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FUSION is a biannual newsletter published by the **Malaysian Industry-Government Group for High Technology (MIGHT)**. It features articles of interest in high technology areas, write-ups on initiatives and programmes of the **Ministry of Science, Technology and Innovation (MOSTI)**, and news on the achievements and development made by **Members of MIGHT**. **FUSION** also serves to communicate to **MIGHT Members and other stakeholders** on activities and initiatives undertaken by **MIGHT** as a **Government-Industry partnership organisation that is mandated to advance the nation's competency in high technology**

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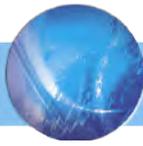
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There are enough sci-fi movies and TV serials that deal with time travel and the ability to look into the future. My personal favorite is of course the 'Back to the Future' trilogy which centres around an absent-minded but brilliant scientist, Dr Emmett Brown. The time machine that he built, using a car as the platform, allows the hero and himself to be transported to a different time, back in history or forward into the future.

Why does mankind find the future so intriguing? Political leaders, businessmen and even ordinary people would be willing to pay a king's ransom for the opportunity to glance into the future. The future holds the key to what and how we do things now, whilst our objectives and deliverables are always tied to the future. So until we are able to invent a time machine, we have to make do with a more down-to-earth methodology to study the possible futures that will help us make sound decisions.

Hence, the theme and title of this Fusion's Special Feature "Futures Thinking for Transforming" is indeed appropriate. Futures or foresight studies are used by many of the world's most successful corporations and governments to model, understand and shape the future to their advantage. MIGHT acknowledges the need for scrutinising the future of our nation, and addressing critical global issues such as energy and food security requires systematic scanning and foresighting to address these issues. One of MIGHT's key programmes, *myFutures*TM is formulated precisely to serve this purpose. The Macro and Future Studies (MFS) Division in MIGHT is heading this initiative in collaboration with local and global centres of excellence.

The world today is in crisis. Universal energy demand is projected to grow dramatically over the coming decades and global warming is expected to intensify. The causes behind this are

complex, but continued growth in energy demand in various technological sectors is the essential background factor.

As we struggle with the energy supply crisis, continued extreme weather phenomena is being reported globally. Anomalous weather conditions including light snowfall, heavy rains and persistent drought are considered as a warning sign among the general public.

To highlight and put some of these issues into perspective, we bring you articles such as the 'Jatropha Initiatives for Biodiesel' which introduces the jatropha plant as another source for alternative energy that is currently hot in the local market. Another article entitled 'Clean Development Mechanism' revolves around international cooperation among governments, business and researchers, defined and regulated by the United Nations Framework Convention of Climate Change (UNFCCC), explicitly for the purpose of curbing global warming.

The Intelligence and Research (I&R) Division is focusing on sustainable development and green management planning to assist our industry players. In the foreseeable future, marketing of our products or services especially to the developed countries will be governed by strict sustainable and green regulations. There is an urgent need for our companies to align their processes and materials used to the new green regulations that are slowly being imposed by the western world.

There is continuing effort in MIGHT to support the Government's objective to increase the percentage of successful commercialisation from public-funded R&D activities. We believe that there is an urgent need to develop new sets of processes and tools to push ideas along the innovation value chain for it to reach the market or as public good. In collaboration



with an international agency, the development of a commercialisation management system is now underway in MIGHT and due for completion by end 2008. It will be called TeNMS or Technology Nurturing Management System and will assist technopreneurs in channeling their ideas in the form of proposals for uptake by interested parties for commercialisation. TeNMS is developed and managed by the Technology Nurturing division.

I am hopeful that our efforts in plugging the gaps along the innovation value chain will assist the technopreneurs and industry players to innovate better. At the same time, we also hope to promote the concept of open innovation that will allow us to tap into the curiosity and creativity of our children and youths. This augurs well for our nation's future.

I hope you will enjoy reading this issue of FUSION, as we bring you more insights into MIGHT's activities and our Members' news. I would also like to extend my heartiest "Selamat Hari Raya Aidil Fitri" to all Muslim readers. May God bless all of us with health, peace and prosperity. We look forward to your feedback and suggestions. Please send them to fusion@might.org.my.

Enjoy your read. Thank you ■

Mohd Yusoff Sulaiman



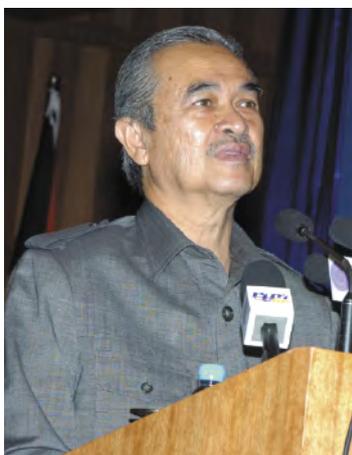
Futures Thinking for *Transforming*

Throughout the ages, people have tried to lift the corner of the veil that hides the future. After all, the future is not predetermined fate, but can be influenced. Every decision we make today has its effect on the future. This applies to everyone: individual, nation states and corporate entities. Those who are knowledgeable about development trends enjoy a decisive advantage.

