



Drones, Robots... The Future is Already Here

■ By Janine Coughlin

Wally Zheng dreams big. The future, he says, will be about the robot. “The most important difference today between humans and animals is that humans can invent tools,” he explains. “Trains, airplanes – they extended our legs. Then we invented digging machines, a lot of machines, they extended our arms. We invented binoculars and extended our eyes. The computer is a big extension for the brain. The robot is the total solution. It combines the arm, the leg, your eyes, it brings everything together. We want to build the robot’s brain, its operating system. I think in the next 50 years that will be the next big thing.”

Zheng’s strategy for his Beijing-based company, PowerVision Technology, seems partly inspired by science fiction writer Isaac Asimov. “We think that deep learning, machine learning and artificial intelligence will be the future,” says Zheng. “In the far future, my target is for us to be

a robot and artificial intelligence company. The robot of the future will likely not be what we commonly imagine it will look like, one with a human shape. It will be more like a computer centre with very strong computing power, deep learning, machine learning. My dream is to make the company go in that direction.”

But first things first. “Today we need to find a business that earns money to support us in doing that,” he says. PowerVision was initially in the business of preparing virtual reality and visual simulations, mainly for clients in the manufacturing, automotive, and aerospace industries. Zheng founded the company together with his wife, Lydia Wang, in 2009. At the beginning of his career he was a computer graphics specialist and then became a sales director. A trained electrical engineer, she worked for a Swiss multinational in the power industry, first in technical sales and later in operations management. The company

name combines their two specialties. The pair has known each other since high school and share the CEO title.

As their clients’ needs grew, Zheng (EMBA 2013) and Wang (EMBA 2015) expanded the scope of PowerVision’s activities. Today it has R&D centres around the world, including Toronto, Boston, Frankfurt and Australia, and it is talking with a Japanese robotics company about opportunities to work together. The company owns design patents on several types of Unmanned Aerial Vehicles (UAVs) – commonly known as drones – as well as visualisation system patents related to smart grid monitoring and operation, along with display technology patents. It also owns a number of software copyrights for flight control systems and payloads.

PowerVision’s innovation has largely been driven by the challenges of its clients, whose needs for data collection

and analysis have become increasingly complex. “We were trying to just show customers the results, but they were saying that wasn’t good enough. They wanted more analysis,” Zheng says. “For example in the power industry they don’t just want to know the transmission tower has a problem, they want to predict where it is.

“We started to do data analysis, and from there we moved to big data analysis. A customer gave us some feedback about needing information from the most advanced sensors to help them with their decision making, that made us start thinking about how to use the robot and the UAV.”

The company’s enterprise division services the needs of big corporate clients, while its consumer products division is currently focused on the global release of a drone (UAV) which it expects will happen by the end of this year. The company has also recently launched a mobile platform, Vizsky, which Zheng says was inspired in part by concepts that he learned in CEIBS Associate Professor of Strategy Chen Weiru’s Platform Strategy course.

“Vizsky is kind of like Uber,” Zheng explains. “We built a crowd-sourcing platform that collects visual data from people around the world who like to use their UAVs and robots to take photos and collect data. We then use our technology to transform these images from 2D to 3D for our customers. Our Vizsky platform can offer data collection/analysis solutions with results that are ten times better than the normal satellite based GIS data and one tenth of the cost.”

Zheng attributes the success of the company to three things: Strategy, People and Learning. “The most important thing is to have the correct strategy, to lead the team in the right direction,” he explains. “The second is to find the right people and put them in the right position. The third is learning. I have to learn every day. I’ve been enrolled in CEIBS’ EMBA programme for the past two years, and now I am in the 2015 China Entrepreneurial Leadership Camp at CEIBS. There are a lot of successful entrepreneurs in the group and we can learn together.”

Wang is also hungry for knowledge and has just begun her own CEIBS EMBA journey. “We only launched our company a short time ago and we have developed very fast. I want to learn about systematic management, HR and finance in the EMBA programme,” she says. “When I worked for the Swiss company I was just focused on my work. Now that I have my own business, I have to learn a lot that I never had to deal with before. This is a very big challenge.”

When they first got started, Zheng and Wang said, their two main bottlenecks were cash flow and talent. “Because of our fast growth a lot of investors want to invest in us, so that is no longer the first priority,” Zheng says. “Today the first priority is attracting the right people to join us in creating a technological revolution.”

Zheng’s enthusiasm for pushing the boundaries and his vivid imagination about the possibilities of the future seem like they are probably the company’s best tool for recruiting talent.

“I think entrepreneurs are the kind of people who really want to change something, do something new. They have to combine a lot of resources – technology, people, money, a lot of things,” Zheng says. “But the most important aspect of an entrepreneur is to be able to change something. If you are relieving some of the pain points in the market, that’s the most important thing for being a successful entrepreneur.”

