procedural languages better than functional ones."

Survivors include two brothers, William Ritchie of Alexandria, Va., and John Ritchie of Newton, Mass., and one sister, Lynn Ritchie of Hexham, England.

Ritchie co-wrote the book "The C Programming Language," a volume on the order of a technological Oxford English Dictionary.

He had a lighter side, too. With Pike, he lined up the magician duo Penn and Teller for a practical joke on his boss, Nobel Prize-winning physicist Arno Penzias.

In the stunt, videotaped in 1989 and available on YouTube, the two scientists convinced Penzias that they had invented fancy voice-recognition technology. "It took him days to recover," the voice-over says.

In May, Dennis Ritchie receives the prestigious Japan Prize for his work in developing the C computer programming language. The New York Times in 1996 wrote that his work was an elegant, deceptively simple language offering unlimited flexibility.; Amanda Brown/For the Star-Ledger

Advance Publications, Inc.

The Daily Caller, 15 October 2011

Dennis Ritchie, C programming language inventor, passed away Wednesday

By Michael J. Miller - PC Magazine Published: 11:09 PM 10/15/2011



FILE - In this May 19, 2011 file photo taken by AP Images for Japan Prize Foundation, Dennis Ritchie, Bell Labs Fellow, poses after receiving the 2011 Japan Prize at Bell Labs headquarters in Murray Hill, N.J. Ritchie, a pioneer in computer programming, is dead at age 70, according to his longtime employer. Ritchie created the popular C programming language and helped create the Unix operating software. (AP Photo/Victoria Will, AP Images for Japan Prize Foundation, File)

Dennis Ritchie, one of the great pioneers of computer science, passed away earlier this week. Although he wasn't as well known to the general public as someone like Steve Jobs, his role in creating the C [programming](#) language and the UNIX operating system has had a profound impact on the way just about all computing is done.

Full Story: [Remembering Dennis Ritchie: Software Pioneer](#)

<http://dailycaller.com/2011/10/15/dennis-ritchie-c-programming-language-inventor-passed-away-wednesday/>

Dennis M. Ritchie, Tech Expert Alumnus, Dies At 70

By ALYZA J SEBENIUS, CONTRIBUTING WRITER

Published: Monday, October 17, 2011

Dennis M. Ritchie '63, a Harvard graduate who had a profound impact on modern technology, died last week at 70.

Ritchie was the principal designer of the C programming language and co-inventor of the operating system Unix, two inventions that revolutionized modern technology.

The C programming language was widely considered simple and elegant compared to the more cryptic and inaccessible B language that preceded it, and is now widely used. Based on C, Ritchie and Kenneth L. Thompson invented Unix, which is the foundation of today's predominant operating systems.

Ritchie worked for Bell Laboratories for his entire career.

At Bell, Ritchie met Brian Kernighan, who became a friend and colleague of 40 years. The two co-authored "The C Programming Language," a 274-page explanatory book that has been widely translated and sold millions of copies.

"The programming language is the best combination of elegance, expressiveness and efficiency the world has seen. It is hard to overstate the importance of C—any computer or communications system uses C directly or through one of its descendents," Kernighan wrote in a letter to USENIX, The Advanced Computing Systems Association.

Ritchie and Thompson received three major awards for their development of Unix. In 1983, the Association for Computing Machinery awarded them the Turing Award. In 1993, President Bill Clinton awarded them the National Medal of Technology and Innovation. And this year, they received the Japan Prize in Information and Communications—which Professor of Physics and of Electrical Engineering Paul Horowitz '65 called "the Nobel prize of computer science."

Horowitz, who knew Ritchie from his high school and college years, said that Ritchie and his roommates in Leverett House were "nerdy" but serious about what they did.

"He made a dent in the fabric of computer science," Horowitz said of Ritchie.

Harvard Professor of Computer Science Harry Lewis blogged about Ritchie's important contributions.

"Ritchie bears more personal responsibility than anyone else for C and Unix, and hence for their many derivatives. The world would be a VERY different place had he not created these things," Lewis wrote.

As an undergraduate at Harvard, Ritchie concentrated in Physics. He went on to earn a graduate degree in Applied Mathematics at Harvard's School of Engineering and Applied Sciences.

Professor of Computer Science Margo L. Seltzer met Ritchie when she was a graduate student.

"It didn't matter if you were a graduate student or a Nobel Laureate—your thoughts, questions, and opinions mattered just as much as anyone else's," she wrote in an email to The Crimson.

"From my perspective, Dennis hated being the limelight—he always preferred being treated as 'just another conference attendee' and wanted to hang out in the hallway and take part in whatever conversation was going on—it didn't have to even be about computers."

"Dennis changed the world and we are all indebted to him," Kernighan wrote to USENIX.

Ritchie will be remembered for his quiet, gentle demeanor, Seltzer said.

"He was a wonderful human being—not just a brilliant creator and engineer, but a kind, friendly, witty person," she said.

<http://www.thecrimson.com/article/2011/10/17/dennis-ritchie-c-programming/>



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Obituary

printf("goodbye, Dennis");

Oct 20th 2011, 20:28 by G.F. | SEATTLE

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Dennis Ritchie, a father of modern computing, died on October 8th, aged 70

EVERY time you tap an iSomething, you are touching a little piece of Steve Jobs. His singular vision shaped the products Apple has conjured up, especially over the last 14 years, after Jobs returned to the helm of the company he had founded. Jobs's death in October resembled the passing of a major religious figure. But all of his technological miracles, along with a billion others sold by Apple's competitors, would be merely pretty receptacles were it not for Dennis Ritchie. It is to him that they owe their digital souls, the operating systems and programs which make them tick.

In the early 1970s Mr Ritchie invented the C programming language. It fundamentally changed how software programs are created. Its popularity stemmed from a mix of robustness and efficiency. Crucially, it was thin. In geek-speak that means it used little computing power at a time when that was in short supply while allowing programmers to control hardware directly with little effort. It was also portable. A C program written for one computer could be modified to work on another. (This is not always easy, but it is possible.)

If that were not world-changing enough, Mr Ritchie was also instrumental (with Ken Thompson and others) in developing Unix, an operating system project begun in 1969 that was originally intended to be a simpler way to run bulky mainframes. At first Unix found a home in academic institutions (Babbage used his first Sun Unix workstation at university in the 1980s) and government agencies. Then, in the 1990s, came the explosion of the internet. In 1991 Linus Torvalds, a Finnish software engineer, reinvented Unix for the internet age. The result was Linux, which worked nearly the same as its forebear and could run the same free and open-source software, but had been purged of intellectual property rights.

Most modern software code is written using C's more evolved descendants. These

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include C++, Objective C (which Apple favours) and C# (which rival Microsoft does). Another staple of the digital age, Java, also owes a substantial debt to Mr Ritchie's invention. Meanwhile, Unix-like systems power several hundred million Apple and Android mobile devices, most internet firms' server farms and a billion tiny gadgets, like digital video recorders and music players. There are alternatives, of course —Microsoft Windows, Nokia's Symbian or Qualcomm's BREW, among others—but their reach pales in comparison.

Mr Ritchie was modest—and deeply committed to his work, which he pursued with unebbing passion until his retirement a few years ago. His [personal web page](#) at Bell Labs, unmodified since 2006 except for the addition of a note from his siblings regarding his passing, shows a quirky character, as likely to post information about his sundry namesakes as to offer insight into his work.

His popular writings were as spare, efficient—and influential—as his coding. "The C Programming Language", a textbook he wrote with Brian Kernighan, has remained the authoritative source about all things C for over 30 years. The book introduced the first program a C coder learns:

```
main ( )
{
printf("hello, world");
}
```

which gets a computer to display the words "hello, world". (Mr Kernighan had come up with both the phrase and the task in an earlier internal manual at AT&T.) Patiently taking the reader through the rudiments of a language, with progressively harder programming tasks, was a departure from the dry, ultra-technical manuals of the day. The tens of thousands of computer books that followed all bear Mr Ritchie's mark.

Mr Ritchie and Jobs crossed paths at a crucial juncture. When Jobs was ousted from Apple in 1985 and founded NeXT, he did not create an operating system from scratch. His machines ran a version of Unix. On his triumphant return to Apple, after the company acquired NeXT in 1996, Jobs abandoned the company's ongoing effort to modernise Mac OS. He chose a version of Unix instead (and added an "X" to Mac OS) and all Macs since have relied on it. So does the iOS operating system which breathes life into iPhones and iPads. Yet for all of Mr Ritchie's groundbreaking contributions, and his key role in making Apple's gadgets what they are, his passing received precious little attention from the world's media, still preoccupied with that of the computer industry's most consummate showman.

All operating systems know when they were born. Their internal clocks start counting from then, so they can calculate the date and time in the future. It is unclear whether it was Mr Ritchie or Mr Thompson who set the so-called start Unix time at January 1st, 1970. That moment came to be known as the epoch. Mr Ritchie helped bring it about. And with it, he ushered in a new era.

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Outros**Morre Dennis Ritchie, cofundador do Unix e criador do C**
*(Dennis Ritchie dies, co-founder of Unix and creator of C)**

Quinta-feira, 13/10/2011 às 11h45, por Redação iMasters

No último final de semana, morreu o cientista da computação Dennis Ritchie, cofundador do Unix e um dos criadores da linguagem C.

Ele trabalhou a maior parte da sua vida na Bell Laboratories, onde ajudou a criar o C e trabalhou extensivamente no sistema operacional Unix com Ken Thompson. A Apple, cujo OS X é baseado no Unix e cuja linguagem Objective C é baseada em C, beneficiou-se bastante do trabalho de Ritchie.

Além disso, Ritchie coescreveu a bíblia definitiva em programação C e recebeu o prêmio Turing, a Medalha Nacional de Tecnologia e, recentemente, o Japan Prize, por seu trabalho no campo da ciência da computação.

Ele é descrito como um homem “não só brilhante, como humilde, cortês e generoso”. James Grimmelmann disse no Twitter que “a influência de Ritchie rivaliza com a de Steve Jobs; só é menos visível”.

Ritchie faleceu em casa no último final de semana, entre os dias 8 e 9 de outubro, depois de uma longa batalha contra uma doença ainda não divulgada. Ele tinha 70 anos.

Com informações de Gizmodo

<http://imasters.com.br/noticia/22437/outros/morre-dennis-ritchie-cofundador-do-unix-e-criador-do-c>

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Interfase

Falleció cocreador de Unix

*(Creator of Unix dies)**

REFORMA / Staff

Dennis Ritchie, cocreador del sistema operativo Unix y desarrollador de C, uno de los lenguajes de programación más usados en el mundo, falleció el pasado 8 de octubre a los 70 años de edad.

Con sus aportaciones, Ritchie fundó las bases de la informática moderna que más tarde contribuyeron al desarrollo de un gran número de tecnologías hoy popularizadas como los sistemas operativos Linux y Mac OS X.

Sus aportaciones y labor fueron reconocidas con el Premio Turing a las Ciencias de la Computación en 1983 y a la Medalla Nacional de Tecnología en 1998, este último constituye el honor más alto que un tecnólogo puede obtener en Estados Unidos.

Además, se le considera uno de los iniciadores del movimiento por el software de código abierto o libre debido a la influencia que Unix tuvo en la industria, como ser el sistema operativo elegido como la plataforma para internet y tener la habilidad

La noticia del fallecimiento del notable informático la dio a conocer Rob Pike a través de su cuenta de Google +. Pike informó sobre la muerte de su colega Ritchie, con quien colaboró en Bell Labs, la cual forma parte de Alcatel-Lucent a raíz de su fusión en 2006. Alcatel-Lucent confirmó más tarde la noticia mediante un comunicado.

"Confío en que haya gente que aprecie el alcance de sus contribuciones y llore su muerte apropiadamente", publicó Rob Pike, miembro del equipo que desarrolló el sistema operativo Unix y amigo personal de Ritchie.

En Bell Labs, Rob Pike y Dennis Ritchie colaboraron juntos durante los años sesenta y setenta en el desarrollo de Unix junto con otros personajes clave del cómputo moderno como Ken Thompson, Brian Kernighan, Douglas McIlroy y Joe Ossanna.

Ritchie se desempeñó como jefe del área de software de sistemas en Alcatel-Lucent hasta su retiro en 2007. Murió en su hogar luego de una larga enfermedad.

**Translation by Google*

Dennis Ritchie, Unix para todos, todos para Unix

*(Dennis Ritchie, Unix for all, all for Unix)**

MIQUEL BARCELÓ 15/10/2011



Dennis Ritchie, en un acto el pasado mes de marzo.- VICTORIA WILL (AP)

No fueron los tres mosqueteros de Alejandro Dumas pero, en cierta forma, los creadores de Unix y de C unieron sus esfuerzos para llevar al D'Artagnan que eran entonces los informáticos de finales de los años sesenta, a un nuevo mundo de sistemas abiertos.

Los mosqueteros fueron Ken Thomson, Brian Kernigham y Dennis Ritchie, fallecido el pasado día 8 a los 70 años. Los tres trabajaban en los laboratorios Bell estadounidenses, centros de investigación de una empresa de telefonía.

Los dos esfuerzos complementarios, la creación del sistema operativo Unix y la puesta a punto del lenguaje de programación C, coincidieron en la persona de Dennis Ritchie, quien colaboró con Thompson en la creación de Unix y con Kernigham para poner a punto el lenguaje C, decisivo entonces en la escritura del nuevo sistema operativo.