What is Futures Studies all about?

Futures Studies is a study about goals and purposes; where we are going, how we get there and the problems and opportunities we will encounter en route. It is a systematic study and exploration of possible, probable and preferable futures.

The major tasks of futures studies include the study of possible futures which require breaking out of conventional thinking and taking unusual perspectives in order to identify possibilities in the real world and to bring them to the attention of people. The study of probable futures focuses on the question of what the most likely future of some specified phenomenon would be within some given time frame and under specified contingencies. Meanwhile in preferable futures, futurists assess the desirability of alternative futures and the ethical foundations of their judgments.



Why Futures Studies?

“...our businesses suffer from a lack of investment in R&D, a lack of investment in long-term strategic planning and foresight studies, a lack of investment in business intelligence gathering, and a lack of exposure to cutting-edge technologies. This malaise has negative ramifications for Malaysia’s future economic performance, some of which we are already starting to see.”

YAB Dato' Seri Abdullah Haji Ahmad Badawi

Prime Minister of Malaysia
National Forum on Leveraging on
Emerging Technologies
31 May 2005

In order to survive and flourish in the current and future environment, individuals, firms, and governments and nations as a whole not only need to adapt quickly to the current changes, but also, if possible, proactively create and shape future changes. To be successful, a nation must know how to recognise key global trends, find a particular niche for itself and utilise fully the resources that it has in order to build economic strength and to be globally competitive. In a world of intense and unrelenting competition, survival is a question of being fit, able and innovative.

Futures studies and foresight are used by many of the world’s most successful corporations and governments to model, understand and shape the future to their advantage. Developed in reaction to the failure of conventional approaches to assessment and forecasting, it is an interactive process that involves identification of the most likely scenarios and the evaluation of alternative, desirable or feasible scenarios. The main applications are to:

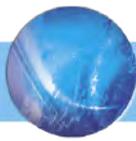
- improve short, medium and long-term decision-making;
- guide technology choices;
- generate alternative trajectories for future developments;
- improve preparedness for emergencies and contingencies; and
- motivate change.

According to Sohail Inayatullah, a professor in political science at Tamkang University in Taipei and Visiting Academic/Research Associate at Centre for Social Change Research, Queensland University of Technology, Australia, the future has six foundational concepts, six questions and six pillars. As the world becomes increasingly heterogeneous, as events from far away places dramatically impact on how, where, when, why and with whom we live and work, futures studies can help us recover our agency.

Sohail is co-editor of the *Journal of Futures Studies*, associate editor of *New Renaissance* and the author of more than 300 journal articles and books including *The Causal Layered Analysis Reader* and *Globalization and World Systems*.

According to Sohail, in order to create the world we wish to live in, we can (i) map the past, present and future; (ii) anticipate future issues and their consequences; (iii) be sensitive to the grand patterns of change; (iv) deepen our analysis to include worldviews and myths and metaphors; (v) create alternative futures; and (vi) choose preferred and backcast ways to realise the preferred.

Futures studies can be described as the art and science of understanding possible, probable, preferred futures and the worldviews and myths that underlie them. It is scientific in the sense of rigour, repeatability, reduction in observer bias but very much an art in the sense of action learning, learning from doing and using multiple ways of knowing such as intuition and sensitivity to others. Finally, it is also an art in that observer bias or worldview is central to the conduct of good research. The main challenge in futures studies according to Sohail is the problem of Monday morning, that is, how to link the long term with the short term. We may have a 10-year vision or a 30-year vision but how do we link that with our day-to-day activities. Often there is a disconnect between the idealistic and the practical; ensuring both go hand-in-hand is the challenge. Many are inspired to engage in long term visioning or using scenarios to reduce uncertainty



but when it comes to Monday morning (the need to connect), there is no real change in worldview or behaviour. Making these links – for example, climate change to behaviour – are crucial.



Other crucial challenges include ensuring that there is a good mix of empirical research (the data), interpretation (what we mean), critical (what is missing, challenging assumptions) and action learning (what to do next).

For futures studies, 5 trends are crucial:

- i. From superficial analysis of trends to understanding depth, that is, civilisational assumptions, myths and metaphors and the perspective of the person engaged in the research
- ii. From futures studies that are focused on one approach (empirical or interpretive or critical) to those that are integrated, using all three approaches
- iii. From futures studies focused on only one future – this will happen – to futures studies that are truly focused on alternative futures – building in capacity to think about alternatives
- iv. Futures studies as novel (the truth is out there) to futures studies as very much a part of what organisations – public and private, an individual and family does on a regular basis – for example, early warning systems, scenarios, visioning
- v. Futures studies have focused on warning – limits to growth – to futures studies that focus on visioning, on working on imagining and creating the world we wish for

With regard to futures studies, technology shifts are expected to take place, and according to Prof Sohail, they will be critical in the future. These

technology shifts include the usage of solar-wind and other renewable energy sources from the current conventional non-renewable energies. In the cities, building design will be greener and smarter, including an intergrid of households which are energy efficient. Another expected technology shift is artificial intelligence, which will be adapted in almost every aspect of life. For example, creating living, interacting (whereby) smart robots that will be fully used in living systems. It is also foresighted that the use of nano-gaia-biomimicry technologies will be increased. The nano-gaia-biomimicry technologies use nature to design new products at very minute levels. Apart from science-related technologies, spiritual technologies are also expected to experience a shift. Meditation and prayer will be practised by more people to reduce health costs and enhance productivity.

