Eager to experience first-hand the cutting-edge technologies that would one day shape Singapore’s infocomm landscape, 23-year-old Winnie Kwan and 25-year-old Thomas Tay took up the National Infocomm Scholarship (NIS) offered by the Infocomm Development Authority of Singapore (IDA).

Thanks to their academic excellence and leadership qualities, they were invited to enrol in the much-coveted Singapore Management University-Carnegie Mellon University (SMU-CMU) Fast Track Programme. As one of the seven Fast Track Infocomm Master’s programmes under the NIS, the four-year programme allows students to graduate with a BSc (Information Systems Management) degree from SMU and a Master’s degree in IT from the prestigious CMU. Both scholars certainly wasted no time jumping on the opportunity.

Winnie and Thomas may have chosen the same course of study under the NIS, but their divergent scholarship journeys prove that in a fast-changing and dynamic industry like infocomm, imagination is but the limit.

What sparked your interest in infocomm?

Thomas: I started experimenting with IT design and creating my own web pages back in 1997. What sustained my interest in infocomm all these years are the seemingly endless possibilities it brings. Just when you think the technologies you know epitomise the pinnacle of progress, a new breakthrough emerges and awes you!

When I was a child, I was also an absolute Star Trek fan. As I witnessed more and more of the ‘fictional’ technologies in the series coming to life, I became increasingly motivated to join this community that builds technologies for the future, turning things that exist in our imagination into reality.

Winnie: How I entered infocomm was fortuitous; the opportunity arose in university! Five years ago, when deciding which undergraduate course to study, I’d settled on accountancy. I applied for a double degree programme in Accountancy and Information Systems Management, which appealed to me because of the synergy between the subjects. SMU offered me the programme, which I accepted.

The learning curve was steep initially as I had no prior background in infocomm. But my passion for the subject grew when I discovered infocomm’s close-knit relevance to every aspect of our lives. For example, we could be learning about the social-business concept of ‘network effects’, and I would be watching it unfold right in front of my eyes on social media sites!

What attracted you to the National Infocomm Scholarship offered by IDA?

Thomas: The scholarship was an ideal match for my interests. I wanted an overseas education, but at the same time I did not want to miss out on college life at home. The SMU-CMU Flagship Infocomm Masters programme offered me the rare opportunity of pursuing my studies at one of the leading computer science institutions in the world while also experiencing the local undergraduate life. The choice was fairly clear.

Winnie: Having the opportunity to study in both Singapore and USA tipped the scale for me as well. What further struck me was that the NIS offers great career flexibility for scholars to choose from a wide spectrum of sponsor companies, ranging from finance and telecommunications to the technology and consulting industries.

Share with us some memorable experiences you’ve had when studying abroad.

Thomas: Over two years at CMU, I’ve worked on several fascinating technological projects. Under instruction from a pair of robotics specialists, I undertook two mini projects in which I designed and developed small gadgets from scratch. It was an incredible hands-on learning experience, from drawing circuit boards, procuring and soldering parts, to microprocessor programming. Although those gadgets were simple in nature, the exposure gave me sufficient knowledge to continue developing new gadgets independently.
Winnie: The most defining experience would be my interaction with peers at CMU. Being the only Singaporean in my cohort, I worked with people from USA, Africa, Germany, India, Taiwan and Korea. It was an exciting learning experience for us to share about how infocomm strategies are carried out in our respective countries.

Also, the weather there was unforgettable! I got to experience extreme weather conditions, from 50 cm-thick snow during Pittsburgh’s ‘Snowmageddon’ to the hottest 40-degree summer in New York to Hurricane Irene which caused offices, schools and the airports to shut down!

Winnie, now that you’ve completed your studies, you’re back working in IDA?

Winnie: Yes, I am. I’m currently under the newly-formed Government ICT Strategy and Performance Management Division, which looks at formulating the overall strategy for government ICT programmes in public sector and various economic sectors. Apart from learning more about the healthcare sector, which I’ve been assigned to, I’m also looking at industry best practices, analysing emerging trends in other countries, and brainstorming for initiatives that Singapore could embark on next.

Thomas, share with us some interesting facts about the infocomm industry that few people know about.

Thomas: People tend to stereotype infocomm professionals as people who develop office software or websites, write complex codes for giant mainframes, or troubleshoot computers. While all these roles do exist and form a vital segment of the industry, the truth is infocomm also encompasses media design, game development, robotics, and many other unique facets.

In return, I would like to pose two questions to entice students to the infocomm industry. Who do you think develops the games you play, such as FIFA 2012, Call of Duty or World of Warcraft? Who develops the computer inside your car that controls the lights, brakes, radio and navigation system? Unbeknownst to many, technical and infocomm professionals are often the invisible hands that combine artwork and storylines into games, and steel and technology into modern cars.

Looking ahead, what fresh ideas do both of you hope to see implemented in Singapore?

Thomas: I envision an intelligent personal assistant system that can be activated using voice or other sensors, and capable of performing tasks like switching on the air-conditioner at home or calling up files from the office. There is also room for voice and linguistic research in Singapore, such as building speech models and user dictionaries – similar to those used in predictive typing on mobile phones – for Singlish.

Winnie: While I was in the USA, I worked with a start-up company for my final-year project and was blown away by their vibrant entrepreneurial culture. Their focus was on gamification, which uses the concept of games to fulfil non-game purposes and engage more users, to transform the way businesses and brands connect with their customers. We developed a prototype for the start-up and created fun and informational games for consumers to play while learning about and supporting local businesses.

Bringing this back to the context of Singapore, I believe that we, too, have the capacity to tap on gamification. Many of my friends are already raring to turn their game concepts into reality. I believe we’ll soon be able to see such ideas taking off in the near future!