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TECHNOLOGY BOOST: The national car maker also uses the National Grid in its crash simulation tests.

OH WHAT A YEAR IT'S BEEN

Just 12 months ago, Datuk Abdul Wahab Abdullah took over the helm of Mimos Bhd. We check back with the CEO to find out how the research organisation has progressed.

By JO TIMBUONG

SITTING behind the chief executive officer's desk at Mimos headquarters in Technology Park Malaysia, Datuk Abdul Wahab Abdullah looked like he found interviews a painful necessity of his position. A researcher at heart, he seemed uncomfortable being put under a spotlight.

But as soon as he started talking about Mimos — its hopes, dreams and successes — his passion for research shone through and it was difficult to interrupt him, even to ask the next question.

Abdul Wahab, who took over the reigns from Tengku Azman Sharifadeen in July last year, has steered Mimos from being a hybrid research organisation and business entity, to a more focused applied-research body.

His first three months in office was spent listing Mimos' strengths and weaknesses. After that, he had the organisation focus its research on several areas — grid computing, information security, knowledge technology, micro-electro mechanical systems (MEMS), and wireless technology.

Abdul Wahab's efforts have not gone unrewarded despite the brief time he's been at the helm. Mimos was named R&D Organisation of the Year by international technology industry analyst Frost and Sullivan last month for its work in precision agriculture.

"We are the only Malaysian recipient for such an award in the world," he said from his armchair, beaming like a proud father.

Precision agriculture, he explained, is not something new in the agricultural sector but has been reserved for high-end crops, such as grapes. The method was introduced to European vineyard managers to improve the quality and yield of their crops.

When the method is introduced to farmers here, it will be beneficial in two ways. The farmers will be able to produce quality crops and the processing of raw materials will be cheaper, he said.

Mimos, based in Selangor, is working with University Putra Malaysia, which is based in the same state, on this method of precision agriculture.

Electronic sensors are put into crops, such as palm oil and rubber trees, and help farmers monitor the health of the plants. With advanced warning, they'll be able to treat or isolate a diseased plant before it can infect the entire crop.

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Since Mimos is also working on MEMS, it is working to combine that system with the precision agriculture method so that the crop sensors can be operated wirelessly.

"In normal cases, the sensors and circuitry would be separate, but with MEMS we can have these together in one solution," said Abdul Wahab.

"Plant diseases can cost a farmer a lot of money and sometimes, by the time the source is discovered, it is too late to save the plantation. By putting MEMS into agriculture, we can help this sector."

The main challenge for Mimos, however, would be to make the technology more affordable for farmers, he added.

Girding up for grid

Grid computing — harnessing the collective computing power of individual personal computers to tackle large problems such as weather prediction, industrial simulations, and disease research — is common overseas.

Mimos is advocating the use of grid computing among Malaysian industries and institutes of higher learning that are conducting R&D work.

Also, now that the country is developing animated movies and other digital content, it has an appetite for huge amounts of computing power that can be expensive to own, which Abdul Wahab believes can be better supplied by the more affordable grid computing.

"There are few animation companies that enjoy huge amounts of funding and these will need to look to the grid to provide them with the computing power they need to render their creations," he said.

Mimos houses the National Grid at its premises and the facility is at a third of its maximum capacity, according to Abdul Wahab.

Malaysia's premier car maker Perusahaan Otomobil Nasional (Proton) Sdn Bhd is using the facility to help it with crash simulations and several universities around the country are using it for research in various fields.

The National Grid is expected to run at full capacity by year end when local animation companies hop on.

But Abdul Wahab is not satisfied with that. He wants grid computing to be a

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household utility, just like electricity and water. "Imagine having that kind of computing power on tap in your home?" he said.

Mimos has engaged the help of some multinational companies to look into transforming the National Grid into a portal so that it can be delivered to the public as a utility. It hopes to achieve this by 2009.

Driving R&D

Abdul Wahab has so far engaged 13 universities in the country to conduct R&D work with Mimos.

"To be a premier applied-research body, we cannot stand alone. That's why we signed MOUs (memorandums of understanding) with the universities," he said.

Mimos' role in the deal is to provide a national research roadmap for the country and set it as a standard for R&D, as well as build proofs-of-concept. With such a roadmap, research findings will be more marketable and in turn, will put more value into local R&D work.

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"There is a need for this roadmap or any research done will be unstructured and may not lead to useful purposes," he said.

Another reason is that the Government is awarding the lion's share of royalities to individual researchers as a way to encourage more and better R&D work.

"If the researchers follow this roadmap, they will be able to better produce marketable products and this will earn them more royalties," said Abdul Wahab.

Putting monetary value into research is also a goal at Mimos, and it is doing its best to create a conducive environment for this.

"Intellectual property (IP) is very valuable and in developed nations, it is highly prized," Abdul Wahab said, adding that Mimos has an IP reward programme to aid the country in this respect.

It set a target for 140 IPs to be disclosed by year end, he said. "But we already have 208 and there are still a few months to go."

In previous years, Mimos had only two IPs for patenting. "Now we have 10 patented ideas and 24 patent-pending IPs," said Abdul Wahab with a smile. "I (still) intend to crack the whip at our patent lawyers to make them file patents faster."

But he agreed that this is a good "problem" to have and said he is pleased with the work by Mimos researchers who are churning out IPs like never before.

The year ahead

On the cards for his second year in office, Abdul Wahab has Mimos developing an initiative called K-Mosque, which is aimed at Muslims in the country.

"I plan to use the K-Mosque to empower the Muslim community, especially those in the rural areas," he said.

Based on the telecentre initiative, which introduces ICT (information and communications technology) to Malaysians, K-Mosque will use technology to enhance the religious knowledge of Muslims.

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He also expects K-Mosque to be embraced by senior members of the Muslim community, who will then absorb the latest in ICT through the experience — a win-win result.

"It's not enough to have telecentres because mostly youths go to these places while senior community members do not usually see the relevance of using ICT," he said.

"K-Mosque will help change this perception."

Over the next 12 months, Mimos has also been tasked with helping the local information technology industry to go global.

It has divided the industry into three tiers — the first is established companies that have the potential, the second is up and coming players, and the third is techopreneur startups.

Abdul Wahab wants transfers of technology between the first and second tier groups, which will in turn help the third-tier companies move up the value chain.

Everyone needs to work together for the benefit of each and everyone, he believes. He declined to name the companies in the three tiers, but said state ICT councils were lending Mimos a hand with the initiative.

"These companies will learn and train with us, and we will make sure they sharpen their capabilities to international standards," said Abdul Wahab.

"(All in all) it's going to be a busy second year."

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DATUK ABDUL WAHAB ABDULLAH, MIMOS CEO

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HIGH-TECH AGRICULTURE: Mimos is working on combining precision agriculture and MEMS to monitor the health of crops wirelessly.