With regard to the future of the South-east Asian region and Malaysia in particular, Prof Sohail had suggested a few scenarios. The first is the creation of an Asian Union with a new Asian currency. The culture would be the nanny state, focused on economic growth but having strong state controls and the state as the parent, and over time moving from the state as father to state as mother. Another much feared scenario is the falling apart of the region. Recession in the USA is already leading to problems in China, which may lead to a global recession and possible depression with the ultimate end of capitalism. From then on a new system will arise which better balances market and state; individual and collective; short and long term; corporatist and cooperative, local and global, to mention a few of the contradictions of the current world system. Contrary to economic breakdown, continued growth is also forecasted. States will continue to grow despite the crises that may occur such as financial, terrorism and disease outbreaks. Continued growth is envisaged to move like a pendulum, back and forth.

myFutures™

The Malaysian Centre for Futures or myFutures™ is a pioneering national level initiative dedicated to foresighting and studies of future possibilities from the economic perspectives to other issues affecting the world and country.

The main objective of myFutures™ is to provide a common platform to share experiences, insights and expertise on futures studies, locally and globally. Among the activities include futures intelligence, research, competency and community. These are:

Futures Intelligence - Identifying trends, emerging issues and scenarios.

This will involve monitoring international trends with the aim of identifying near-term threats and disruptions (for example, global food crises), and long-term changes in demographics, climate, technology, economics etc. This is a fundamental activity for most futures organisations, and it needs more targeted scenario work and strategic thinking. Besides, myFutures™ will identify potential short-term threats and will develop the capacity to anticipate, and just as important, spread the word about emerging disruptions, like the ongoing food crisis.

Futures Consult - Advises government and industry on strategic futures.

This will involve, for example, articulating on a long-term vision for Malaysia. As the country celebrated its 50th year of independence last year, myFutures™ can play a role in describing trends that will affect Malaysia through 2057, and help develop a vision for the country over the next 50 years.

Futures Competency - Understanding and analysing futures techniques, tools and methodologies.

This will include developing forecasting expertise nationally; building a better understanding of futures and forecasting methods among stakeholders; and developing myFutures™ into a global and regional centre of excellence in futures work.

Futures Community - Provides a platform for the futures community to share ideas and insights physically and virtually.

For further information, please visit:
www.myfutures.my



Clean Development Mechanism (CDM)

What is CDM?

CDM is a mechanism for international cooperation among governments, businesses and researchers, defined and regulated by the United Nations Framework Convention on Climate Change (UNFCCC), with the purpose of reducing greenhouse gas emissions (GHG) and curbing global warming. CDM works by linking the Annex 1 Countries (Annex 1 Countries are countries which have emission caps and cannot meet them; they consists of 36 developed countries) and Non-Annex 1 Countries (Non-Annex 1 Countries are countries which do not have the caps, but want to contribute to a reduction in global warming, that is the developing countries).

With this categorisation, the Annex 1 Countries can therefore invest in new technologies in non-Annex 1 Countries, so that the latter can continue development in a cleaner way and produce less GHGs. The 'saved' GHGs emission can then be converted to 'carbon credits' after registration and certification with UNFCCC (shared by the participants), which then can be sold, banked or traded just like stocks.

Malaysia, as a non-Annex 1 country, is not obligated to reduce its GHG emissions. However, as a signatory to the UNFCCC, Malaysia ratified the Kyoto Protocol in September 2002.

What is the Kyoto Protocol?

The Kyoto Protocol is a protocol to the UNFCCC with the objective of reducing greenhouse gas emissions that cause climate change. It was adopted on 11 December 1997 by the 3rd Conference of the Parties(COP), which met in Kyoto, and entered into force on 16 February 2005. As of April 2008, 178 states have signed and ratified the Kyoto Protocol. Of these, 36 developed countries plus the EU are required to reduce greenhouse gas emissions to the levels specified for each of them in the treaty with three more countries intending to participate. One hundred and

thirty-seven developing countries have ratified the protocol, including Brazil, China and India, who have no obligation beyond monitoring and reporting emissions. The United States, although a signatory to the Kyoto Protocol, has neither ratified nor withdrawn from the Protocol. The signature alone is symbolic, as the Kyoto Protocol is non-binding on the United States unless ratified. The United States was, as of 2005, the largest single emitter of carbon dioxide from the burning of fossil fuels.

