

16/02/2004

Upping the security ante

S. Jai Shankar

OCT 31, 2003 will be long etched on the minds of most Malaysians. It was Tun Dr Mahathir Mohamed's final day as Prime Minister after holding office for a record 22 years. But not many would have noticed that when Dr Mahathir clocked out of the Prime Minister's Office on that day, he didn't punch a card or sign his name in a book. Instead, he placed his thumb on a scanner machine that uses the high-tech Karsof Fingerprint Technology (KFT). Similarly, on Nov 3, 2003, when Datuk Seri Abdullah Ahmad Badawi took office as the new premier, he used the scanner machine to clock in.

Interestingly, KFT was invented by a company based in Malaysia, Multimedia Glory Sdn Bhd (MGSB), and is registered worldwide as a Malaysian technology. MGSB was formed in 1999 with the mission of providing total security software solutions and in system design and development for a wide range of industries.

According to MGSB's executive director, N.Srikanthan, the company's formation in Malaysia was a logical step. After a stint as an ICT lecturer in Tafe College, Seremban, Srikanthan ventured into the software development industry in 1992. As with many other independent software developers then, he opted to outsource technical work to specialists in India. 'That was a mistake because we suffered from a host of logistics issues and service level suffered as a result,' he says. It was then that the 42-year-old Indian national decided to invite his cousin, ex-college mate and often business associate, Lalitha Kaleedhas, to Malaysia so that a permanent base can be set up locally. Little did Srikanthan know that The invitation would net him not one but two R&D scientists. This is because apart from her husband, Lalitha also brought along her son K.Karthik - a child software prodigy.

With the help of Karthik - who began developing software for commercial use when he was only seven years old - the three-person R&D team was soon creating cutting edge technologies. The company, for example, was one of the first to launch biometric based products in Asia. Consequently, it started to expand quickly. Srikanthan says MGSB has been recording 100% revenue growth consistently since 2000. Its biggest deal thus far is a RM4.5 million contract to provide the KL International Airport (KLIA) with a biometric based security system.

The company has since received MSC status and Ministry of Finance registration. It currently has six patents pending. Its suite of products is called Karsof(tm) (an abbreviation for Karthik software). According to Lalitha, who is the managing director of MGSB, the company is involved in many areas of development, including commercial application development and system protocols (which include operating system and databases).

Its flagship technology is KFT, which includes unique biometric storage process that enables low fingerprint data storage size. Lalitha claims that KFT is the only technology in the world that can store fingerprint data in 16 bytes storage space compared to the industry average of at least 256 bytes of storage size. This ensures the technology works well in narrow bandwidth options, e.g. dial up line.

Lalitha says KFT's high performance identification algorithm recognises, verifies and accesses data from any database regardless of size in less than two seconds. 'KFT is user friendly and widely accepted by end-users because of its prompt verification and high tolerances to finger conditions and other external variant to the system,' she adds. Not

surprisingly, KFT in security applications is used by some of the nation's highly secured premises such as the Prime Minister's Office, the Prime Minister's residence and KLIA.

This ability to minimise storage capacity ensures that KFT based application can be used to improve existing infrastructure within various industries. Expect more secure ATMs and credit cards within the financial sector. Areas within the government sector which can potentially benefit from the technology are passports, ID cards for citizens, terrorist monitoring and national security.

Based on KFT, MGSB developed the Karsof Total Airport Security System (KTASS) in 2001. This integrated solution monitors and controls all internal security management at KLIA. Among other things, it provides biometrics access control to 26,000 KLIA personnel and also to all visitors to restricted areas of the airport. It handles an average of 150,000 transactions per day involving staff, crew, pilots, visitors and other airport pass holders.

Based on open architecture, KTASS is a system that can integrate with other security databases as such airport blacklists and criminal databases, even via narrow bandwidth. Interestingly, due to its KFT's technology enabling the low data storage size, search capabilities are fast and provide accurate results. Field tests, at the 2003 Asia Pacific Australian Information Communication and Technology Awards (APICTA) in Thailand recently, proved that search results for a 30 million-fingerprint database took only 0.5 seconds for fingerprint matching.

Not surprisingly, KTASS has won a string of awards for its R&D work. At APICTA 2003, it bagged the 'Best of Security System Applications, MSC', 'Best of the Best Prime Minister's Award, MSC', and 'Best of Security, International' awards.

Most of MGSB's solutions, including basic components and systems protocol, are developed in Malaysia. Karthik, who is CTO of MGSB, says that in comparison, some of its competitors opt for external software components when developing their suites. 'Such practices will cause problems to customers who might require new functionalities or added requirements in the future,' he points out.

However, this stated commitment towards internal software development work has not translated into higher head count for MGSB, which stands at 10 core personnel. The company, however, hires additional manpower from within and outside the country based on the project needs. The rationale for this is that the manpower turnover in the industry is high, and therefore there is always the likelihood that coders will leave important development work halfway. 'So, we have strengthened our processes to ensure seamless development work can be carried out by any reasonably talented coder without a loss in efficiency,' says Karthik. The company relies on its own Karsof standard tools for developing the application software.

Competent technical personnel are handpicked from Malaysia and abroad, and used on a contract basis. MGSB hired 35 technical specialists for the KLIA project. As such, the overheads are maintained at reasonable levels, allowing savings to be passed on to customers through a more competitive pricing structure. The flexible product development model has obviously been successful based on the number of patents pending products developed by MGSB. Currently, there are six encompassing areas such as biometric verification for electronic transactions over the Web, computer network security, fingerprint authentication in large database, fingerprint storage size less than 20 bytes, and application security with biometric features.

The future looks bright. The company is due to launch two products with

the potential to become money-spinners soon - "Karsof Protection Shield" and "Karsof Anti Piracy System". The first product is a security solution and the second an anti-piracy system that, among others, protects original CDs from being pirated.

The launch of these products is bound to attract more blue chip clients. At present, MGSB's clients include the Government of Malaysia, Malaysia Airports Bhd, Affin Bank Bhd, Oriental Capital Assurance Bhd, and Fujitsu Micro Electronics (M) Sdn Bhd. According to Lalitha, talks are underway with many interested parties from Australia, Sri Lanka, Thailand and the United States for various solutions.

(END)