Graduado en Física y Matemática Aplicada, Ritchie empezó a trabajar para los laboratorios Bell desde 1967. Por ello se vio involucrado en el proyecto del mejor y mayor sistema operativo que se desarrolló en la segunda mitad de los años sesenta, el Multics (Multiplexed Information and Computing Services), un proyecto cooperativo dirigido por Fernando José Corbató del MIT (Massachusetts Institute of Technology) con la

colaboración de General Electric y los laboratorios Bell.

El proyecto Multics resultó de demasiada envergadura para los intereses de Bell. Exigía un *hardware* demasiado potente y eso llevó a Thompson y Ritchie a abandonar el proyecto en 1969 y volver a los laboratorios Bell. Allí intentaron crear una mini-versión del Multics que pudiera ejecutarse en un pequeño PDP-7. Así nació Unix.

Como sea que Ritchie había participado en el proyecto BCPL (Basic Combined Programming Language) desarrollado por Martin Richards en la Universidad de Cambridge, se basó en él para crear el Lenguaje de Programación B que, con la ayuda de Brian Kernigham, se convirtió en el hoy famoso Lenguaje de Programación C. Con ese lenguaje (evolucionado, pero capaz de operar directamente sobre el *hardware*) se sustituyó la primera versión de Unix creada por Thompson en lenguaje ensamblador.

Como los laboratorios Bell no se dedicaban al negocio de vender ordenadores, distribuyeron gratuitamente versiones de Unix y del compilador de C a las universidades. Así, durante los años setenta, apareció el movimiento de los sistemas abiertos que, en contraposición al *hardware* y *software* "de propietario", empezó a cambiarlo todo. Los sistemas abiertos nos liberaron de la casi férrea dictadura de los "fabricantes de ordenadores" que dominaban el mercado como IBM y el reducido grupo conocido como "la pandilla" (BUNCH, por Burroughs, Univac, NCR, Control Data y Honeywell).

Se abrió así un nuevo mundo de posibilidades que, en lo técnico, han sido muy importantes para la informática actual y que nacen con esos tres mosqueteros y, muy particularmente, con Dennis Ritchie quien actuó como eje de esos dos proyectos que fueron luego totalmente inseparables.

Descanse en paz.

Miquel Barceló es profesor de la UPC y autor del libro Una historia de la informática.

<http://online.wsj.com/article/SB10001424052970204774604576629354123067080.html?KEYWORDS=dennis+ritchie>

*Translation by Google

Dennis Ritchie obituary

As co-inventor of Unix and the programming language C, he had a key role in shaping today's computing environment

Martin Campbell-Kelly

guardian.co.uk, Thursday 13 October 2011 22.25 BST



Dennis Ritchie in May 2011, when he was awarded the **Japan prize**. Photograph: Victoria Will/AP Images for the Japan Prize Foundation

The American computer scientist Dennis Ritchie, who has died aged 70 after a long illness, was one of the co-inventors of the Unix operating system and the C programming language. Unix and C provided the infrastructure software and tools that created much of today's computing environment – from the internet to smartphones – and so have played a central part in shaping the modern world.

The origins of Unix go back to the 1960s, long before the microchip

and personal computers had been invented. The nearest thing to personal computing was the so-called computer utility. This consisted of a large mainframe computer that was used simultaneously, and at great expense, by a couple of dozen users sitting at typewriter terminals.

By the middle of the decade, the computer utility appeared to provide the way ahead, and a consortium of General Electric, Bell Labs and the Massachusetts Institute of Technology (MIT) embarked on a project called Multics (Multiplexed Information and Computing Service). Multics would be the world's largest computer utility, supporting several hundred simultaneous users. Bell Labs was responsible for the operating software.

Ritchie joined the programming division of Bell Labs in 1967. His father, Alistair Ritchie, had had a long career there, and had co-authored an influential technical book, *The Design of Switching Circuits* (1951). Dennis was born to Alistair and his wife Jean in the northern New York suburb of Bronxville, and grew up in New Jersey, where Bell Labs had its Murray Hill site. He studied physics and applied mathematics for a bachelor's degree (1963) and computer science for a PhD (1968) at Harvard University.

Multics was in crisis when he arrived at the research organisation. Indeed, many big software projects were in crisis – people were just beginning to learn that writing large programs was horrendously difficult and costly. In 1969, after four years of development, Bell Labs pulled out of the project.

Ritchie and another lead programmer on Multics, Ken Thompson, were left somewhat bereft by the project's demise. Multics promised a wonderful computing experience, but the operating system was too complex to build. This led them to rethink their software philosophy. They would build a simpler, smaller system that they would call Unix – the name was "a kind of treacherous pun on Multics", Ritchie once explained.

The idea was not immediately appreciated by their managers, and they had to "scrounge around" for an obsolete computer to develop Unix. The computer had just 16 kilobytes of memory, and this alone was an encouragement to keep things simple. If Multics was the victim of baroque software architecture, then Unix would be pure Bauhaus.

Unix was designed over a period of a few months in 1969, and a prototype was running early the following year. Their colleagues remained unconvinced. However, by offering to write some text-processing software, Ritchie and Thompson managed to persuade the Bell Labs patent department to acquire a full-size computer and run Unix on it.

They decided to rewrite the operating system entirely for the new machine. The first version of Unix had been written in the computers' native machine code, which was difficult and slow. For this next version of Unix, Ritchie invented a new language called C, which bridged the gap between machine code and programming languages such as Fortran and Cobol.

C also had an interesting ancestry. The progenitor was a language jointly designed at Cambridge and London universities in 1964 and known as CPL (Combined Programming Language). CPL never survived, but one of the development team, Martin Richards, became a visitor at MIT. There he designed a simpler version of the language for systems implementation, BCPL (Basic CPL).

Once Thompson and Ritchie discovered BCPL, they decided to use it for writing Unix: to do so they squeezed it into 8 kilobytes and renamed it B. Finally, a new and improved version was developed and named C, which, Ritchie mused, "left open the question whether the name represented a progression through the alphabet or through the letters BCPL".

C made writing software immeasurably easier and it also made software portable – so that a program written in C could run on any machine. The new version of Unix was completed in 1973, and since it was written in C, it, too, was portable.

Because Bell Labs's parent, AT&T, was a regulated telephone monopoly, it was prohibited from competing in the computer industry, and so had no pecuniary interest in Unix. This allowed Ritchie and Thompson to distribute Unix free of charge to universities and research institutions, which loved its clean, economical design.

Universities began to train their students in Unix and C, and when they graduated they took the culture into industry, where it blossomed. In 1978 Ritchie and a colleague, Brian Kernighan, wrote a textbook, *The C Programming Language*, which became a bestselling programming primer for the next 15 years. Despite the prosaic title, it was equally a book about programming style, and it shaped programming practices worldwide.

Ritchie and Thompson got early recognition for their work when they received the 1983 Turing award of the Association of Computing Machinery, often dubbed the Nobel prize of computing. But the Unix story was just beginning. The Advanced Projects Research Agency of the US department of defence adopted Unix for the network research that eventually created the internet, and it remains the software glue that binds everything together.

Steve Jobs was a Unix devotee. When he was ousted from Apple Computer in 1985, he used Unix as the basis for his NeXT computer workstation. After his return to Apple ten years later, he brought Unix with him and it became the foundation for all of Apple's current products.

Unix is also at the heart of today's open-source software movement. In the 1980s, following deregulation, AT&T began to assert its intellectual property rights in Unix. A Finnish computer science student named Linus Torvalds decided that the world needed a free version of Unix, which became known as Linux. The system was written by hundreds of programmers, mostly steeped in the Unix and C culture, collaborating over the internet. Today, the free Linux operating system powers billions of electronic devices, from smartphones to set-top boxes.

Ritchie and Thompson – usually together – received many honours and awards, culminating with the National Medal of Science awarded by President Clinton in 1998. The citation described their inventions as having "led to enormous advances in hardware, software, and networking systems and stimulated the growth of an entire industry." Earlier this year, the pair won a Japan prize. Ritchie spent all his career at Bell Labs, retiring as head of systems software research in 2007.

• Dennis MacAlistair Ritchie, computer scientist, born 9 September 1941; died 8 October 2011
<http://www.guardian.co.uk/technology/2011/oct/13/dennis-ritchie?newsfeed=true>

Computerworld UK, 13 October 2011

Unix and C creator Dennis Ritchie dies

His influence? It could be too soon to say

By [John E Dunn](#) | [Computerworld UK](#) | Published 13:05, 13 October 11



Unix mentor and creator of the C programming language, Dennis Ritchie, reportedly died on 8 October at the age of 70 after a long but unspecified illness.

Ritchie's influence on the today's computing world could accurately be described an incalculable.

Born in New York in 1941, Ritchie was from the generation of great minds that made its mark in corporate years of the 1960s, taking a Harvard degree in physics and applied mathematics to his first important job at Bell Labs in 1967.

Ritchie was a major influence the most famous thing ever to come out of that company, an operating system called Unix. First run up by colleague and fellow computing Ken Thompson in assembly language for DEC's PDP-7 minicomputer, the pair later wrote the

founding document of a software movement, edition one of the *Unix Programmer's Manual*.

Armed with an operating system that was to change the computing world, Ritchie set about creating C, a programming language that could be used to make system and applications for Unix machines.

It would be flippant to say that the rest is history but at the time it certainly didn't seem so certain to the modest Ritchie himself. Asked why he toiled so hard to create C and Unix, Ritchie reportedly replied that it "looked like a good thing to do."

The C language was later used as the foundation of an object-oriented C++, which abounds in software to this day and of course Linux can be seen as a descendant of Ritchie's pioneering brilliance.

In 1983 Ritchie and Thompson were awarded the Turing Award for which Ritchie penned the acceptance lecture, *Reflections on Software Research*. In 1999, the men also received the US National Medal of Technology from President Bill Clinton in honour of their work on Unix. Earlier this year, they were awarded the Japan Prize.

"He was a quiet and mostly private man, but he was also my friend, colleague, and collaborator, and the world has lost a truly great mind," said former colleague and Google engineer Rob Pike on Google+, echoing the sentiment of hundreds of condolences offered underneath the announcement.

Ritchie will be remembered as occupying the very top echelon of computing achievement.

<http://www.computerworlduk.com/news/operating-systems/3310655/unix-and-c-creator-dennis-ritchie-dies/>

Dennis Ritchie – creator of C and UNIX – dies

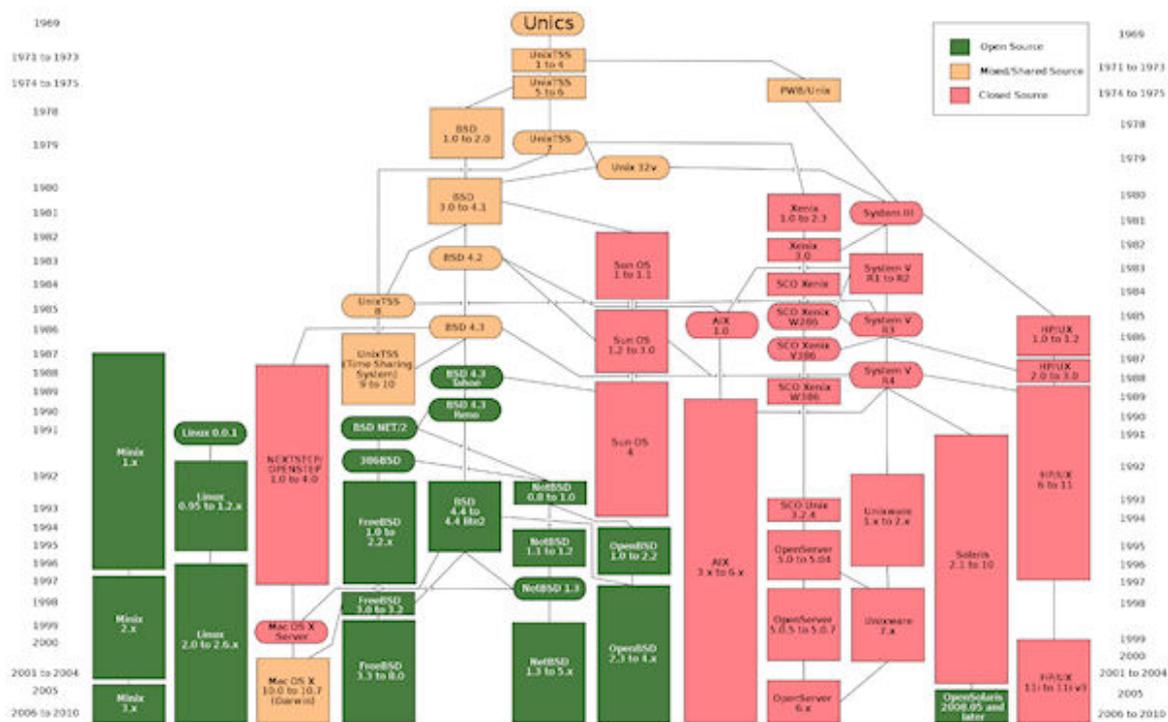
by **Scott Bicheno** on 13 October 2011, 16:57

Pioneer

It's been an attritional month for tech pioneers. Steve Jobs died just over a week ago, now Dennis Ritchie - far less prominent but arguably no less influential - has died, aged 70.