How are CDM Project Processes Applied?

An industrialised country that wishes to get credits from a CDM project must obtain the consent from the developing country hosting the project that it will contribute to sustainable development. Then, utilising methodologies approved by the CDM Executive Board (EB), the applicant (one of the Annex 1 Countries) must make the case that the carbon project would not have happened without the additional incentive provided by emission reductions credits, a concept known as 'additionality' and must establish a baseline in estimating the future emissions in the absence of the registered project. The case is then validated by a third

party agency, called a Designated Operational Entity (DOE), to ensure the project results in real, measurable, and long-term emission reductions. The EB then decides whether or not to register (approve) the project. If a project is registered and implemented, the EB issues credits, called Certified Emission Reductions (CERs) to project participants based on the monitored difference between the baseline and the actual emissions, as verified by the DOE. Each unit of CERs, commonly known as carbon credits, is equivalent to the reduction of one metric tonne of CO₂e or its equivalent.

As of today there are 1118 registered CDM projects globally with an annual average of 218,936,923 CERs, and these are expected to achieve up to 1,290,000,000 CERs by end of 2012. There are more than 3,000 projects in the pipeline, most of which are yet to be registered, but which, if implemented before the end of 2012 would result in a reduction equivalent to over 2.5 billion tonnes of CO₂.

Industrialised countries have gradually developed domestic policies to comply with the Kyoto Protocol. Most countries are, however, still not meeting their targets and are looking for emission trading options. This has led to a growing demand for carbon credits which in turn has led to a burgeoning

Projects that are eligible for CDM in Malaysia include amongst others:

Sector	Type of projects
Renewable Energy	<ul style="list-style-type: none"> Biomass power generation – on-grid and off-grid Biogas Solar: Solar water heating; solar photovoltaic systems Hydro: Mini-hydro power
Energy Efficient Improvement	<ul style="list-style-type: none"> Improving efficiency in electricity production Improving combined heat and electricity production Improved boilers – more efficient producers of heat and steam systems Fuel switching
Forestry	<ul style="list-style-type: none"> Afforestation projects Reforestation projects
Waste management	<ul style="list-style-type: none"> Power and heat production from wastes Gas recovery from landfills Anaerobic waste water treatment
Transport	<ul style="list-style-type: none"> Improved vehicle efficiency Switch to fuel systems with lower emissions



interest in CDM projects in developing countries including Malaysia especially after the entry into force of the Kyoto Protocol.

CDM in Malaysia

Malaysia has abundant waste resources consisting of forestry, agricultural crops, trees, plant organic wastes and residues as well as agricultural effluence, both agro-industrial waste and domestic waste such as municipal solid waste which are potential sources of materials for renewable energy. Hence, Malaysia is well-placed to supply such carbon credits to the Annex 1 countries. As a Party to the Kyoto Protocol, Malaysia can voluntarily participate in the CDM and benefit from investments in the GHG emission reduction projects, though we are not subject to any commitment towards reducing the emissions.

However, it is the prerogative of the host country to decide whether or not a project contributes to sustainable development. Therefore, the government of Malaysia has to ensure that only those projects that are deemed contributing to sustainable development are approved and the project developers in turn have to ensure that the projects comply to the processes determined by the CDM Executive Board.

Under the international agreement, efforts towards reducing greenhouses gas emissions promote cost-effective means of achieving the CDM project commitments. CDM is a flexible financing tool designed to assist developed countries in the reduction of GHG emissions while assisting developing countries meet sustainable development goals. Therefore, the additional funding channeled through the CDM could assist Malaysia in reaching its goals of sustainable development and clean environment objectives, such as cleaner air and water, improved land use and reduced dependence on fossil fuels.

How are CDM Projects Managed in Malaysia?

CDM in Malaysia is governed under the ambit of Conservation and Environmental Management Division (CEMD) of the Ministry of Natural Resources which has been appointed as the Designated National Authority (DNA). In assisting CEMD, Pusat Tenaga Malaysia (PTM) has been appointed as the secretariat for the energy sector while Forest Research Institute of Malaysia (FRIM) is the secretariat for the forestry sector.

In the year 2001, the Ministry of Energy, Water and Communications launched the Small Renewable Energy Power (SREP) programme to facilitate the implementation of grid-connected power generation utilising renewable energy resources. The launch of the SREP is among the steps taken by Government to encourage and intensify the utilisation of renewable energy in power generation. Most of the SREP projects are entitled to participate in the CDM.

Economic Opportunities from CDM Projects

With the introduction of the CDM, there are now two possible revenue streams for these types of projects; via traditional cashflows (e.g. electricity sales) and the opportunity of trading carbon credits (CERs). CDM can stimulate a capacity of up to 350MW of small-scale renewable energy projects in Malaysia until 2010.

Up to now, there are 36 projects which have been registered under the CDM in Malaysia, of which 29 have been approved, 1 has been withdrawn, 3 have been rejected and another 3 have requested registration (detailed documentation). Most of these projects are registered by palm oil plantation companies utilising mainly biomass as the source of materials.

