

by grace ma

# All systems go

## A deep passion in technological developments helps project engineer Frank Chen to excel at DSTA's Naval Systems Programme Centre

PROJECT engineer Frank Chen, 26, not only has a degree in electrical engineering, but in psychology as well.

He pursued his double degree at Cornell University on a DSTA scholarship and believes it was a good decision.

He explains: "My studies of neural networks and the construction of sensory perception in psychology have allowed me to have a deeper understanding of the fundamentals of artificial neural networks used in cutting-edge technology for pattern identification."

His studies in the psychology of visual communications have also helped him to come up with presentations and reports on complex technological issues.

As a member of DSTA's Naval Systems Programme Centre, Mr Chen supports the Republic of Singapore Navy in the acquisition

and development of the latest weapons, naval platforms such as strike ships, submarines and unmanned surface vessels, as well as sensors.

This support includes managing projects to ensure the timely delivery of technology, providing technical advice and expertise to make better decisions during acquisitions and system acceptance tests,

and contributing to developmental decisions during the project phase.

A typical day would see Mr Chen and his teammates doing system integration on-board platforms, as well as testing and liaising with navy logisticians on storage and maintenance issues.

They also participate in design reviews, assess current project develop-

ments and brainstorm potential improvements for the system.

Says Mr Chen: "Depending on the project phase, I may also be at my desk coordinating schedules, finance and logistical matters with my suppliers, or be moving around the relevant military bases and technological facilities to work with navy personnel and suppliers. It is

definitely not a desk-bound job."

Having been in this job for over a year, Mr Chen, who is an avid photographer and tennis player, relishes the opportunities to grow and develop professionally through the many hands-on learning experiences.

He also feels he has benefited from overseas courses in countries like Italy, France and Sweden, where he gets to tap the minds of foreign experts who are at the forefront of technological developments.

"There are many opportunities during design reviews and system acceptance tests to gain in-depth understanding of the systems and core technology that are driving these developments.

"Managing multi-million-dollar complex systems-of-systems and handling information security with care have taught me valuable skills that I can draw upon in the future for similar projects," says the former vice-president of the Singapore Students Association in Cornell University.

There are challenging moments too, such as managing customer expectations and the need to have a thorough understanding of and abide by security policies and regulations.

"In times like these, it's the sense of pride in my work and a motivation to do the best I can in everything that keeps me going," he explains.

It also helps that his working environment is open, collaborative and innovative, he adds.

"My colleagues and bosses are very approachable and willing to guide me in project matters. I am given the freedom to plan my development in consultation with my superiors. The culture is one that emphasises learning and building technical skills and knowledge."

To excel as a project engineer, he says one needs to have a keen passion in technological developments, a strong motivation to develop one's technical expertise, perseverance in resolving problems and patience to work within security constraints.

He adds: "I have also found that effective communication skills, commitment to the job, humility in dealing with others, a proactive learning attitude and the courage to ask questions are also important qualities."

His advice to those who are considering a career path like his is to be clear and focused on what they want to do in the next five to 10 years and to plan ahead.

"I believe that one has a better chance at career success with prudent and disciplined contemplation and a clear understanding of one's talents and interests," he says.



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— Mr Frank Chen (left)