

A KEEN EYE IN THE SKY

DR ENG HOW LUNG
ZWEEC Analytics Pte Ltd

As a video analytics company with years of experience and a wealth of expertise, ZWEEC Analytics Pte Ltd addresses the needs of 3 vertical markets, namely water security, sports safety, and intelligent surveillance. Together with his co-founders, Chief Technology Officer (CTO) Dr. Eng How Lung has overseen rapid growth for the business since their establishment in August 2011.

"For water security, our solution is the Fish Activity Monitoring System (FAMS)," Dr. Eng introduces, explaining that it uses video analytics to monitor and analyze changes in fish behavior as an indication of water quality. "Using fishes as a biosensor, our solution provides a cost effective way to achieve 24/7 online monitoring for water security. We have been working with the PUB to develop and deploy such solutions island-wide." To date, 42 units of FAMS have been deployed, with another 26 units planned.

For sports safety, they provide the Drowning Early Warning System (DEWS), which also uses video analytics to monitor and detect signs of swimmer distress in a swimming pool. "DEWS provides a fast means of water crisis detection." He continues, having already deployed a system at a public swimming pool, working closely with domain experts from Sport Singapore to enhance the system.

ZWEEC's intelligent surveillance solution uses video analytics for surveillance in public places for both indoor and outdoor environments. "We were part of the NEC consortium which participated in the SSIPO (Safety and Security Industry Program Office) testbed led by MHA and EDB. We demonstrated our solutions for crowd counting, detection of abandoned objects, and anomalous events detection such as fights."

The company currently has a staff strength of 12, and foresees a healthy prospect for future expansion. "We have been spending a lot of effort on test-bedding and piloting our products, and we expect our revenue to grow significantly in the coming 2 to 3 years," remarks Dr. Eng. Their collaborative project with Yangtze Valley Water Environment Monitoring Centre is listed as one of the projects under the Singapore-China G2G MOU; similarly, their collaborative project with the US Environmental Protection Agency is part of the Singapore-US G2G MOU.

"Our strength is in video analytics," explains Dr. Eng, stressing the need to constantly innovate to address the customers' needs, "We adapt our solutions to meet different application requirements." Beyond their core of video analytics, they also provide additional components to deliver a total solution. One example has been in FAMS, in which they designed the entire system for easy maintenance and also added in a pre-treatment module using technology applied for water treatment. Continuing to leverage on their strength in video analytics, the company's aim to become a leading video analytics solutions provider in Asia-Pacific is evident in their passion and dedication to the field.



"The journey is the reward"
- Steve Jobs

Up Close & Personal

What made you pursue a business in this field?

I have always been interested in seeing research being applied in real life applications. In our collaboration with PUB, the team worked closely together in delivering the initial prototype to PUB. We worked countless nights and weekends but we thoroughly enjoyed it. There was a good rapport and trust established with PUB's project team. The business potential is also tremendous, with interest from Taiwan and China. I would say it's a combination of both a labor of love and the opportunity lying in front of me.

What is the main driving force and motivation for you?

Having seen the birth of FAMS from concept to reality, I really wanted to continue overseeing its development and growth. This also gives me the opportunity to conceptualize and materialize our other research outcomes, such as our DEWS solution for sports safety and IS solution for public surveillance.

Looking back now, what were the personal challenges that were necessary for you to overcome, in order for you to achieve your success today?

The main challenge is changing the mindset from doing good research to delivering good products. A good product relies on more than just a

good technology. It requires a great deal of engineering to ensure a robust and stable solution. It also requires understanding the intricate needs of the customer and the application. Having come from a research background, this was initially a challenge but the experience gained in working with the industry while at I2R helped ease the transition.

What advice would you give to aspiring entrepreneurs?

The first step towards getting somewhere is to decide that you are not going to stay where you are. I was in a stable career and could have continued to build my career there and stayed within my comfort zone. However, I decided to lead a new path and have not looked back. Personally, I strongly believe that startups are the birthplace of innovative ideas and remarkable ways of execution.

How do you measure success in life?

Success in life is measured by more than just monetary benefits. Of course, we would all like to lead a comfortable life. Beyond that, it's the joy in being part of the journey in seeing a good technology become a great product and contributing to a successful business. As Steve Jobs said so succinctly, "the journey is the reward".