Ritchie created the C programming language 40 years ago as an employee of Bell Labs - at which he stayed for the rest of his career - and it remains one of the most prominent to this day. Furthermore he was part of the team that created the UNIX operating system around the same time, which led to many of the OSs we use today, including Mac OSX, Linux and Solaris.

Here's a chart from Wikipedia showing the evolution of Unix. The portrait was also acquired from Wikipedia.



Bell Labs is now owned by Alcatel Lucent, and the current Bell Labs president - Jeong Kim - blogged to acknowledge Ritchie's passing. "It is with great sadness that I inform you that Dennis Ritchie has passed away at the age of 70," he said.

"This summer we were fortunate to celebrate with him as he accepted the 2011 Japan Prize for co-inventing the UNIX operating system and the C programming language at a ceremony in Murray Hill, NJ, which was viewed by Bell Labs colleagues around the world.

"As one of the most respected researchers from Bell Labs, Dennis has a long list of accomplishments. In addition to his work on UNIX and the C language, Dennis also contributed to the Plan 9 operating system, generally released in 1995, and also to the Inferno operating system, which was announced in April 1996. His last contribution to the UNIX system was a Stream input-output mechanism for connecting networks, terminals, and processes in a unified way.

"On behalf of Bell Labs, I would like to express my deepest sympathies to the Ritchie family, and to all who have been touched in some way by Dennis."

<http://hexus.net/tech/news/industry/32176-dennis-ritchie-creator-c-unix-dies/>

The H, 13 October 2011, 11:48

Dennis Ritchie, creator of C and more, has died

Dennis Ritchie, best known as the creator of the C programming language and co-creator of the UNIX operating system, has died at the age of 70 after a long, unspecified, illness. News of his death came from past collaborator, Rob Pike, in a message on Google+ which read: "I trust there are people here who will appreciate the reach of his contributions and mourn his passing appropriately. He was a quiet and mostly private man, but he was also my friend, colleague, and collaborator, and the world has lost a truly great mind."



Dennis Ritchie receiving the
National Medal of Technology in
1999 

Ritchie's work with Ken Thompson in developing the UNIX operating system, led to them receiving the Turing Award in 1993, the IEEE Hamming medal in 1990, the National Medal of Technology in 1999 and, most recently, the Japan Prize for Information and Communications in 2011.

UNIX came about from attempts by Ritchie and his collaborators to create a simpler, cleaner operating system as a reaction to the "big system syndrome" which they saw in contemporary operating systems. From its early days in the 1970s at Bell Labs, UNIX redefined how people thought about operating systems. UNIX was not just code, but a culture based around ideas such as small programs connected by pipes. It was the Unix culture that inspired Linus Torvalds to create Linux, the open source UNIX-like operating system. The C Programming language, which UNIX was written in, became the de facto language for systems, application and embedded programming and is still one of the most popular languages in the world; Ritchie once said of his creation "C is quirky, flawed, and an enormous success."

As noted by Tim Bray (editor of the XML specification), Ritchie also brought to the world the idea of introducing new languages with a "Hello world" program, null-terminating byte strings, creating processes by duplicating existing ones, and writing operating systems in a compiled machine-independent programming language. "It is impossible – absolutely impossible – to overstate the debt my profession owes to Dennis Ritchie" said Bray, "I've been living in a world he helped invent for over thirty years."

<http://www.h-online.com/open/news/item/Dennis-Ritchie-creator-of-C-and-more-has-died-1360480.html>

Dennis Ritchie

Dennis Ritchie, who has died aged 70, was the co-creator of the Unix operating system, the software tool which powers the internet, and the equally important computer programming language known as “C”.



Dennis Ritchie Photo: AP

5:44PM BST 16 Oct 2011

For those with only a sketchy knowledge of computer-speak, the job of an operating system is to organise the various parts of the computer – the processor, the memory, the disk drives, keyboards, video monitors and so on – to perform useful tasks. A programming language, meanwhile, is usually an artificial shorthand of words, numbers and punctuation used to construct computer programs – including operating systems themselves.

Such is its utility in the modern world of computing that Unix has been described as “the best screwdriver ever built”. The operating system powers many of the world’s data centres, such as those at Google and Amazon, and its technology serves as the foundation of many different operating systems.

Steve Jobs used Unix as the basis for his NeXT computer workstation, and later it became the foundation for Apple’s smartphones and other products. In addition, computer languages such as C++ and Java were built on the C language that Ritchie devised. Meanwhile, the Unix philosophy of free access inspired the open source software movement and its Unix variant, Linux, which now powers most of the servers on which the internet depends.

Work on Unix began at AT&T’s Bell Laboratories in the late 1960s at a time when computers were generally huge, complex to use and typically overseen by men in white coats who jealously guarded access to them. The idea behind Unix was to design an easily portable system that could be run on the cheaper and smaller “minicomputers” that were in the early

stages of development at the time. Ritchie explained that their aim was to produce “a system around which fellowship can form”.

Ritchie and his colleague Ken Thompson, the two researchers assigned to the project, set to work on the core components of the new operating system (known as shell, editor and assembler) and persuaded the Bell Labs patent department to acquire a full-sized DEC computer, known as the PDP7, and run Unix on it.

The first version of Unix had been written in a primitive programming language known as machine code , but it proved cumbersome and slow. So Ritchie invented a new language called C . By the early 1970s five people were working on Unix, and it soon had a long list of commands it could carry out, written in C.

Helped by AT&T’s decision to give the software away free, word about Unix soon spread among the academics who were the principal users of computers. Universities began to train their students in Unix and C, and when they graduated they took this training into industry. In May 1975 Unix was chosen as the operating system for the new computer network that grew into the internet, and it was subsequently adapted for use on many different computers. In the 1990s the rise of the web beyond halls of academia gave it a new lease of life.

In 1978 Ritchie and a colleague, Brian Kernighan, published The C Programming Language, widely known as “K&R”, which became a bestselling programming textbook, running into two editions and selling millions of copies in 25 languages.

Dennis MacAlistair Ritchie was born on September 9 1941 in Bronxville, New York state. His father was an engineer at Bell Labs. When Dennis was a child, the family moved to Summit, New Jersey, where he attended high school. He then went to Harvard, where he read Applied Mathematics.

Ritchie stayed on at Harvard to do graduate work, but while working at the computer centre at the Massachusetts Institute of Technology he decided he was more interested in computing than mathematics. He was recruited by the Sandia National Laboratories, which conducted atomic weapons research and testing, then in 1967 was recruited by Bell Labs to work on a new operating system known as Multics. When Bell pulled out of the project in 1969 after four years of development on the grounds that it was proving too complicated and costly, Ritchie and Ken Thompson began rethinking software philosophy and came up with Unix – “a kind of treacherous pun on Multics”, as Ritchie once explained.

Ritchie travelled widely and was well read, but his main passion was work, and he remained at Bell Labs until he retired in 2007.

In 1983 he and Thompson received the Turing award of the Association of Computing Machinery, the “Nobel Prize of computing”, and in 1998 were awarded the National Medal of Science by President Clinton. In 1999 Ritchie was awarded the US National Medal of Technology.

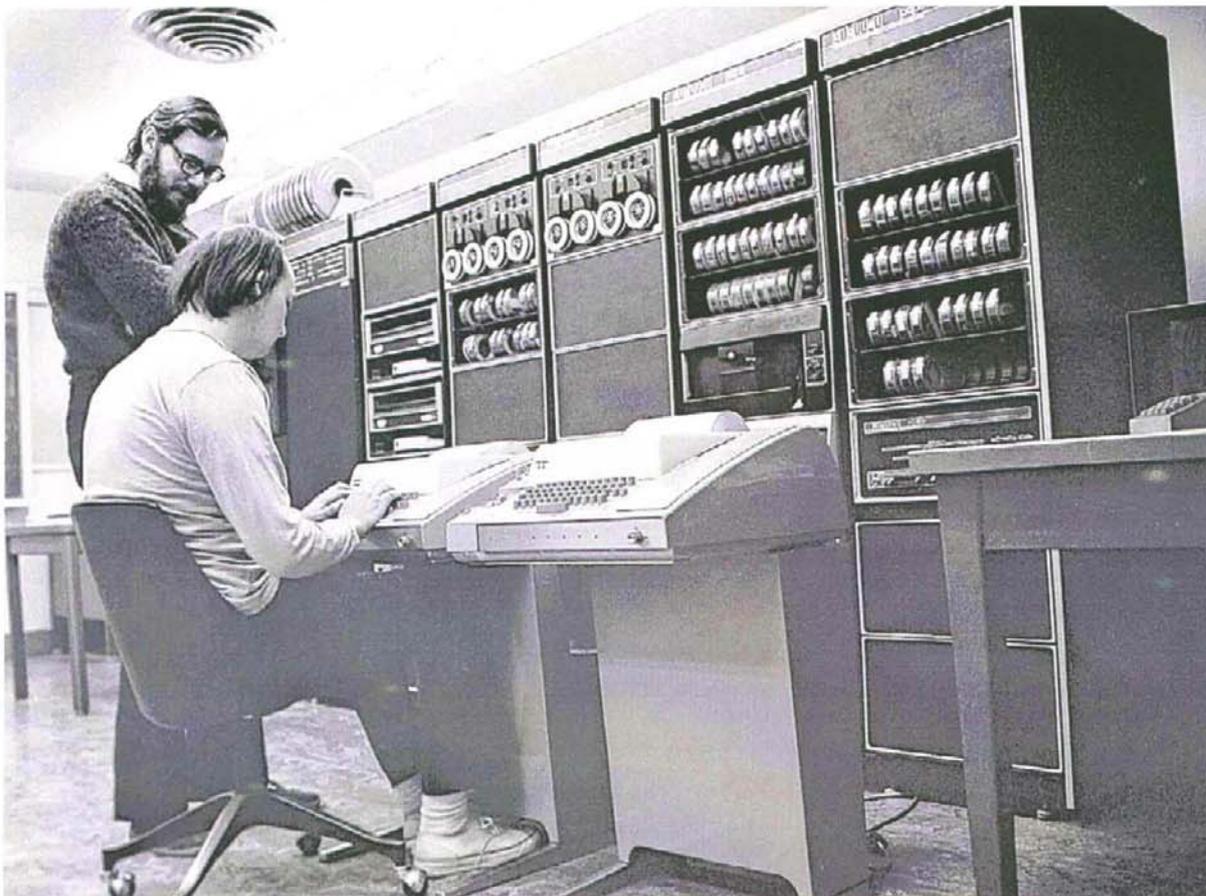
He was unmarried.

Dennis Ritchie, born September 9 1941, died October 12 2011

<http://www.telegraph.co.uk/news/obituaries/technology-obituaries/8830332/Dennis-Ritchie.html>

Dennis Ritchie

Computer scientist who shaped the modern digital era by writing the most widely used operating language



Ritchie, standing, with his collaborator Ken Thompson in 1972: they developed the Unix operating system, which was vital for the development of the internet

Dennis Ritchie was a US computer scientist famous for co-creating Unix, the most widely used computer operating system in history, and C, a computing language that became the staple ingredient in most of today's computers and electronic devices.

With his long-time collaborator Ken Thompson, Ritchie helped to shape the modern digital era and yet he was largely unknown outside the world of computing, modestly spending almost his entire career as a computer scientist at Bell Labs, the research arm of communications technology group Alcatel-Lucent.

Dennis MacAlistair Ritchie was born in 1941 in Bronxville, New York, and grew up in New Jersey. He received bachelor's and advanced degrees from Harvard University, studying physics as an undergraduate then applied mathematics as a postgraduate student. His doctoral thesis in 1968 was on the rather abstruse topic of "subrecursive hierarchies of functions".

He did not believe himself clever enough to become a physicist and opted instead for computing. In 1967 he joined Bell Labs, the venerable communications technology company that was founded in 1925 and credited with several technological breakthroughs, not least of which was the first long-distance transmission of television pictures.

Ritchie's father, Alistair, had already enjoyed a long career at the company, specialising in the design of switching circuits before the era of transistors, so it seemed natural for the son to follow suit.

One of Dennis Ritchie's first projects

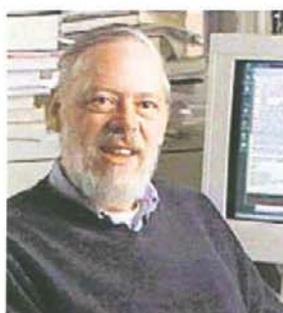
was Multiplexed Information and Computing Services (Multics) — a joint attempt by Bell Labs, Massachusetts Institute of Technology and General Electric to create the first operating system. He helped to develop compilers for the BCPL and ALTRAN computing languages. But the project became too large, expensive and complex, and Bell Labs withdrew in 1968 leaving Ritchie and his lifelong collaborator, Ken Thompson, in a quandary.

They began working on an alternative operating system. Ritchie was particularly keen to show that operating systems did not have to be as complex and expensive as Multics, but could instead be simpler, machine independent and portable.

He began developing Unix with Thompson in 1969 and they had a working prototype up and running in 1970. Their aim was to create a system "around which a community could form", said Ritchie. Unix went on to become the backbone of the internet, the bedrock of most corporate data systems, and the brain powering many consumer electronic devices, including Apple products.