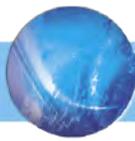
It should be noted that not all projects can benefit from CDM. First, projects have to meet the so called

CDM eligibility criteria. The most important qualification is that projects should be 'additional' to what would have otherwise occurred. This implies that if it is possible to demonstrate that the proposed activity is not the business-as-usual scenario, the 'additionality' requirement would apply. This can be done by demonstrating that the revenues of CDM can help overcome some financial constraint. Second, several costs have to be incurred before it is possible to register a project as a CDM project and before the tradable CERs can actually be generated. These costs are also referred to as transaction costs and can vary from USD40,000 to as high as USD150,000 per project.

Assuming an annual potential of 18 million CERs per year in 2010 in Malaysia, there is a substantial CDM potential in this country of up to 100 million tones of CO₂e for the period covering 2006 to 2012. At market prices of between USD3 to USD10 per tonne, this corresponds to a total capital inflow to Malaysia from sales of CDM credits (CERs) in the range of RM1.14 to RM3.8 billion. Bilateral and multilateral CDM projects might typically leverage project financing up to three to four times the amount, thus contributing substantially to foreign direct investment and also technology transfer.

MIGHT's Involvement in CDM

Recently, MIGHT has been appointed as the member of the Task Force for Renewable Energy and Food Production Technology under MOSTI. Among others, the task force aims to register and monitor all R&D activities related to renewable energy as well as all projects under the ambit of CDM from the Seventh Malaysia Plan to the Ninth Malaysia Plan. MIGHT is also exploring the potential of involving itself in carbon trading especially in trading CDM credits, jointly with interested parties among its members, particularly RHB bank ■



Jatropha Initiatives for Biodiesel



Rising Demands for Renewable Energy

Energy is essential to economic progress, to our way of life and to raising and maintaining living standards. The pursuit of economic progress, population growth and improvements in quality of life by many governments, particularly in the developing world, will continue to drive global energy demands. World population has more than doubled since 1950 and is set to increase by 40% by 2050. As growth in the production of oil and gas will not match the projected rate of demand growth, new supplies of reliable and affordable energy are needed.

Meeting these essential energy needs economically and sustainably requires a balanced energy portfolio that is suited to the economic, social, and resource conditions of individual countries and regions. Renewable energy (RE) such as wind, solar, hydro, geothermal, and bio-energy have emerged as an important part of the energy equation, and contribute towards the achievement of the national energy security agenda. More than 65 countries now have goals for their own renewable energy futures, and are enacting a far-reaching array of policies to meet those goals.

The economic risk of relying primarily on fossil fuel energy has grown in recent years as oil prices have skyrocketed and increased more than

600% since 2002 to over USD145 per barrel in 2008. These rising prices have had a disproportionate impact on poor countries. Governments in these countries subsidise basic fuels, and the cost of these subsidies have ballooned in recent years – reducing the funds available to governments to pay for education, health care, clean water, and other public investments that are essential for development.

Investment in renewable energy can help diversify a country's energy portfolio and reduce the risk of over-dependence on fossil fuels. Not only is RE a hedge against future price increases in conventional fuels, but it improves the balance of trade and creates new economic opportunities.

Biodiesel Production Experiencing High Growth

The production capacities of many renewable technologies and industries have been growing at rates of 20 to 60% year after year. According to the Worldwatch Institute, production of biodiesel, mainly driven by demands of the transportation sector, enjoyed the highest growth rate, after that of solar photovoltaic.

The growth in biofuels such as biodiesel production may have unexpected economic benefits. Nations that develop their own biofuel industries will be able to purchase fuels from their farmers, instead of using scarce foreign exchange on imported oil. Towards this end, the European Commission has drawn up a blueprint to achieve a 10% biofuel mix by 2020.

However, large scale production of biodiesel from vegetable oils has unintended side effects. Biodiesel produced from first generation feedstock, vegetable oils such as rape seed, palm oil, soyabean, sunflower and other cereals has diverted large amounts of food commodities from the food supply chain which are used instead for fuel production. As a result, millions of hectares of scarce farm land are being utilised for biofuel production which inevitably has led to the infamous 'fuel for food' controversy. Consequently, the sharp increases in food prices in recent years have been blamed on the lesser availability of land for food production.

