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## Robert Johnson, Utah computer science professor who helped develop routing numbers on checks, dies at 87

By Mike Gorrell The Salt Lake Tribune

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Services will be held Wednesday evening for Robert Royce (Bob) Johnson, whose name was not well known outside of computer-science circles but whose lifetime of work impacted most everyone's lives.

Johnson, who died March 25 at age 87 of Parkinson's Disease, was a retired University of Utah professor whose earlier work included developing those oddly shaped numbers that make up bank account routing number on personal checks.

"Bob was one of a very few computer scientists from, I'll call it the golden age, who had major impacts" on an emerging science that would rewrite the way people go about their day-to-day business, said Erik Brunvand, an associate professor in the University of Utah's School of Computing.

"Those weirdly shaped numbers are little magnetically encoded numbers," he added, configured to be recognizable and chunky enough to contain coding. "That font is a legacy of his group from long, long, long ago."

While creating those check numbers was Johnson's most visible accomplishment, Brunvand said he contributed to many other scientific breakthroughs in a career shaped by being the son of an electrical engineering professor.

After graduating from the University of Wisconsin and Yale, Johnson received the first doctorate in digital computing from the California Institute of Technology, where he also worked with scientists who had been on the atomic bomb team at Los Alamos.

He earned 15 patents, including one for creating the "Johnson counter" still used by computer scientists.

Brunvand said that early in his career at the U. he had already met Johnson, a friendly and unassuming man, and knew all about the Johnson counter because it was part of his specialty — hardware and circuitry. "It took me a while to realize this was the Johnson," he said. "It was one of those little epiphanies."

To Brunvand, some of Johnson's most noteworthy contributions to computer science occurred while he worked for Burroughs Corp. in the 1960s and '70s.

"What we forget in this modern day is that back then there were a lot of computer companies, making innovative machines, that didn't survive but were terribly important at the time," he said. "It was an era of computer design where things that had not settled onto well-used designs. There was a lot of experimentation. Burroughs was very innovative and it was all Bob Johnson."

Besides Burroughs, Johnson worked for Energy Conversion Devices, Ovonix Imaging Systems and Mosaic Systems Inc. before coming to the U. in 1987 as computer science department chairman, retiring in 1993.

Johnson is survived by his widow, Mary, two daughters and a son, seven grandchildren and two brothers.

Services will be at 5 p.m. at All Saints Episcopal Church, 1710 S. Foothill Drive.

Robert (Bob) Johnson

1928-2016