Early in the development of Unix, Ritchie added data types and new syntax to Thompson's B computing language, thus producing a new language, C. This language was fundamentally important in making Unix portable and came to be used in computers of all sizes, from handhelds to supercomputers.

C was popular with developers for its elegance and concision and formed the basis for Bjarne Stroustrup's C++ language, developed in the Nineties.



He inspired the systems that power the world's largest data centres

Ritchie's guidebook, *The C Programming Language*, written with his Bell Labs colleague Brian Kernighan, sold millions of copies and was translated into 25 languages.

The Unix system went on to inspire the open-source and widely adopted variant Linux, developed by Linus Torvalds in the late Nineties. Linux would become the powerhouse behind many of the world's largest commercial data centres.

In addition to Ritchie's work on Unix and C, he contributed to the Plan 9 operating system, released in 1995, and the Inferno operating system, launched in 1996. He continued to work for Bell Labs until his retirement from the Computer Sciences Research Centre in 2007, although he main-

tained close links with the company as a consultant.

Ritchie, known by his initials DMR, which served as his username, was respected for his humility despite winning numerous awards for his work with Thompson. He won the Association for Computing Machinery (ACM) Award for the outstanding paper of 1974 in systems and languages; the IEEE Emmanuel R. Piore Award in 1982; the ACM Turing Award and ACM Software System Award in 1983; and the IEEE Hamming Medal in 1990.

He was elected to the US National Academy of Engineering in 1988 and received the US National Medal of Technology from President Clinton in 1999. He was still winning awards until shortly before his death, receiving the Japan Prize with Thompson in the summer of 2011.

He delivered the following message to young researchers around the world: "Since its birth Unix has been widely used by governments and civilians for over 40 years. I believe it became a successful unique system because it was developed by a small team for their own use, with very simple design. I feel the long-running success of Unix can be credited to the research in which we had total freedom to research whatever we liked."

Towards the end of his life Ritchie had been in poor health after suffering prostate cancer. A quiet and private man, fond of travelling, reading, and the natural world, he was unmarried.

Dennis Ritchie, computer scientist, was born on September 9, 1941. He died October 12, 2011, aged 70



Naked Security, 14 October 2011

RIP Dennis Ritchie, inventor of C and father of UNIX

by Paul Ducklin on October 14, 2011

Dennis Ritchie, the researcher and computer scientist whom Wired farewelled with the headline *The Shoulders Steve Jobs Stood On*, has returned from main. He died at his home last weekend.

Dr Ritchie can perhaps most succinctly be described as the inventor of C and the father of UNIX, work for which he and Bell Labs colleague Ken Thompson were jointly awarded the 1983 Turing Award.

But Ritchie's work on UNIX was not just a kingly act of engineering.

It was also a masterful demonstration of what software developers can achieve if they set out neither with the intellectual arrogance of supposing they can reinvent the world, nor with the financial goal of forcing their programmatic predilections upon it.

As Ritchie himself modestly pointed out in his Turing Award acceptance speech - "our intent was to create a pleasant computing environment for ourselves, and our hope was that others liked it."

(Unforgiving proponents of cloud computing - in particular, those especially brash sales people who won't, and possibly *can't*, perceive any other path forward - might like to bear in mind that Ritchie also noted, of UNIX, that "there were sociological forces that contributed to its success: [...] it appeared at a time when alternatives to large, centrally administered computation centers were becoming possible." Hold that thought!)

The Turing Award selection committee explained its respect for UNIX more forcefully:

The success of the UNIX system stems from its tasteful selection of a few key ideas and their elegant implementation. The model of the UNIX system has led a generation of software designers to new ways of thinking about programming. The genius of the UNIX system is its framework, which enables programmers to stand on the work of others.

Ritchie, with Thompson, went on to receive other major accolades for UNIX, including the 1998 US National Medal of Technology and Innovation, and the 2011 Japan Prize for Information and Communications.

However, Dennis MacAlistair Ritchie, or dmr, is probably best-known - especially to those who aren't really aware of who or what he was - simply as the **R** in **K&R**, the colloquial name for the central religious text of C programmers around the world.

Ritchie co-authored the book with Brian Kernighan, another colleague at Bell Labs.

Of course, since Ritchie both invented C and wrote its definitive guide, he gets to

decide its orthography.

So, in memory of dmr, let me remind you all that writing C code like this:

is not only unsightly, but also incontestably and unarguably wrong.

As Henry Spencer declares in his Ten

Commandments for C Programmers: thou shalt make thy program's purpose and structure clear to thy fellow man by using the One True Brace Style, even if thou likest it not, for thy creativity is better used in solving problems than in creating beautiful new impediments to understanding.

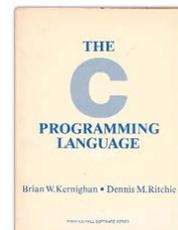
Do it for dmr!

And if you're a modern-day manager of computer technologists, engineers and scientists, take some advice from Microsoft programming language guru Herb Sutter.

In his [eulogy for Dennis Ritchie](#), Sutter praises dmr's brilliance in creating the world's first portable *and* efficient programming language, pointing out that "C is a poster child for why it's essential to keep those people who know a thing can't be done from bothering the people who are doing it."

Amen to that.

<http://nakedsecurity.sophos.com/2011/10/14/rip-dennis-ritchie-inventor-of-c-and-father-of-unix/>



```
if (p == NULL)
{
    return -1;
}
else
{
    process(p);
    return 0;
}
```

Heise Online (Germany), 13 October 2011

Unix ist einfach - zum Tode von Dennis Ritchie

*(Unix is simple - to the death of Dennis Ritchie)**



Wie erst jetzt bekannt wurde, ist der US-amerikanische Informatiker [Dennis MacAlistair Ritchie](#) am vergangenen Wochenende nach langer Krankheit in Murray Hill gestorben. Ritchie wurde 70 Jahre alt.

Über 40 Jahre beeinflusste er maßgeblich die Entwicklung der Informationstechnologie. Er gilt als eine der treibenden Kräfte hinter dem Aufstieg von Unix: Zusammen mit Ken Thompson schrieb und portierte er die erste Version von Unix. Für Unix konzipierte er mit Thompson und Brian Kernighan die Programmiersprache C. Das von ihm und Kernighan geschriebene Buch "The C Programming Language" gilt als eines der einflussreichsten Informatikwerke, das Heerscharen von Programmierern den Einstieg in ihren Beruf bereitete. Außerdem war Ritchie für die ersten sechs Ausgaben des "Unix Programmer's Manual" verantwortlich, ehe das Handbuch in "Unix Time-Sharing System" unbenannt wurde.

Dennis M. Ritchie wurde am 9. September 1941 in Bronxville geboren. Sein Vater arbeitete als Elektroingenieur bei den Bell Labs von AT&T, wo Ritchie 1967 im neuen "Computing Science Research Center" seine Karriere startete, nachdem er in Harvard Physik und angewandte Mathematik studiert hatte. Parallel zur Arbeit in den Laboratorien promovierte Dennis Ritchie in Harvard bei Patrick C-Fischer mit einer Arbeit über rekursive Programmierstrukturen, "Program Structure and Computational Complexity".

Noch während seiner Studienzeit hatte Ritchie [erste Erfahrungen mit MULTICS](#) (Multiplexed Information and Computing Service) gesammelt, einem Betriebssystem, das am Massachusetts Institute of Technology (MIT) für General Electric entwickelt worden war. Die Erfahrungen mit MULTICS veranlassten Ritchies Kollegen Ken Thompson, einen anderen Weg zu beschreiten, wie Ritchie erzählte: *"We were a bit oppressed by the big system mentality. Ken wanted to do something simple. Presumably, as important as anything was the simple fact that our means were much smaller - we could get only small machines with none of the fancy Multics hardware. /.../ Multics wasn't there for us anymore, but we liked the feel of interactive computing that it offered."*

Das Resultat dieser Arbeit führte im Jahre 1969 zur [Entstehung von Unics](#), das für die DEC PDP-7 konzipiert wurde. Für dieses System entwickelte Dennis Ritchie auf der Basis von B eine [Programmiersprache](#), die er zunächst "New B", dann C nannte. Während dieser Zeit entwickelte sich aus Unics das Unix Time-Sharing System First Edition (V1), das 1970 auf einer PDP-11 installiert wurde. Der große Wurf kam 1973, als Dennis Ritchie und Ken Thompson das Betriebssystem in der Sprache C komplett neu schrieben. Diese Version begründete die weitreichende Portabilität von Unix; allerdings dauerte es 10 Jahre, bis die erste Portierung auf ein DEC fremdes Rechnersystem erfolgte. Dennis Ritchie und Steve Johnson portierten Unix 1978 auf die Interdata 8/32.

Für diese Leistung erhielten Ritchie und Thompson im Jahr 1998 die [National Medal of Technology](#). Unix und C hätten die Computertechnologie stimuliert und so die führende Rolle der USA im Informationszeitalter gefördert, erklärte der damalige US-Präsident Bill Clinton. Ritchies Erklärung wurde legendär und lautete vollständig: *"Unix is simple and coherent, but it takes a genius - or at any rate a programmer - to understand and appreciate the simplicity."*

Zeit seines [Berufslebens](#) bis zum Ausscheiden im Jahre 2007 arbeitete Dennis Ritchie bei den Bell Labs. Als größte Ehre hielt er einen Labs-Eintrag am Gebäude, in dem die Erfindung des Transistors und die Entwicklung von Unix als die beiden wichtigsten Geschenke der Labs an die Welt bezeichnet wurden. Zusammen mit Ken Thompson und Brian Kernighan erhielt Ritchie zahlreiche Preise und Ehrenwürden, darunter den Turing Award 1983 und den [Japan-Preis](#). Das von ihm mitentwickelte Unix hielt Ritchie nicht für das ultimative Betriebssystem, sondern ermahnte seine Kollegen 1984 in der Zeitschrift [Communications of the ACM](#):

"The greatest danger to good computer science research today may be excessive relevance. If we can keep alive enough openness to new ideas, enough freedom of communication, enough patience to allow the novel to prosper, it will remain possible for a future Ken Thompson to find a little-used Cray/1 computer and fashion a system as creative, and as influential, as Unix." (Detlef Borchers) | (jk)

<http://www.heise.de/newsticker/meldung/Unix-ist-einfach-zum-Tode-von-Dennis-Ritchie-1360366.html>

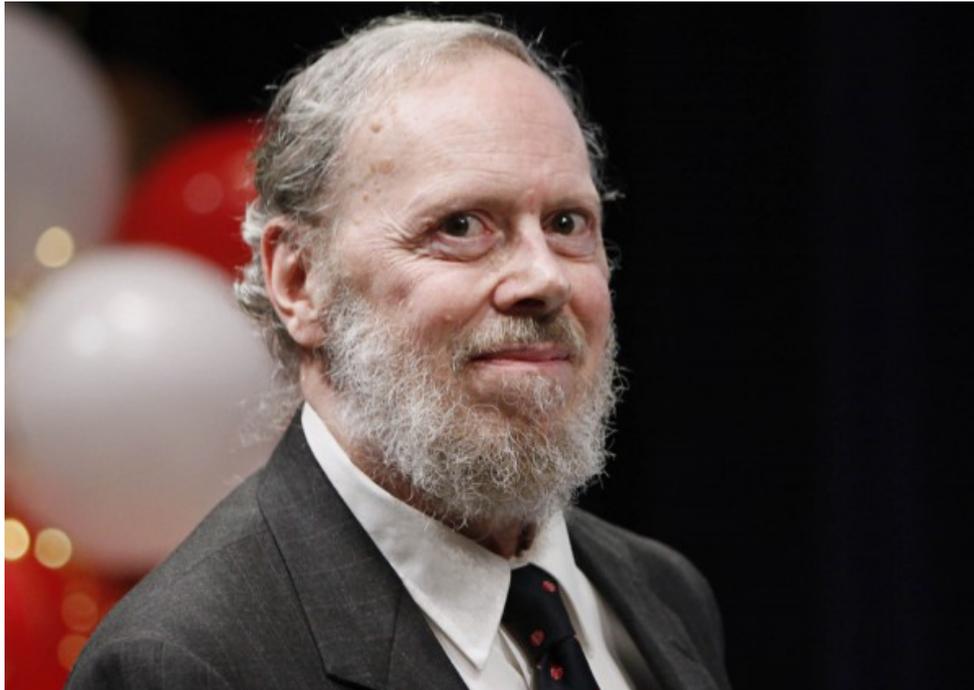
**Translation by Google*

Computer-Pionier Dennis Ritchie ist tot

*(Computer pioneer Dennis Ritchie is dead)**

Deutsch Türkische Nachrichten | 13.10.11, 17:29

Die IT-Szene trauert um Computer-Pionier Dennis MacAllstair Ritchie. Wie erst jetzt öffentlich wurde, starb der US-amerikanische Informatiker bereits am vergangenen Wochenende.



Dennis Ritchie ist am vergangenen Wochenende verstorben. (Foto: ddp images)

Dennis Ritchie wurde nur 70 Jahre alt. Er verstarb bereits vor einigen Tag nach längerer Krankheit in Murray Hill. Gemeinsam mit Ken Thompson zeichnet er für die erste Version des Betriebssystems Unix verantwortlich. Mit Brian Kernighan im Boot entwickelte das Gespann die Programmiersprache C. Das dazugehörige Buch "The C Programming Language" gilt seit seinem Erscheinen als Meilenstein in der Informatikerszene.

