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Close-up: Joseph Vilella

SPADA's CEO has an eye for innovation

By JENNIFER MCENTEE

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Joseph Vilella was working as director of engineering and operations for green data centers and infrastructure solutions at San Diego's **Science Application International Corp.**, better known as SAIC, when he learned about an exciting new network architecture for broadband services.

The innovation, called Gigabit Passive Optical Network or GPON, is said to be capable of saving its users up to 60 percent of the space, weight and power otherwise required of traditional access-layer networking infrastructure. The difference comes down to materials: the traditional infrastructure relies on copper, which can transmit data only 300 feet at a time, as compared to GPON's fiber optic cabling, which can propel data 24 miles without interruption.

"That blew my mind," Vilella said in a recent interview. "I got all excited about it and I wanted to be able to promote it commercially."

He pushed for the creation of a new, independent company that would promote GPON as its flagship offering. **SPADA Innovations Inc.** — with Vilella as president and CEO, 10 in-house employees and an office suite on La Jolla Village Drive — works with commercial, federal and defense clients to design IT systems, coordinate how the equipment is purchased and installed by subcontractors and ensure that the systems are deployed properly. SPADA's strategic partners include SAIC, **Corning Cable Systems** and **Motorola** (NYSE: MMI).

SPADA will someday be a huge company, Vilella predicted, particularly as more organizations begin to recognize the value of GPON. Already in widespread use by the Department of Homeland Security and the U.S. Army, SPADA's pending GPON deployments include the new San Diego

City Library, which will include 1,100 Internet protocol points, and in the new private-annex dorm project at California State University, San Marcos, expected to have about 840 IP points.

Vilella said it's his background as an innovator that makes him so certain of GPON's eventual ubiquity. "People like me have this propensity to improve on stuff. That way of being is what attracted me to GPON. I see in GPON the potential for huge innovation that could change the IT world," he said.

Born in Puerto Rico of Corsican Italian descent, Vilella moved to the mainland when he was 28 to pursue a career in electrical engineering and aerospace.

"What I really wanted to do was work in missiles, rockets and planes," he said.

He worked for **Lockheed Martin** (NYSE: LMT), **General Dynamics** (NYSE: GD) and **Vectron Inc.**, figuring out how to make computers do tough calculations for everything from stealth cruise missiles to printed circuit boards.

He counts among his innovations the implementation of the first real-time PC computing system, and the first parametric automated optical inspection system. Both are still widely used in the defense and private sectors, he said.

"I always thought that I had the talent to be an engineer, but I didn't have a clue that I could be an innovator," Vilella said. "That happens by accident. People don't set out to be innovators."

"There's a difference between an inventor and an innovator. Inventors come up with something extremely new and different. What an innovator does is take systems that have been there before and improves on them, or combines them to make a better system."

Vilella of course didn't invent computers, but found new applications for their use, he explained.



Joseph Vilella

Vilella said he comes from a long line of engineers and artists. His company takes its name from his mother's side of the family: "Spada" is a family surname and also means "sword" in Italian.

True to his ancestral roots, Vilella is also an artist. SPADA's UTC-area office is decorated throughout with modern, abstract paintings by Vilella. The brightly hued painting above his desk was inspired by another hobby: cycling. Every week, Vilella rides his bicycle at a local fitness club and along the Highway 56 bike path.

While Vilella's paintings do include fluid lines, he acknowledged that he can't help but gravitate toward strong, geometric patterns. "That comes from my engineering background, no doubt about it," he said.

McEntee is a San Diego-based freelance writer.

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