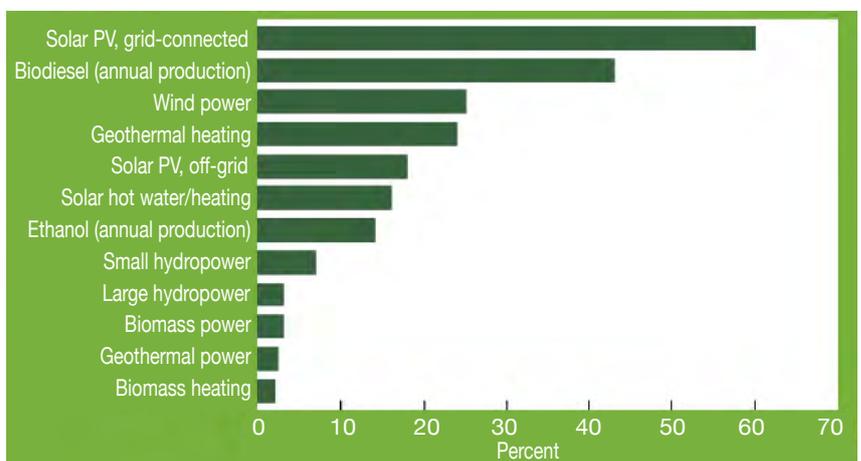


Figure 1: Average annual growth rates of renewable energy capacity, 2002–2006

Source: REN21. 2008. Renewables 2007 Global Status Report. Paris: REN21 Secretariat and Washington, DC: Worldwatch Institute.

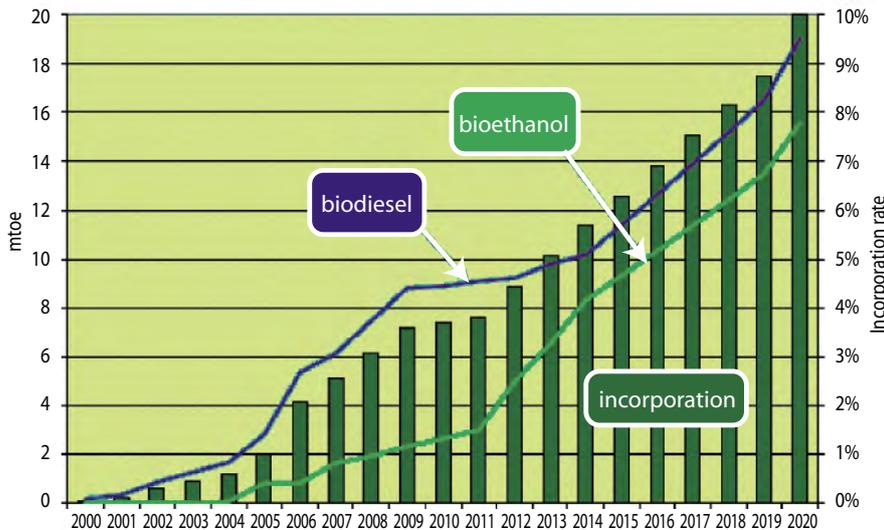
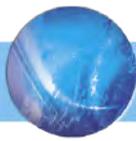


Figure 2: EC Biofuels Roadmap (to 2020)

Source: Mittelbach, M. 2008. International Jatropha Conference, Bogor, Indonesia 24-26 June, 2008.

Jatropha –The Biofuel Crop of the Future?

The search for a non-food commodity as the alternative supply source for biodiesel feedstock has led to the Jatropha plant, locally known as *jarak pagar* being identified as among the most potent of oil-bearing crops. *Jatropha curcas Linnaeus*, a shrub and toxic tree with smooth gray bark, belongs to the family Euphorbiaceae. It can grow in most tropical areas as well as endure poor soil and severe heat but the leaves drop in cold weather and in arid conditions. The minimum average rainfall requirement is about 250 mm per year, growing best under an average rainfall of 900-1200 mm. A 4-metre plant in height, Jatropha starts producing seeds within 4-6 months but maximum productivity is after 4 or 5 years. It has a life span of over 20 years. Almost every part of the Jatropha plant can be used and its products are used for liquid fuel, biomass, fertiliser, glycerol, medicine and detoxified animal feed.

Jatropha offers several unique advantages over other plants as a source of biofuel:

- No competition with food production
- Oil quality is similar to major food oils
- Could be used as pure plant oil or transformed into biodiesel
- No change in biodiesel production is necessary
- High oil content in the seeds: 35-50 % (dehulled)

- High productivity: approximately 1,600 L of oil per hectare
- Content of toxic compounds in the seeds: curcine in protein, phorbol esters in oil
- The plant is highly pest and disease resistant.
- Various parts of the plant are of medicinal value, for example, its bark contains tannin, the flowers attract bees and therefore offer honey production potential.
- Jatropha removes carbon from the atmosphere, stores it in the woody tissues and assists in the build up of soil carbon.

Biodiesel Production from Jatropha

Biodiesel is already being produced from jatropha seeds. To produce biodiesel in large quantities, a large amount of seeds must be secured from farms, meaning large tracts of lands must be transformed into jatropha plantations. This is the first major challenge for nations wanting to use jatropha as a major feedstock. The current yield for jatropha oil, 1-3 t/ha is much lower than that for palm oil (5 t/ha). In the case of Malaysia, replacing palm oil for jatropha is not as yet a viable option. Furthermore, jatropha is more suited for cultivation on marginal lands due to its low yield and hardy nature. Therefore the approach to jatropha planting cannot follow the path of oil palm planting.