In Foren war Dennis Ritchie als "dmr" bekannt

Geboren wurde Ritchie am 9. September 1941 in Bronxville. Nach seinem Studium der Physik und angewandten Mathematik in Harvard sowie seiner Promotion mit dem Titel "Program Structure and Computational Complexity" wurde Ritchie schnell zum wegweisenden Programmierer, dem 1998 sogar die National Medal of Technology verliehen wurde.

Den größten Teil seiner Karriere verbrachte Ritchie bei Bell Labs. Auf Grund seiner Unternehmens-E-Mail-Adresse wurde er in Foren oft nur "dmr" genannt. 2007 zog er sich aus dem Berufsleben zurück. Woran Ritchie genau erkrankt war, ist nicht bekannt.

<http://www.deutsch-tuerkische-nachrichten.de/2011/10/216760/>

**Translation by Google*

Der Standard.at (Austria), 14 October 2011

*"Dennis Ritchie had greater influence than Steve Jobs"**



Dennis Ritchie und Steve Jobs

UNIX- UND C-MITERFINDER

"Dennis Ritchie hatte größeren Einfluss als Steve Jobs"

14. Oktober 2011 16:23

Wegbegleiter des verstorbenen Computerwissenschaftlers erinnern an dessen bedeutsame Arbeit

Anfang Oktober dieses Jahres sind zwei Persönlichkeiten gestorben, die die Computer-Entwicklung entscheidend geprägt haben und darüber hinaus starken Einfluss hatten. Während der Tod des einen jedoch von Fans weltweit betrauert wird, ist der andere außerhalb der IT-Branche nur wenigen bekannt. Die Rede ist von Apple-Mitgründer Steve Jobs und Dennis Ritchie, dem Miterfinder von Unix und C der Programmiersprache C.

MEHR ZUM THEMA

APPLE: Das iPhone 4 bei A1 jetzt ab 0€!

Werbung

"Dennis hatte größeren Einfluss"

Der Tod von Steve Jobs habe einen großen Aufschrei nachgezogen, was sehr bewegend und auch gerechtfertigt gewesen sei, meint Programmierer Rob Pike, der 20 Jahre lang mit Ritchie bei Bell Labs gearbeitet hat. "Aber Dennis hatte einen größeren Einfluss, und die Öffentlichkeit weiß nicht einmal wer er ist", beklagt der heutige Google-Mitarbeiter im Interview mit *Wired*.

"So gut wie alles im Web basiert auf C und Unix"

Pike war es auch, das die Öffentlichkeit von Ritchies Tod auf Google+ informiert hatte. Ritchie erfand die Programmiersprache C mit und entwickelte darauf basierend Unix, das Betriebssystem auf dem unter anderem auch Apples Betriebssysteme Mac OS und iOS basieren. "So gut wie alles im Web nutzt zwei Dinge: C und Unix", erklärt Pike. "Browser sind in C geschrieben. Der Unix Kern - auf dem praktisch das ganze Internet läuft - ist in C geschrieben."

Jobs "König des Sichtbaren"

"Jobs war das König des Sichtbaren und Ritchie ist der König dessen, was weitgehend unsichtbar ist", sagt MIT-Professor Martin Rinard. Während Jobs für viele Produkte verantwortlich zeichne, die den Geschmack vieler Leute getroffen haben, habe Ritchie die Voraussetzung für die Infrastrukturen davon geschaffen. Die Menschen könnten sie zwar nicht sehen, würden sie aber täglich nutzen. Für seine Arbeit erhielt Ritchie Auszeichnungen wie den Turing Award und die National Medal of Technology.

"Wir stehen alle auf Dennis' Schultern"

Sowohl Jobs als auch Ritchie hätten sehr zurückgezogen gelebt. Doch im Gegensatz zum ehemaligen Apple-Chef ist um den Entwickler kein Personenkult entstanden. Brian Kernighan, mit dem Ritchie Anfang der 80er das Buch *The C Programming Language* herausgebracht hatte, führt das darauf zurück, dass beide Personen in sehr unterschiedlichen Zeiten und Umgebungen gearbeitet hätten. Doch "wir stehen alle auf Dennis' Schultern", hält Kernighan in Anspielung an das berühmte Zitat von Newton fest. (red)

<http://derstandard.at/1318461330920/Unix--und-C-Miterfinder-Dennis-Ritchie-hatte-groesser-en-Einfluss-als-Steve-Jobs>

*Translation by Google

Indexel.net (France), 14 October 2011

Dennis Ritchie, le père de l'informatique moderne est mort (*Dennis Ritchie, the father of the modern computing, is dead*)*



Par Antoine Robin le 14/10/2011 - indexel.net

Dennis MacAlistair Ritchie s'est éteint le 8 octobre 2011. Il était l'inventeur du langage C et l'un des principaux développeurs du système d'exploitation Unix.

Inconnu du grand public, Dennis MacAlistair Ritchie était un informaticien de génie et un des pionniers de l'informatique moderne. Avec trois autres grands noms de l'informatique - Robert Metcalfe (l'inventeur d'Ethernet), Vint Cerf (l'inventeur du protocole TCP/IP) et Tim Berners-Lee (l'inventeur du web) - il a jeté les bases de l'informatique d'aujourd'hui.

Au début des années 70, dmr (son surnom issu de son adresse e-mail) travaille pour les laboratoires Bell. Il y invente avec Ken Thompson le langage C. Particulièrement moderne, ce langage est une véritable révolution pour les développeurs de l'époque. Le nom du langage C vient du langage B avec lequel Thompson et Ritchie tentaient d'écrire le système d'exploitation Unix. Lassés des limites du langage B, K&R ont créé leur propre langage de programmation (C) pour pouvoir développer Unix. Rien de moins !

Quarante ans plus tard, C et Unix sont toujours les deux technologies les plus utilisées dans le monde. De Windows à Linux, tous les systèmes d'exploitation modernes sont développés en C / C++ et reposent sur les concepts d'Unix. Idem pour les applications informatiques les plus critiques, qui nécessitent à la fois performance et fiabilité. Même les technologies les plus récentes telles que le système d'exploitation de l'iPhone (iOS) et son langage de programmation Objective C, présentés à tort comme des innovations, ne sont en réalité que des dérivés d'Unix et de C. Mac OS X, le système d'exploitation d'Apple, est un Unix. Bref, sans C et Unix, l'informatique d'aujourd'hui n'existerait pas.

Dennis Ritchie a été récompensé à de nombreuses reprises par les distinctions les plus prestigieuses : prix Turing de l'ACM (1983), Médaille Richard Hamming de l'IEEE (1990), National Medal of Technology and Innovation décernée par le président des Etats-Unis (1998) et dernièrement le Japan Prize (2011).

<http://www.indexel.net/actualites/dennis-ritchie-le-pere-de-l-informatique-moderne-est-mort-3441.html>

*Translation by Google

Mort de Dennis Ritchie, l'inventeur d'Unix et du langage C

*(Death of Dennis Ritchie, inventor of Unix and C language)**

LEMONDE.FR | 17.10.11 | 18h10 • Mis à jour le 17.10.11 | 18h32



Dennis Ritchie (au centre) reçoit, avec Ken Thompson (à gauche), la médaille de la technologie des mains du président américain Bill Clinton, le 27 avril 1999. Bell labs

Dennis Ritchie, un programmeur dont les travaux ont permis l'évolution de l'informatique moderne, est mort ce 12 octobre, à l'âge de 70 ans. Il est notamment l'un des créateurs d'Unix, l'un des premiers systèmes d'exploitation – le logiciel central d'un ordinateur – modernes, et était également le co-créateur du langage de programmation C, dont la simplicité et la portabilité ont permis le développement rapide de programmes utilisables sur des machines différentes.

Embauché par le géant des télécommunications Bell à la fin des années 1960, titulaire d'un diplôme de Harvard, M. Ritchie avait travaillé sur un premier projet de système d'exploitation, baptisé Multics, qui avait été un échec. Trop complexe, le projet avait été abandonné en 1969 ; Dennis Ritchie et son collègue Ken Thompson ont alors décidé de lancer un nouveau projet, plus simple. En quelques mois de travail, et malgré l'absence de soutien de leur hiérarchie, les deux programmeurs développèrent alors Unix, conçu pour tourner sur des machines très peu puissantes.

Pour faire évoluer Unix, Ritchie et Thompson eurent alors besoin d'un langage de programmation simple et qui puisse fonctionner sur différentes machines. Ils firent donc évoluer un ancien projet des universités de Cambridge et Londres pour créer un langage générique, dont la première version fut nommée B, et la suivante C. Le langage s'imposa rapidement comme un standard, d'abord dans les universités, puis dans le monde de l'entreprise ; un manuel écrit par Dennis Ritchie avec un autre collègue devint l'un des livres de cours les plus vendus au monde.

Distingué à de nombreuses reprises, Dennis Ritchie a, avec Ken Thompson, permis la création de nombreux programmes et systèmes d'exploitation modernes. Distribué gratuitement à ses débuts, Unix a été à l'origine des systèmes d'exploitation créés par Apple ou, dans une version réécrite pour éviter les problèmes de licences, de GNU/Linux. Sur téléphone mobile, Android comme iOS sont basés sur Unix.

Le Monde.fr

http://www.lemonde.fr/technologies/article/2011/10/17/mort-de-dennis-ritchie-l-inventeur-d-unix-et-du-langage-c_1589267_651865.html

**Translation by Google*

INFORMATICA

Addio a Dennis Ritchie padre di Unix e del "C"

*(Farewell to Dennis Ritchie, father of Unix and "C")**

Scompare a 70 anni una delle menti più geniali del secolo digitale, inventore di sistemi operativi e piattaforme di programmazione. Grazie al suo lavoro oggi esiste Linux, l'Os libero più diffuso al mondo



Dennis Ritchie

NEW YORK - Un altro grande lutto nel mondo dell'informatica. E' morto a 70 anni Dennis Ritchie: un nome meno noto di quello di Steve Jobs ¹, ma senza il quale molte delle realizzazioni di Apple e dell'industria informatica non sarebbero mai nate.

Ritchie è stato, assieme a Ken Thompson, una delle menti principali dietro lo sviluppo del sistema operativo Unix e inventore del linguaggio di programmazione C. Un genio poco noto, eppure autore di un lavoro fondamentale su cui oggi si basa una parte consistente del nostro ecosistema digitale.

Ritchie ha iniziato la sua attività ai Bell Labs, alla fine degli anni Sessanta, lavorando sul linguaggio macchina. Dallo sviluppo di Unix è poi derivato quello che oggi è il sistema operativo open source e gratuito più diffuso al mondo, Linux, nelle sue numerose varianti. E anche il blasonato Mac Os X basa la sua architettura su Unix, realizzato nel 1971 grazie al prezioso contributo di Ritchie. Il linguaggio C venne dopo il B, sempre progettato e realizzato da lui durante gli anni trascorsi ai laboratori Bell.

Per il suo contributo decisivo nell'informatica, Ritchie ha ricevuto, insieme a Thompson, il prestigioso premio Turing nel 1983.

http://www.repubblica.it/tecnologia/2011/10/13/news/addio_a_dennis_ritchie_pap_di_unix_e_del_linguaggio_c-23171432/?rss

**Translation by Google*

GIZMODO (Italy), 13 October 2011

E' morto Dennis Ritchie, padre di Unix e del linguaggio C

*(And Dead Dennis Ritchie, the father of Unix and the C)**



Non è un bel periodo per il mondo dell'IT. Si è spento ieri, infatti, Dennis Ritchie considerato uno dei pionieri dell'informatica moderna, co-autore, insieme a Ken Thompson del sistema operativo UNIX e del linguaggio di programmazione C. Il suo libro, "Linguaggio C", scritto insieme a Brian Kernighan, è ritenuto uno dei pilastri della programmazione da generazioni di programmatori.

Ritchie si è spento all'età di 70 anni e a dare la notizia è stato il suo ex collaboratore dei Laboratori Bell, dove Ritchie iniziò il suo lungo lavoro di informatico, Robert Pike. "Il mondo ha perso una mente davvero grandiosa" ha dichiarato Pike, e non si può non essere d'accordo.

C, infatti, è ancora oggi il linguaggio di programmazione più usato di tutti i tempi e senza UNIX, molto probabilmente, non avremmo Linux, Mac OS X, BSD solo per citare i più famosi e usati tra i sistemi operativi basati sulla creazione di Ritchie e Thompson.



Nel 1983, Ritchie e Thompson ricevettero il premio Turing per il contributo allo sviluppo della teoria generica dei sistemi operativi e specialmente per UNIX. Nel 1990, poi i due ricevettero l'IEEE Richard W. Hamming Medal dall' Institute of Electrical and Electronics Engineers "per avere dato origine al sistema operativo UNIX e al linguaggio di programmazione C", mentre nel 1998 l'allora presidente Bill Clinton consegnò loro la Medaglia Nazionale della Tecnologia come riconoscimento agli enormi passi fatti dall'informatica grazie a UNIX e C. Infine,

proprio quest'anno, Ritchie e Thompson sono stati insigniti del **Japan Prize for Information and Communications** per il "lavoro pionieristico svolto nello sviluppo del sistema operativo UNIX".

