

A Jazz Musician Inspired by Software Testing

LogiGear's Vietnamese engineering team introduces TestArchitect, a groundbreaking software testing product, to the world.

"Let's be happy when meeting together. Life is like floating flowers in flowing water. Fame is the floating cloud's shadow. Only love still exists..." Looking out the glass window on the 5th floor of LogiGear Tower in Phu Nhuan residential area, the head of LogiGear sings a jazz-inspired song based on the poetry of Ton Nu Ky Khuong. He has adapted many songs by Vietnamese and English artists which he performs at jazz bars in the U.S., or while on tour in Vietnam with the San Francisco Bay Jazz band.

Hung Nguyen, whose friends call him a "romantic jazz musician" plays professionally, but his name is also synonymous with software testing. LogiGear's Vietnamese Software Testing Center, established in 2005, has raised Nguyen's visibility. He ranks number 213 in the TOP 400 Chief Executive Officers of American Companies rankings according to ExecRank 2012. They are chosen for this honor from more than 100,000 American private enterprises because of their leadership skills, and their contributions to industry innovation.

When LogiGear established itself in Vietnam, the software testing industry was not a recognized profession or service in Vietnam. The publication and translation of the book, *Testing Applications on the Web*, was published a few years later and LogiGear began its training programs with local universities.

Over the last eight years, LogiGear engineers have provided large-scale software testing services for a variety of industries, from petrochemicals, technology, telecommunications to security, health, and education, etc.. The larger clients who have benefited from their relationships with LogiGear include Halliburton, Baker Hughes, Applied Biosystems, Cisco, Disney, McAfee, Genesys, Leapfrog and SYSTIMAX,. The keyword-driven software test automation tool, TestArchitect, based on LogiGear's Action Based Testing strategy is globally known. The application allows clients to perform software testing processes automatically, creating a homogeneous process for the software testing teams inside and outside the company.

One of the few software testing research experts in Vietnam, Dr. Nguyen Thanh Binh, Head of the IT faculty of Da Nang University of Technology, commented that in the IT industry when people hear LogiGear, everyone associates the brand with software testing, and its product, TestArchitect. *"LogiGear has developed a well-known new industry in Vietnam and the world."* He added that LogiGear's successes are due to Nguyen's leadership and his determination to develop a new industry in Vietnam.

When he was in the high school, Nguyen played in a jazz band in SaiGon. After 1975, he went to America and continued learning from jazz musicians at the Stanford Jazz Workshop. In addition to his love of music, he became involved in IT and started his career in software development, product, quality and sales management at companies such as Arts, PowerUp Software, Spinnaker Software and Palm Computing in the 1980s. These companies later became well-known as the software industry grew a decade later.

Along with two colleagues, Nguyen started LogiGear in 1994. [The company] included the LogiGear [a] testing training program. They provided software consulting solutions, wrote testing technology materials and books. They wrote a book on computer testing which was published in 1999, and which received rave reviews in Silicon Valley. These books on software testing are still in publication and used by software enterprises to determine the role of software testing in the software development process, and utilizing global human resources.

When the Dotcom bubble burst in 2000, it created opportunities for enterprises to increase their outsourcing services in order to reduce cost. While most looked to China and India, Nguyen returned to Vietnam. In addition to providing software testing services to customers, he began developing LogiGear's first product, TestArchitect, a software testing tool developed in Vietnam and released in the United States.

Nguyen's ambition to make Vietnam a leading software testing center [was initially difficult] remembers Tran Sy Chuong, President of TranInvest, an investment fund based in Vietnam. According to Tran, Nguyen had all but given up three years after returning to Vietnam. In the early 2000s, human resources in Vietnam were limited in both of quantity and quality, and poor English skills were a major barrier for companies. *"...Hung overcame these difficulties with his enthusiasm."*

Software manufacturers need good software testers, and test engineers approach their work like editors: they examine software, develop [the code], identify bugs, and know how to fix it. LogiGear's business model is U.S.-centric, but it is successful in Vietnam thanks to Nguyen's talent for balancing technology with an understanding of Vietnamese sensibilities.

