

# The father of invention: Dick Morley looks back on the 40th anniversary of the PLC



Friday September 12, 2008  
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Manufacturing was changed forever because Dick Morley liked to ski.

The year was 1964, and Morley was a young engineer working nine-to-five at a desk job designing airplanes, atomic bombs and communications systems.

"I was the guy in the corner room that nobody ever came to see," Morley recalls. "They just said, 'design me an airplane, design me a radar or design me a better communication system.' All of which I did."

Morley's friend, a man named Jonas Landau, made a keen observation. "Dick," he told Morley, "you've got to change what you do. All you're doing is being a computer for these guys and putting stuff out."

"Yeah, but I like it," Morley replied.

"Yeah, but you should get out a bit," Landau advised.

That's when Dick Morley had the wake-up call of a lifetime: He learned how to ski. And that is how the programmable logic controller was born.

No single invention has had as much impact on the manufacturing sector as the PLC. Invented in 1968 by Morley and a group of fellow "geeks," the PLC allowed us to automate industrial process with multiple input/output arrangements in real time. With the ability to withstand extreme temperature ranges, electrical noise and vibration, it changed the way we automate our factories and is still widely in use today.

But how does Dick Morley's love of skiing translate into the invention of a lifetime? We sat down with Morley on this, the 40th anniversary of the PLC, to look back at how it all began – and what the future holds for the next 40 years.

## **The beginning of Bedford**

After suggesting that Morley get out a bit more, Jonas Landau took Morley out skiing for the first time. That ski trip was a bit of a revelation for Morley. He liked it, and he was pretty good at it too.

The only problem was that Morley wasn't the only one who liked to ski. Much to his dismay, the ski hills were jam-packed on the weekends with other skiing enthusiasts. It got to the point that it made more sense to go skiing during the week, when fewer people were out on the hill. So the enterprising young engineer asked his employer if he could swap his workdays. He'd take Fridays off to ski, and work on Saturdays.

"I never talked to anybody at work anyway," he says. "I talked to somebody once a week! But they said, 'you can't do that. It's against the rules.'"

Morley made the decision of a lifetime. He quit his job so he could go skiing. He wasn't looking to start his own company, or come up with the invention of a lifetime – he just wanted to get off the corporate hamster wheel.

But, of course, real life intervened. "I had a little baby, a mortgage, \$1,000 in the bank and no possible thing to do," he recalls. "I had nothing, but I wanted out. So I started a company."

The company was Bedford Associates, so named because it was located in Bedford, Mass. Morley started the company with his friend George Schwenk, and the professional consulting firm worked with local machine tool firms to help them evolve into the new, solid-state manufacturing sphere.

But once again, monotony got to Morley. He noticed that each project was roughly the same; they were using small minicomputers, and there was a certain similarity from project to project. And, once again, he started to get bored. Was there a way he could create a controller that worked for every job?

Dunn, A. (2008). The father of invention: Dick Morley looks back on the 40th anniversary of the PLC, *Manufacturing Automation* [online]. Available at: <http://www.automationmag.com/features/the-father-of-invention-dick-morley-looks-back-on-the-40th-anniversary-of-the-plc.html> [Last Accessed 21 March 2016]