Nato a Bronxville, New York, Ritchie si era laureato ad Harvard in Fisica e Matematica Applicata e nel 1967 iniziò a lavorare al Bell Labs' Computing Sciences Research Center dove insieme a Thompson diede vita a UNIX. Il suo ultimo incarico, che ha ricoperto fino al momento della pensione nel 2007 è stato quello di capo del System Software Research Department presso Lucent Technologies. Come si dice in questi casi, l'informatica ha perso uno dei suoi padri fondatori e a noi resta la sua grandiosa eredità.

Qui di seguito, il video in cui Ritchie e Thompson raccontano la nascita, la struttura e l'utilizzo di UNIX. (c.c.)

<http://www.gizmodo.it/2011/10/13/e-morto-dennis-ritchie-padre-di-unix-e-del-linguaggio-c.html>
|

*Translation by Google

14/10/2011

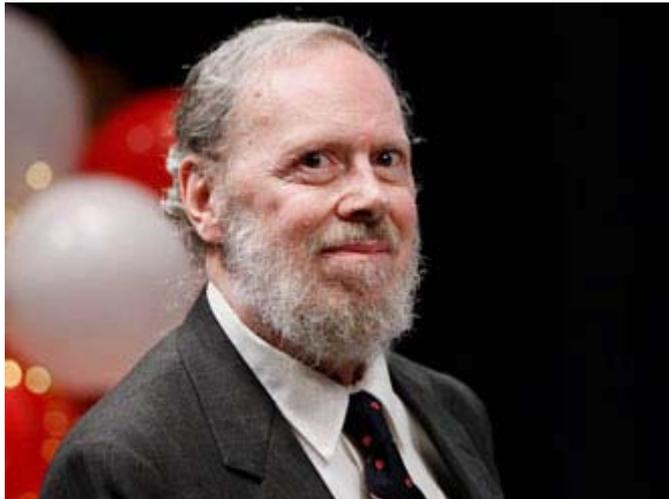
Addio al papà di Unix e del linguaggio C

L'informatico americano Dennis Ritchie è morto all'età di 70

*(Farewell to the father of Unix and C languag
American computer scientist Dennis Ritchie dies at 70)**

TORINO

Dennis Ritchie, co-inventore del sistema operativo Unix e del linguaggio di programmazione di C, è morto all'età di 70, dopo una lunga malattia. Il lavoro dell'americano ha giocato un ruolo centrale nel plasmare l'attuale mondo informatico, grazie allo sviluppo di architetture software e strumenti fondamentali per molti dei dispositivi moderni.



Sulle orme del padre, Ritchie entra nella divisione di programmazione dei Bell Labs nel 1967, quando scrivere programmi di grandi dimensioni è ancora difficile e costoso. Insieme al suo compagno di lavoro Ken Thompson, ripensa la filosofia del software e semplifica la scrittura in codice macchina.

Per il loro lavoro, entrambi ricevono nel 1983 il premio Turing, soprannominato il premio Nobel dell'informatica, nel 1998 la National Medal of Science e quest'anno un'onorificenza in Giappone.

Negli anni ottanta, il sistema operativo Unix è stato utilizzato da Steve Jobs come base per i prodotti della Apple e da Linus Torvalds per creare una versione open source, nota come Linux.

+ [«Dennis Ritchie obituary» sul Guardian](#)

http://www.lastampa.it/web/cmstp/tmplrubriche/tecnologia/grubrica.asp?ID_blog=30&ID_arti_colo=9611&ID_sezione=38

**Translation by Google*

Unix-Erfinder gestorben (*Unix inventor died*)*

Der amerikanische Informatiker Dennis Ritchie, Miterfinder des Unix-Betriebssystems und der Programmiersprache C, ist kurz nach seinem siebzigsten Geburtstag verstorben.

» Von idg , 14.10.2011 09:30.

Ritchie, Jahrgang 1941, entwickelte zusammen mit Ken Thompson und anderen die erste Version des Unix-Betriebssystems und schrieb 1971 das erste «Unix Programmer's Manual». Zusammen mit Thompson und Brian W. Kernighan entwickelte er die Programmiersprache C. Ritchie und Kernighan schrieben gemeinsam das Buch «The C Programming Language».

Ritchie studierte an der Harvard University Physik und Angewandte Mathematik. Seit 1967 arbeitete er im Computing Sciences Research Center der Bell Labs. Er beschäftigte sich mit Multics, BCPL, ALTRAN und schliesslich mit der Programmiersprache B, Unix und Plan 9. 2007 zog er sich aus dem «aktiven Dienst» zurück. In seinem Ruhestand arbeitete er trotzdem noch gelegentlich als Berater.

Zusammen mit Thompson erhielt Ritchie 1983 den Turing Award, 1990 die Richard-W.-Hamming-Medaille des IEEE, 1999 die National Medal of Technology und 2011 den Japan-Preis für die Entwicklung von Unix und C. 2005 wurde Ritchie mit dem IRI Achievement Award des Industrial Research Institute ausgezeichnet.



Dennis Ritchie ist Miterfinder von Unix und C

<http://www.computerworld.ch/news/it-branche/artikel/unix-erfinder-gestorben-57970/>

*Translation by Google

09ESQUEL

**OBITUARIOS; Genio del software
(Obituary; Software genius)***

FRANCESC BRACERO

DENNIS RITCHIE (1941-2011) Científico y programador Al mundo de la tecnología de consumo se le acumulan los motivos para el pesar en estos días. Pocos días después de la muerte de Steve Jobs, el pasado 9 de noviembre fallecía a los 71 años en Murray Hill (Estados Unidos) otro influyente genio, Dennis Ritchie. Se trataba de uno de los expertos que más ha contribuido a la informática con la que hoy trabajamos . Entre otros logros, Ritchie es el inventor del lenguaje de programación C, uno de los que más se utiliza hoy, pero además creó, junto con otros expertos, una teoría para el desarrollo de sistemas operativos de ordenadores y después la puso en práctica con el sistema Unix que es la base que hoy equipa, entre otros, al Mac OSX de Apple y a Linux. Nacido en 1941 en Bronxville, muy cerca de Nueva York, Ritchie se graduó por partida doble en física y en matemática aplicada por la Universidad de Harvard.

Pronto empezó a trabajar en 1967 en los Laboratorios Bell, donde participó en proyectos de desarrollo de lenguajes de programación. Su gran obra de esa época es la creación del lenguaje C, que se utiliza hoy en día de forma regular y que además ha tenido gran influencia en otros más modernos como Java. Fue en los Laboratorios Bell donde Ritchie trabajó con otros ilustres informáticos pioneros, en una época con máquinas muy limitadas, para desarrollar Unix, que hoy es sinónimo de un sistema operativo con una arquitectura muy estable y que entre sus características cuenta con su capacidad para ser utilizado por varios usuarios y ejecutar varias tareas al mismo tiempo. multiusuario. En ese equipo de Unix, Ritchie trabajó con otros expertos reconocidos como Ken Thompson y Brian W. Kernighan, con el que publicó el manual de programación del lenguaje C que él mismo había creado. En 1983 Ritchie fue galardonado con el premio Turing, una distinción que en el mundo de la informática equivaldría al premio Nobel. Este importante reconocimiento le fue otorgado por sus aportaciones al desarrollo de sistemas operativos y, en especial, por su contribución a Unix. En Estados Unidos le fue otorgada también la Medalla Nacional de Tecnología en 1998 junto con su compañero Kenneth Thompson, que le fue impuesta por el presidente de la época, Bill Clinton. Linus Torvalds, creador deLinux, dijo en cierta ocasión que, para crear este sistema se había apoyado "sobre los hombros de gigantes". Uno de ellos era Dennis Ritchie. La importancia de la creación intelectual y la investigación de Ritchie se demuestra sólo con preguntarse como sería la tecnología hoy si Unix o el lenguaje de programación C no existieran. La cuestión no es para profanos, pero los expertos apuntan que estos avances fueron fundamentales para que los ordenadores sean lo que son hoy en día. A raíz de la muerte de Ritchie, el presidente de los Laboratorios Bell, Jeong Kim, escribió: "era una verdadera inspiración para todos nosotros, no sólo por sus muchos logros, sino debido a que era un amigo, un inventor y un humilde hombre lleno de gracia". Una de las anécdotas más conocidas de Ritchie es que, aunque pese a ser el admirado creador de C, uno de los lenguajes de programación más reconocidos, en realidad su lenguaje favorito era otro: Alef.

558 wordsVNGDIA 33 Spanish (C) 2011 La Vanguardia

**Translation by Google*

FILED UNDER [Software](#)

おくやみ: C 言語の作者 デニス・リッチー博士

By Ittousai



C 言語の開発者として知られる計算機科学者 Dennis Ritchie 氏が先週末に亡くなっていたことが分かりました。ベル研究所時代の同僚であり、現在は Google に勤務するエンジニア Rob Pike 氏によると、リッチー氏は長い闘病ののちニュージャージー州の自宅で亡くなったとのこと。1941 年生まれの 70 歳でした。

デニス・リッチー氏といえば、ベル研究所でケン・トンプソンとともにオペレーティングシステム UNIX を開発し、また UNIX を記述する言語として C 言語を開発した人物。それぞれの派生 OS や言語も含めて、現代のコンピューティングに極めて大きな影響を与えています。

1978 年にブライアン・カーニハンと共著した *The C Programming Language* (略称 K&R、邦訳『プログラミング言語

C』) は、長らく C 言語の正典かつ教科書として用いられていました。またオペレーティングシステム理論や UNIX、C 言語開発の業績を称え、1983 年にはコンピューターサイエンス分野の最高荣誉であるチューリング賞を、最近では 2011 年に日本国際賞をいずれもケン・トンプソンと共に受賞しています。教科書上の名前というだけでなく、現在もほとんどあらゆるところで使われている C の作者として、現代のコンピューティングのありかたを決定した偉大なエンジニアでした。謹んでお悔やみ申し上げます。

<http://japanese.engadget.com/2011/10/13/c/>

IT Media, 14 October 2011

C 言語の開発者、デニス・リッチー氏が死去

C 言語と UNIX の開発で知られるデニス・リッチー氏が 70 歳で亡くなった。

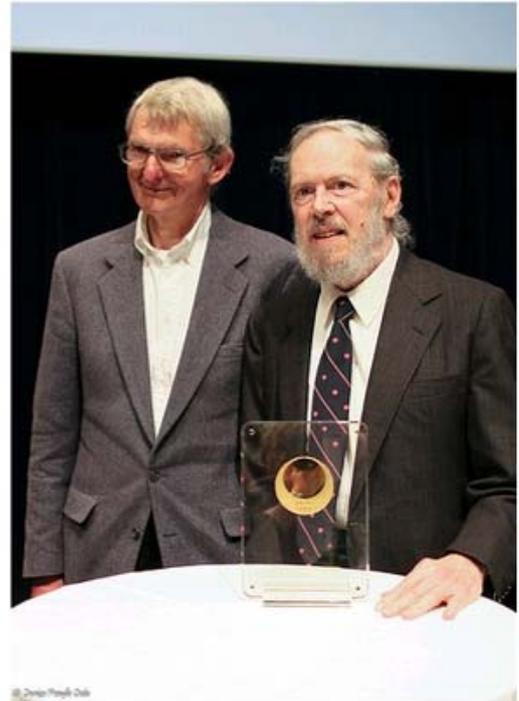
[佐藤由紀子, ITmedia]

C 言語および UNIX の開発者の 1 人として知られるコンピュータ科学者のデニス・リッチー氏が亡くなった。享年 70 歳だった。同氏が 2007 年の引退後もコンサルティングをしていたベル研究所のジェオン・キム所長が公式ブログで明らかにした。

同氏の元同僚で現在 Google に務めるロブ・パイク氏の Google+ への投稿によると、リッチー氏は先週末、長い闘病の末、ニュージャージー州の自宅で亡くなったという。

リッチー氏は 1967 年にベル研究所に入り、そこで開発したプログラミング言語のコンパイラをケン・トンプソン氏とともに発展させて C 言語とした。また、同研究所で開発された UNIX の C 言語への書き換えを統括したことで、UNIX の父とも呼ばれる。リッチー氏とブライアン・カーニハン氏が 1978 年に出版した解説書「プログラミング言語 C」は、現在も世界中で読み継がれている。リッチー氏は 1983 年にトンプソン氏とともにチューリング賞を受賞し、その際にベル研究所のフェローに昇格した。

2011 年にトンプソン氏とともに日本国際賞を受賞し、5 月にベル研究所がニュージャージー州で開いたセレモニーに姿を見せた。



5月に日本国際賞のセレモニーで姿を見せたデニス・リッチー氏(右)

<http://www.itmedia.co.jp/enterprise/articles/1110/14/news018.html>

C 言語と UNIX システムを生んだ Dennis Ritchie 氏が死去

 japan.internet.com 編集部  海外発

米 Bell Labs は 2011 年 10 月 13 日、コンピューターサイエンティストの Dennis Ritchie 氏が、先週自宅で亡くなったと発表した。70 歳だった。死因は公表されていない。