LogiGear continuously invested in innovation, developing software testing tools on demand, creating Professional, Enterprise, Mobile Plus and software testing versions. In 2012, they released a version of TestArchitect for Visual Studio, a software development tool from Microsoft. Thanks to its keyword-testing ability and high flexibility on various platforms, TestArchitect was chosen by Microsoft to help software developers enhance testing procedures to ensure the quality of their products and make their project management more professional.

Microsoft has many partners and being integrated into their ecosystem is a big advantage for LogiGear. Tom Linderman, Director of the Visual Studio Industry Partner program at Microsoft said:

"LogiGear's TestArchitect, integrated with Visual Studio 11, is a shining example of how automated, scalable testing within a development environment results in faster deployment of high-quality software by enabling test engineers and developers to expedite comprehensive testing."

LogiGear clients include Halliburton, a multinational corporation which provides products, services and solutions in the Oil and Gas industry. In 2010, Landmark, a seismic interpretation and oil and gas exploration software supply division of Halliburton, developed software to simulate an oilfield in order to build a fundamental computation for the rig. After employing some solutions, they approached LogiGear, and after the three month trial, 84 percent of shortcomings in the beta version and 97 percent of bugs were reduced. Halliburton became LogiGear's most significant client, with 300 engineers working on global projects. LogiGear also provided Electronic Arts with an automation testing tool that provides image

recognition to reduce the time to market and expanded automated game testing solutions on Android and iOS devices.

“LogiGear’s journey has had its ups and downs,” says Nguyen. “Plans failed but LogiGear’s growth has reached about 30 percent annually, and revenue in 2013 is estimated at approximately \$17 million. Our greatest success has been proving the capabilities of Vietnamese engineers who have helped LogiGear to create its own technology products and stand tall in a very competitive market.”

Nguyen expected human resources in the industry to reach several thousand after 10 years but the reality was different. Even his plan for the business to grow to 1000 Test engineers in 2010 failed.

Currently, LogiGear has 850 employees in both their HCM City and Da Nang offices. The nature of outsourcing is influenced by external factors. In 2009, with the global economic crisis hitting full force, customers cut down contracts and LogiGear had difficulties signing new customers. The average decline was 30 percent. Although the IT industry soon recovered, by the end of 2010 they found themselves at their 2008 levels.

But the crisis positively impacted Vietnamese companies when they restructured their business procedures to help their machines operate more efficiently. As the IT industry changes quickly and levies a high demand on resources, companies must increase the human resources to promote their competitive capabilities. In the past eight years, LogiGear invested more than \$10 million in product development, from the initial 15 to 80 engineers today. They not only have good technical knowledge, but also product experience and the ability to learn quickly. Over the past year, LogiGear began selling TestArchitect and licensed its product to companies such as General Electric and Amway.

Nguyen wants to increase revenue growth. According to his estimation, his company must add 300 people by the end of 2014, of which one sixth will be dedicated to marketing. He said that technology is only one factor since success depends on whether products can match modern technology trends and markets. When the business reaches a certain threshold in the market, heavy investment in marketing is necessary. "Now is the time to start," he says. "The shorter the life cycle of a software product, the faster the product will be released; the fact that test automation becomes inevitable is LogiGear’s advantage."

How does the "romantic jazz musician" run his company? He says that a hot temper won't solve anything. Every time he comes to the company to see if there are any "incidents" needed to be solved, he only participates in certain stages. All departments must follow the given process: "My job is to measure the proficiency of all levels of management, what they need and how to acquire it for them. Business is always problematic, there are always potholes or bends in the road, but we should know where they are."

While having lunch at 2:00PM and talking about his business, Nguyen showed us his Apple t-shirt, a gift from his daughter who is a brand management division manager Apple. In any given month, he travels between Vietnam and the US; the 55-year-old is too busy now to play jazz in SaiGon as he did a few years ago, but his San Francisco Bay Jazz group has toured Vietnam to raise funds for the Room to Read charity. The message they send to music lovers is, “We dream of a world where all children can have a high quality education to develop their overall capacity in order to contribute to the community and the world.”