Biodiesel production from jatropha seeds starts with a simple oil

press process to produce Crude Jatropha Oil (CJO). The filtered CJO then goes through a trans-esterification process to isolate methyl ester (biodiesel) as the end product. In the process, several valuable by-products are produced such as press cakes which are used to produce biogas and biofertiliser, compost from husks, cake briquettes, liquid fertiliser and glycerin. The recent International Conference on Jatropha held in June 2008 at Bogor, Indonesia revealed the economic value of jatropha to be around IDR 7-21 m /ha/year (RM6,000–RM8,800/ha/year or RM500–RM730 /ha/month). By any rural income standard, such economic value has a high impact on the rural development agenda of a developing country.

To boost the rural farmers' income, intercropping with cash crops such as corn, sorghum, ground nuts and ginger are carried out. Integrating animal husbandaries such as cattle and goat rearing with jatropha farms elevates the jatropha programme into a noble concept of energy self-sufficient rural communities. These communities grow their own 'energy plants' and produce their own fuels (cake briquettes, biogas, CJO) and agricultural inputs such as fertilisers. This seems to be an optimal solution for rural development whereby costly utility infrastructure can now be provided in a cost-effective manner. Additionally employment is generated and economic activities created.

Jatropha – A Social Innovation Initiative

In Indonesia and India, jatropha plantations are developed as social innovation projects. The government promotes jatropha as rural development initiatives to increase the income of rural communities, create employment, rehabilitate infertile, idle and non-arable lands (including ex-mining lands) and overcome hardcore poverty. Indonesia has targeted around 1.5 million hectares of jatropha plantations by 2010. However, up to now, it has only managed to achieve around 200,000 hectares. In the meantime, rapid developments in seed and plantation improvements in Indonesia have yielded 7-8 t/ha of seeds, or 2.3-2.6 t/ha of oil. Researchers are racing to develop high yield seeds capable of producing 15 t/ha/year.

In Malaysia, the private sector is making a heavy push for jatropha plantations and for biodiesel oil

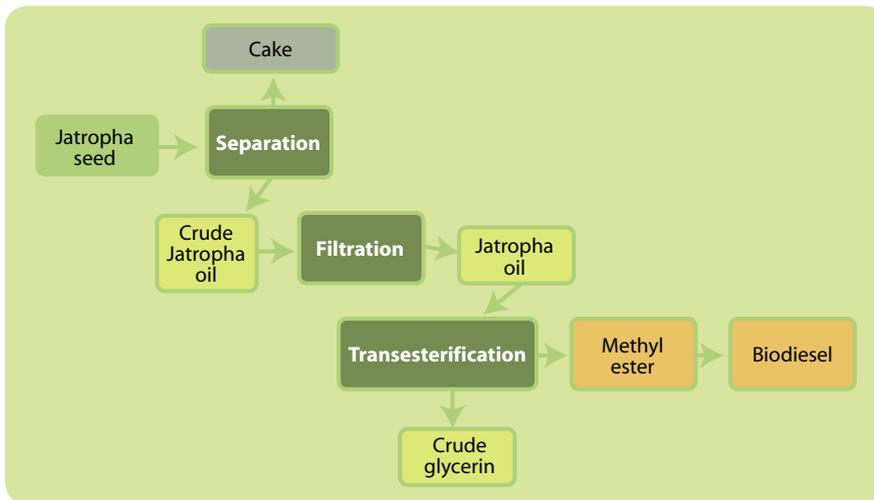
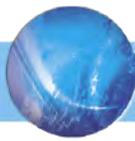


Figure 3: Jatropha Biodiesel Production Process

production, although the Malaysian Government has mandated the Plantation and Commodity Ministry and the Malaysian Rubber Board to lead jatropha initiatives. Research plots by private farms in Malaysia have been reported to yield double the production yield of the Indonesian farms. However, such claims are yet to be verified. Nevertheless, the private sector push indicates market readiness for commercial development of the jatropha business in Malaysia. A number of Malaysian firms have invested in Indonesia, planting thousands of hectares of jatropha. Jatropha nurseries have sprung up in Malaysia too, largely owned by the private sector, in preparation for the arrival of commercial plantations and contract farming. The major driver behind the jatropha business is the huge biodiesel demands of the EU, Japan, Korea and Taiwan on the demand side and the push from the supply side by Malaysian entrepreneurial expertise and vast experience in large scale plantations.

The Jatropha Business Model in Malaysia

Commercial jatropha plantations and biodiesel production by the private sector will continue to be driven by the market. Encouraged by improvements in yields and development of new high yielding seeds, private investment in jatropha plantations is expected to grow. However, the emphasis will be more on overseas rather than local, due to the higher land and labour costs. Large biodiesel plants, now lying idle due to the prohibitive palm oil feedstock price, await jatropha oil as an alternative feedstock. But the more

likely scenario is for Malaysia to be the regional hub for biodiesel production, initially for exports and subsequently meeting national needs for energy security and bioenergy requirement.