Bell Labs の社長 Jeong Kim 氏は、同社の公式ブログに次のメッセージを寄せている。

「非常に悲しいことをお伝えしなければなりません。Dennis Ritchie 氏が 70 歳で他界されました。Dennis は、Bell Labs の同僚から大変親しまれていましたので、みな寂しく感じていることでしょう。Dennis は、多くの業績からだけでなく、1 人の友として、また 1 人の発明家として、そして 1 人の謙虚で上品な男としてわたしたち全員に本当に多くの刺激を与えてくれました。 <<中略>> Bell Labs の全社員を代表しまして、Ritchie 氏のご家族と Dennis となんらかの接点のあった方々全員に対して深い追悼の意を表します」

Ritchie 氏は、C プログラミング言語の開発者であり、UNIX システムの開発者の 1 人でもあった。同氏は、UNIX への貢献により、1983 年には Ken Thompson 氏とともに、Turing Award (チューリング賞)を受賞している。また 1998 年にはビルクリントン大統領から National Medal of Technology of 1998 (1998 年度アメリカ国家技術賞)を授与された。

Ritchie 氏は、Harvard 大学で物理学と数学を学んでいる。同氏はかつて自身がコンピューターの世界に入り C 言語の開発にかかわることになったいきさつを、ユーモアを交えて次のように語っていた。

「私は学卒で学歴が足りないから、物理学者になれるほど頭が良くないのだと自分に言い聞かせた。しかも、コンピューターは格好良かったんだ。学歴が足りないから、アルゴリズムのエキスパートにも不十分だったけど(数学者にもなれなかったが)、手続き型言語は(数学的な言語仕様を持つ)関数型言語よりも好きだった」

C 言語は、現在でも世界で 2 番目に使用されているコンピューター言語。また、氏の開発した UNIX は、現在は Linux などに引き継がれ、いまでも広く使用されている。



2011 年に日本国際賞を受賞した Dennis Ritchie 氏
(出典: Bell Labs)

○言語の開発者、デニス・リッチー氏が死去

 チェック  +1  9  B! 12  Tweet  211  Like  157

米ベル研究所は13日、○言語とUNIXの開発者として知られるデニス・リッチー氏が死去したと発表した。70歳だった。

リッチー氏は、1967年にベル研究所コンピュータシステムリサーチ部門に入社。同僚のケン・トンプソン氏とUNIXの開発に携わり、プログラミング言語の○言語を開発した。1983年にはチューリング賞を受賞するなど多数の賞を受賞しており、2011年には日本国際賞を受賞している。



2011年5月に日本国際賞を受賞した際のリッチー氏(右)

http://internet.watch.impress.co.jp/docs/news/20111014_483856.html

C 言語と UNIX システムの"父"、デニス・リッチー氏が死去 - 享年 70

ベル研究所 (Bell Labs) は 10 月 13 日、同社公式 Web ページでデニス・リッチー (Dennis Ritchie) 氏が亡くなったと発表した。享年 70。

訃報は意外なところから飛び込んできた。同氏の元同僚で、現在 Google に勤務するロブ・パイク (Rob Pike) 氏が、Google+ に「Dennis Ritchie 博士が長い闘病の末、自宅で亡くなった」と書き込んだことだ。

その後、Bell Labs の所長 ジェオン・キム氏 (Jeong Kim) からのメッセージが、同社 Web ページに掲載された。

「デニス・リッチーが 70 歳で死去したとお知らせするのは深い悲嘆です」

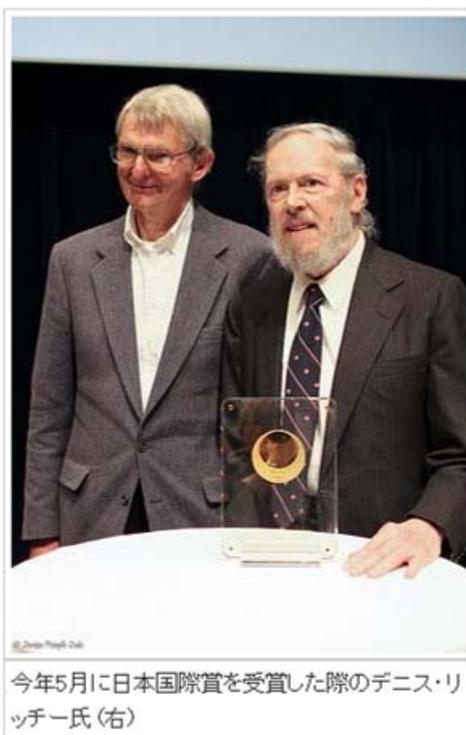
リッチー氏は 1941 年 9 月 9 日に生まれ、その後ハーバード大学にて物理学を学び、大学院では応用数学を専攻した。1967 年に、同氏の父が勤務するベル研究所コンピュータシステムリサーチ部門に入所。その後、1968 年にハーバード大学で博士号を取得している。

リッチー氏はベル研究所に入所後、マサチューセッツ工科大学 (MIT)、ゼネラル・エレクトリック (GE)、同社の 3 者の共同開発における Multics (Multiplexed Information and Computing System) プロジェクトを担当。同プロジェクトは、「新しいコンピュータ環境を創る」というプロジェクトだった。

リッチー氏は、Multics 上で動く BCPL 言語用のコンパイラを担当。また、同僚だったケン・トンプソン (Ken Thompson) 氏と一緒に BCPL を発展させて B 言語を作る作業もしていた。B 言語は主にトンプソン氏によって開発されたが、その後開発された C 言語はリッチー氏が主体となって作成されたものだ。

その後、リッチー氏は UNIX システムを C 言語で書き換えを行った。C 言語で書かれた UNIX システムはその後、移植性に優れた OS として、多くのユーザーを獲得した。このことからリッチー氏は C 言語及び UNIX システムの父とも呼ばれている。

また、リッチー氏の開発した C 言語は、UNIX、パソコンのみならず、汎用機その他ほとんどすべてのコンピュータの主要用語として使われており、さらに後にベル研究所のビャーネ・ストロヴストルップ (Bjarne Stroustrup) 氏によって、オブジェクト指向に対応した C++ が作られ、その C++ からはジェームズ・ゴスリン (James Arthur Gosling) 氏による Java が派生した。このことからリッチー氏の果たした役割は数知れない。



今年5月に日本国際賞を受賞した際のデニス・リッチー氏(右)

副刊：旅遊：旅遊頭條

Open Ray手記：電腦語言C

(Notes by Open Ray: Computer language C)*

【東方日報專訊】近來科技界精英相繼離世，實在流年不利。繼喬布斯去世後，電腦語言C的發明者Dennis Ritchie也於日前去世。

C可說是現代所有電腦語言之母。C語言的出現，造就了Unix作業系統、Linux、Mac OS X、iOS、Android，以至千千萬萬的電腦軟件，大部分都是用C編寫出來，其對電腦發展影響之大，不下於喬布斯。

Ritchie遠不及喬布斯出名，也沒有每年拿一部新電腦或新手機演講，令認識他的人不多。即使他近日離世，報章新聞也沒有大肆報道。不過，Ritchie對電腦界的貢獻和影響力，絕對不比把個人電腦普及的喬布斯為少。

C語言於1973年由Ritchie在美國貝爾實驗室(Bell Labs)發明。C的前身是B語言，算是B語言的改良版，因此最初被稱為「新B」語言，後來才正名為C。

在C語言出現以後，也出現過D和E等電腦語言，但沒有廣受歡迎，因此也沒普及。幾十年來，只有C是最多人使用，其速度也被公認是最快。當年Ritchie發明了C語言之後，也同時協助開發Unix作業系統，該系統幾乎全由C所寫成，經過多年的改良和變化，Unix衍生出Linux、FreeBSD、Solaris、HP-UX等多個不同版本的Unix系統，其中Mac OS X就是建基於FreeBSD，Android和HP webOS則建基於Linux，因此Unix系統是除視窗以外，最多人使用的作業系統。

現在Mac機和iPhone上所用的電腦語言，名為Objective C，當然也是建基於C。由此可見，C的威力無遠弗屆，是最多人用的電腦語言，在此感謝Ritchie對電腦界的偉大貢獻。

飲食網站創辦人

鍾偉民(Ray)

*Translation by Google

iExpress104

IT 人眼界

*(IT men's vision)**

Steve Jobs 離世，另一位 IT 界巨人亦殞落，就係開發 C 語言嘅 **Dennis Ritchie** 周末亦離開人世，兩位巨人一時俱逝。

70 年代，Ritchie 在貝爾實驗室工作，為開發 UNIX 作業系統而發明 C，除 UNIX 及 Linux，以前 Windows，近代蘋果 OSX 系統，皆以 C 為開發，Ritchie 可謂有開山之功。C 面世三十多年，影響之大，足令 Ritchie 名垂 IT 史。

1985 年，喬布斯接受訪問，話任何技術學問，必然有「大江東去，浪淘盡，千古風流人物」嘅一日，最後須懂得「How to grow obsolete with grace」。

喬布斯解釋 iOS 唔支援 Flash，亦持同一見解。佢話技術如人生朝暮，唔支援 Flash，HTML5 取而代之，係隨更替之大勢，Flash 曾吒咤一時，必須 obsolete with grace。喬布斯最令人懷念，可能唔係 iPhone，係豁達同參透生死，知道取捨放手。

另一段熱爆網上文章，就係 Google 一位內部工程師 Steve Yegge 嘅博客文章，呢位 Yegge 兄以前曾經響 Amazon 做過 6 年。文章內大爆 Amazon 老頂 Jeff Bezos 嘅管治手法以及自我中心，但佢深信 SOA，結果為 Amazon 開創另一番天地。

Yegge 批評 Google+ 缺乏長遠眼光，只着眼於產品本身，唔理解作為平台，可廣納共融創意，所以 Google+ 一定打唔過 facebook。呢篇本來只係內部嘅文章，錯誤公開，結果網上熱傳，激起唔少討論。Yegge 探討唔少 IT 管理同埋技術方向，一針見血。
<https://plus.google.com/112678702228711889851/posts/eVeouesvaVX> 繚らせ主恚 IT 人眼界，讀之令人汗顏。

**Translation by Google*

The Australian Eye, 13 October 2011

Dennis Ritchie, pioneer of modern computing, dead at 70

By Erik West



Dennis Ritchie, pioneer of modern computing, died aged 70

Dennis M. Ritchie, co-inventor of the Unix operating system and the C programming language, died earlier this week on October 8, as announced by his friend Rob Pike yesterday on Google+. Ritchie died at his home in Murray Hill, New Jersey following a long illness.

Dennis Ritchie co-invented the Unix operating system, along with Ken Thompson, on which the popular mobile platform Android and well-known Linux operating systems are ultimately based. Ritchie is also the inventor of the C programming language, currently the world's second-most widely used programming language.

Unix continues to power many of the world's larger computer systems used in governments, banks, and other institutions that securely handle large volumes of information over a period of decades.

The C programming language gained popularity because Ritchie built much of Unix using it. Ritchie invented the programming language based on improvements he made to its predecessor, aptly called B. Ritchie credits the C programming language for making Unix portable – the ability to use one operating system on a variety of computer hardware – a key driver of the operating system's adoption. C is now widely used in a variety of computers and devices including personal computers, cellular phones, and computers found in many automobiles.

Ritchie co-authored the definitive book on C called "The C Programming Language", commonly referred to as K&R in reference to the respective authors' initials – Kernighan and Ritchie.

Among his main awards, Ritchie and Ken Thompson were jointly awarded the Turing Award, the highest distinction in computer science, in 1983 for their development of general operating system theory and for their work on the Unix operating system.

Ritchie and Thompson received the National Medal of Technology and Innovation from President Clinton in April 1999. The award, granted to inventors and innovators who have made significant contributions to the development of new and important technology, was awarded for their work on co-inventing Unix and the C programming language which together lead to key advances in computer software, hardware, networking, and stimulated growth of the information technology industry. In 2011, Ritchie and Thompson were awarded the Japan Prize for Information and Communications.

In an interview, published in C++ Report July/August 2000, Ritchie humbly described his career and contributions to computer science:

" I started out interested in physics, and still maintain an amateur interest in keeping up with what's happening at its edges. Sometime in college and early grad school, I spent a lot of time in theoretical computer science (Turing machines, complexity theory). Meanwhile I also became more fascinated with real computers and, I suppose, the immediacy of the experience they provided: when you write a program, you can see what it does right away. All of these things connect with each other in interesting ways. Being involved with this sort of activity was what motivated me. Somehow I didn't think of what I was doing as joining the Software Industry, although, even in 1968, I guess it was."

<http://www.theaustralianeye.com/news/dennis-ritchie-pioneer-modern-computing-dead-70-aoi3587789.html>

TopNews New Zealand, 17 October 2011

Dennis Ritchie- “the father of C”

Submitted by Neelesh Raghuwanshi on Mon, 10/17/2011 - 11:30



Dennis Ritchie, widely known as “father of C” programming language, passed away over the weekend in Murray Hill, N. J., at the age of 70.

Ritchie had been suffering poor-health over the past few years, following treatment for prostate cancer and heart disease.

Jeong Kim, the president of Bell Labs, where Ritchie worked for more than three decades, said, “He was truly an inspiration to all of us, not just for his many accomplishments, but because of who he was as a friend, an inventor, and a humble and gracious man.”

Born on September 9, 1941, Ritchie played a vital role in the development of many popular computer programming languages. He wrote programming language ‘C’, and developed UNIX operating system in partnership with his colleague Ken Thompson.

In 1999, Ritchie and Thompson were bestowed with the National Medal of Technology by US President Bill Clinton for their contributions to C and UNIX.

In 1998, Ritchie was also elected to the National Academy of Engineering. This year, Ritchie and Thompson were selected for the 2011 Japan Prize for their contributions to computer science.

<http://topnews.net.nz/content/219822-dennis-ritchie-father-c>

PC World Vietnam Online, 14 October 2011

Cha đẻ của Unix và ngôn ngữ lập trình C mất ở tuổi 70 *(Father of Unix and C programming language died at age 70)**

Bạch Đình Vinh

Dennis Ritchie là người tạo ra ngôn ngữ lập trình C, và cùng với Ken Thompson tạo ra Unix.



Ông Dennis Ritchie (giữa) được Tổng thống Mỹ Bill Clinton trao tặng Huy chương Quốc gia về Công nghệ hồi năm 1999.

Ông Dennis Ritchie - người đưa phần mềm mang ngôn ngữ lập trình C và hệ điều hành Unix đến với thế giới - đã qua đời ở tuổi 70. Ông Ritchie (được biết đến với tên người dùng là "dmr") cùng với ông Ken Thompson là bộ đôi phát triển phần mềm năng động (một trong những phương pháp phát triển phần mềm linh hoạt) tại Bell Labs. Ông Ritchie gia nhập Bell Labs vào năm 1967 và ông Thompson năm 1966. Ông Ritchie tạo ra ngôn ngữ lập trình C, thay thế ngôn ngữ lập trình B mà ông Thompson đã phát minh.

Sau đó 2 ông Ritchie và Thompson tiếp tục tạo ra Unix, ban đầu cho máy tính mini và được viết bằng hợp ngữ (năm 1969) rồi được viết bằng C vào năm 1973. Unix đã trở thành phần mềm chủ chốt cho hạ tầng điện toán quan trọng trên toàn thế giới, mặc dù không phải dành cho tất cả mọi người. Unix đã trở thành nguồn cảm hứng cho nhiều hệ điều hành mới hơn, bao gồm cả Linux và Apple iOS.

Năm 1978, cuốn sách Ngôn ngữ Lập trình C mà ông Ritchie và ông Brian Kernighan là đồng tác giả được xuất bản lần đầu. Nhiều người gọi cuốn sách này là K&R (K: Kernighan và R: Ritchie) và nó trở thành cuốn sách "gối đầu giường" của rất nhiều thế hệ lập trình viên.

Trong suốt cuộc đời của mình, ông Ritchie (cùng ông Thompson) đã giành được rất nhiều giải thưởng như Japan Prize của Nhật Bản, Turing Award của Hiệp hội Máy tính, Huy chương Quốc gia về Công nghệ và Đổi mới của Mỹ. Hai ông cũng được vinh danh tại Bảo tàng Lịch sử Máy tính vào năm 1997.

Ông Ritchie đã nghỉ hưu từ Lucent Technologies vào năm 2007. Bell Labs giờ đây là đơn vị R&D của Alcatel-Lucent.

Từ khóa: hệ điều hành, ngôn ngữ lập trình, Unix

Nguồn: Network World, 13/10/2011

<http://www.pcworld.com.vn/articles/quan-ly/nha-nuoc/2011/10/1228623/cha-de-cua-unix-va-ngon-ngu-lap-trinh-c-mat-o-tuoi-70/>

*Translation by Google

Dennis Ritchie, father of C programming language and Unix,dies

New York, October 14 2011 (PTI) -- Dennis Ritchie, a computer czar who wrote the popular C programming language and helped develop the Unix operating system, has died.

Ritchie, 70, was found dead on Wednesday at his home in Berkeley Heights, New Jersey.

Ritchie, who lived alone, was in frail health in recent years after treatment for prostate cancer and heart disease, The New York Times quoted his brother Bill as saying.

Ritchie died a month after his birthday, according to his biography on a Web page of Alcatel-Lucent's Bell Labs. Ritchie joined Bell Labs in the late 1960s.

Ritchie is best known for his contributions to computer programming and software. The C programming language, which he developed in the early 1970s, is still popular. It has gone through a number of upgrades, and it is commonly used for website development and other computer tasks.

The Unix operating software also surged in popularity. It and its offshoots, including the open-source Linux, are widely used today, in corporate servers and even cellphones.

After studying physics and mathematics at Harvard University, Ritchie joined Bell Labs. PTI
AKJ AKJ 10141807

Dennis Ritchie: The other man inside your iPhone who created Unix

18 Oct, 2011, 01.01PM IST, New York Times



Dennis M Ritchie, who helped shape the modern digital era by creating software tools that power everything from search engines like Google to smartphones, was found dead Wednesday at his home in Berkeley Heights, N.J. He was 70.

Ritchie, who lived alone, had been in frail health in recent years after treatment for prostate cancer and heart disease, said his brother Bill.

In the late 1960s and early '70s, working at Bell Labs, Ritchie made a pair of lasting contributions to computer science. He was the principal designer of the C programming language and

co-developer of the Unix operating system, working closely with Ken Thompson, his longtime Bell Labs collaborator.

The C programming language, a shorthand of words, numbers and punctuation, is still widely used today, and successors like C(PLUS)(PLUS) and Java build on the ideas, rules and grammar that Ritchie designed. The Unix operating system has similarly had a rich and enduring impact. Its free, open-source variant, Linux, powers many of the world's data centers, like those at Google and Amazon, and its technology serves as the foundation of operating systems, like Apple's iOS, in consumer computing devices.

"The tools that Dennis built, and their direct descendants, run pretty much everything today," said Brian Kernighan, a computer scientist at Princeton University who worked with Ritchie at Bell Labs.

Those tools were more than inventive bundles of computer code. The C language and Unix reflected a point of view, a different philosophy of computing than what had come before. In the late '60s and early '70s, minicomputers were moving into companies and universities, smaller and at a fraction of the price of hulking mainframes.

Minicomputers represented a step in the democratization of computing, and Unix and C were designed to open up computing to more people and collaborative working styles. Ritchie, Thompson and their Bell Labs colleagues were making not merely software but, as Ritchie once put it, "a system around which fellowship can form."

C was designed for systems programmers who want to get the fastest performance from operating systems, compilers and other programs. "C is not a big language, it's clean, simple, elegant," Kernighan said. "It lets you get close to the machine, without getting tied up in the machine."

Such higher-level languages had earlier been intended mainly to let people without a lot of programming skill write programs that could run on mainframes. Fortran was for scientists and engineers, while Cobol was for business managers.

C, like Unix, was designed mainly to let the growing ranks of professional programmers work more productively. And it steadily gained popularity. With Kernighan, Ritchie wrote a classic text, "The C Programming Language," also known as "K&R" after the authors' initials, whose two editions, in 1978 and 1988, have sold millions of copies and been translated into 25 languages.

<http://economictimes.indiatimes.com/tech/software/dennis-ritchie-the-other-man-inside-your-iphone-who-created-unix/articleshow/10395985.cms>

Computer programming pioneer dies

October 17 2011 at 06:24pm

San Francisco - Dennis Ritchie, a pioneer in computer programming, has died at age 70, according to his longtime employer.

Ritchie created the popular C programming language and helped create the Unix operating software.

He died a month after his birthday, according to his biography on a webpage of Alcatel-Lucent's Bell Labs. Ritchie joined Bell Labs in the late 1960s.

The company confirmed his death to The Associated Press but would not disclose the cause of death or when Ritchie died. A spokeswoman said the company was trying to contact his family.



Dennis Ritchie

Ritchie is best known for his contributions to computer programming and software. The C programming language, which Ritchie developed in the early 1970's, is still popular. It has gone through a number of upgrades, and it is commonly used for website development and other computer tasks. The Unix operating software also surged in popularity. It and its offshoots, including the open-source Linux, are widely used today, in corporate servers and even mobile phones.

Ritchie's biography on the Bell Labs site says that he was born on Sept. 9, 1941 in Bronxville, New York, and studied physics and math at Harvard University.

"My undergraduate experience convinced me that I was not smart enough to be a physicist, and that computers were quite neat," Ritchie wrote. "My graduate school experience convinced me that I was not smart enough to be an expert in the theory of algorithms and also that I liked procedural languages better than functional ones."

Jeong Kim, president of Bell Labs, wrote in a blog post on Thursday that Ritchie was "truly an inspiration to all of us, not just for his many accomplishments, but because of who he was as a friend, an inventor, and a humble and gracious man." - Sapa-AP

<http://www.iol.co.za/dailynews/news/computer-programming-pioneer-dies-1.1158946>

Opinion

Another tech pioneer, Dennis Ritchie, passes

The foundations of current computer technology revolutionised the industry into what it is today.

Christopher Kelty and Gabriella Coleman Last Modified: 17 Oct 2011 14:01



The Linux operating system was built on UNIX, designed by Dennis Ritchie and Ken Thompson [GALLO/GETTY]

In the last two weeks, two pioneers of our information age have come and gone. I would bet you can name one, but not both. The one you likely cannot name is Dennis Ritchie, known to his peers as "dmr", his computer login name. Ritchie created the C programming language, and together with Ken Thompson, designed the UNIX operating system without either of which you wouldn't be able to name that other charismatic pioneer so much in the news lately.

The difference in their legacies is instructive. One of them created a brand, a way of life, and a slick, safe and intuitive experience sold to millions of people. The other created an infrastructure through which generations of engineers, programmers, hackers and entrepreneurs have come to understand what computers are capable of doing. Both were revered by those in the IT industry and they both created great things. But only one is being lionised in the public eye as an "American inventor". We might want to rethink that.

In the 1980s, the board of Apple fired Jobs, and he went out and started another visionary and creative company called NeXT. NeXT was a UNIX company and it failed. It was only one of dozens of UNIX companies in the 1980s. They all failed - some more spectacularly than others. Surely, you are thinking, this must be a clear sign of UNIX's inferiority - but this would be a mistake. Even if the company never took off, the idea, the artifact and the technology behind UNIX succeeded in ways that most people in business and economics cannot account for. UNIX became a lingua franca for computer aficionados, tinkerers and technology makers across the world. All the early development for the Internet was done on UNIX machines - indeed, the World Wide Web created by Tim Berners-Lee was made on a NeXT machine.

Consider this: If you ask any programmer or software engineer in the world to tell you the principles of a modern operating system for a computer, they will more than likely describe something like UNIX to you. Or, if you ask them to tell you what a modern programming language should look like, they will more than likely refer you to some version of C. If you ask a programmer to go inside your iPhone, you won't see 1s and 0s, but you will see C.

UNIX and C are technical artifacts, but they have secured a vibrant public sphere: something every software engineer or programmer can talk and argue about, love or hate, configure and even remake, without ever having to buy anything or relinquish any rights. One can even tell jokes with UNIX commands, its very name is a humorous reference to its birth (UNIX was a castrated version of an early operating system called Multics).

Why is this? UNIX and C succeeded for a reason that may seem, at first, to be counterintuitive: they succeeded because they were prevented from being commercialised. In the 1970s, when Dennis Ritchie and Ken Thompson worked for AT&T's Bell Labs in New Jersey, the company was under an anti-monopoly consent decree from 1956 that forbade AT&T from entering any market other than that of the telephone. For market-loving liberals and conservatives alike, this will undoubtedly seem like a classic form of government intervention - but its effect was that UNIX spread like wildfire.

With the help of an innovative and creative cadre of engineers in corporations and universities, UNIX was shared and improved, without ever being sold, to the point where it became ubiquitous. For the generation that included Steve Jobs, it became the very definition of a modern operating system. In 1984, when AT&T was deregulated, the company was finally allowed to market its intellectual property. Disaster followed. By the late 1980s, there were so many different versions of UNIX that literally, every computer company in the market was vying to sell its own version - the chaos was only quelled by a different, and no less destructive monopoly: Microsoft.

But strangely, UNIX lived on and on. Today, there are hundreds of flavours of UNIX. Its hold on university curricula was such that in 1991, a young Finnish computer science undergrad named Linus Torvalds could copy it - without penalty - and create another generation: the Linux operating system. Linux itself is now so ubiquitous that you are probably using it right now without knowing it - it runs on an overwhelming number of the servers that make up the Internet. Indeed, you might be looking at a softly glowing apple-shaped logo, but underneath it is a UNIX-based operating system.

The story of heroic invention we tell about Steve Jobs is not the one we can tell about Ritchie. Ritchie invented C - but generations of students, programmers, entrepreneurs, engineers and hackers made it, what it is through their collective work, their ethic of sharing and a suspicion that not everything good must be made by one big corporation. In an age when children are learning to compute by pinching and swiping across a slick iPad, we might want to reconsider what invention, freedom and "thinking different" actually means. For it is people like Dennis Ritchie and Ken Thompson who give us some of our freedom today. Rather than merely touching the icon on the surface, we might need to "grep" a bit deeper, as a UNIX engineer might say it, to understand this lesson.

Christopher Kely is a professor at UCLA in the Department of Anthropology and author of Two Bits: The Cultural Significance of Free Software.

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The views expressed in this article are the author's own and do not necessarily reflect Al Jazeera's editorial policy.

<http://english.aljazeera.net/indepth/opinion/2011/10/20111017101758923914.html>