Government support to accelerate the development of renewable industry is expected to be forthcoming through the provision of clearer policies and a suitable development framework. Such support in terms of policies, R & D, incentives, land availability, investments, education and promotions and marketing need to be coordinated as several ministries and agencies are involved and clearly the mandate extends beyond the 'plantation and commodity' boundary. Moving forward, technology roadmaps and industry development blueprints need to be drawn up in the near future if Malaysia wants a fair share of the global renewable energy business. Such an initiative will be undertaken by MIGHT with the support of the Ministry of Science, Technology and Innovation (MOSTI).

Social innovation initiatives similar to the Indonesian model of an energy self-sufficient village, can

be adopted and be adapted to the local environment by the Malaysian Government. Such an idea is now being mooted and will soon be implemented through the community-based 'Inovasi Desa' and will be funded by the Innofund program of the Ministry. The rural community-based approach will benefit citizens in the remote areas and provide the much needed oil seeds for biodiesel production in the urban or nearby areas. Participation of the private sector is crucial in terms of providing buy-back guarantees through contract farming. The program can be extended nationwide by the Ministry of Rural and Regional Development, if found successful, at a later stage ■

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Proton to diversify, looks into auto tech

Friday, 1 August 2008

Proton Holdings Bhd is on a drive to change its image. It wants to be more than a mere carmaker and a car seller. The national carmaker is diversifying its revenue base and is looking to move up the value chain by licensing and selling its automotive technology.

“We have come quite a long way. In a relatively short time, we’ve managed to develop our own technologies. Others have come after us for the technologies and we are happy to collaborate with them.” Chairman Datuk Mohammed Azlan Hashim told the reporters after the company’s AGM in Subang Jaya, Selangor yesterday.

Proton posted a net profit of RM52.03 million for its first quarter ending 30 June 2008, compared to a net loss of RM46.75 million in the same quarter a year ago on the back of a RM1.71 billion revenue.

“Revenue from the intellectual property rights sale will be a contributor to the company’s growth and this is something we really look forward to,”

Azlan said. He added that Proton will also be emphasising sales derived from the export market.

“With the small domestic market, it is a given that Proton look at the export market for tangible long-term growth,” Azlan said.

The company is tapping on emerging markets such as Iran, Vietnam and Russia, as well as ASEAN, China and India.

“We acknowledge the complexity of these markets and we are taking a cautious approach to addressing them. This will be critical for sustainable growth over the next decade,” he said.

Meanwhile, Proton’s managing Director Datuk Syed Zainal Abidin Syed Mohammed Tahir said the company achieved 4,000 units per year in sales in Thailand, placing Proton as the ninth best dealer in the country,” he added.

He said Proton will also be focusing its efforts in Iran, especially after it exported 5,000 Waja taxis last year to Iran.

“We are also in discussion with



Iran on expanding our Gen2 from completely built up units to complete knocked-down units. This will put us in a better (position) in our export drive,” he added ■

*Source: The Malaysian Reserve
Perusahaan Otomobil Nasional Berhad (Proton Berhad):
Member since 18-01-1994*

SilTerra Launches 0.13 Micron High Voltage Technology

Kulim, Kedah, 8 August 2008 – SilTerra Malaysia, a leading wafer foundry provider of high voltage technology, today announced the availability of 0.13 micron high voltage technology (codename: CL130H32). This new technology is targeted at the display driver IC used in high resolution TFT LCD panels (6.35 cm panel size and above) such as PDA Phones, Mobile TV Phones and Smart Phones.

The latest high voltage technology features the proven 2.13 micron square SRAM bit cell mostly optimised for high density embedded memory design for WQVGA (240RGBx432, Wide-Quarter VGA), HVGA (320RGBx480, Half VGA) and VGA (480RGBx 640)

TFT panels. The new SRAM bit cell is a slim cell type which provides better yield performance and area optimisation for display driver design as compared with the rectangle SRAM cell type. In addition, the technology offers Asymmetry High Voltage Well for denser design, One-Time-Programmable cell for gamma colour tuning and voltage trimming, ESD protection and Metal capacitors design guideline.

“SilTerra is a leading foundry focusing on the small panel driver IC market. Our latest 0.13 micron high voltage technology is the fourth generation platform targeting at the advanced display driver IC solutions for the fast expanding Smart Phones, PDA Phones, Mobile TV Phones and other high resolution multimedia handheld

applications. This technology offers a true low standby current performance, tighter design rules with full aluminium backend interconnect. It also features a full suite of design kits and libraries to help our customers win early designs with the time-to-market advantage.” said Yit Loong Lai, Vice President of World Wide Sales and Marketing.

“Being a leader in high voltage technology, SilTerra is also on track to roll out the next generation <1.9 micron square 6T SRAM bit cell in 1Q09. Our latest development of 0.13 micron high voltage 1T SRAM process is executing very well and is on track for 1H 2009 mass production,” Lai added ■

*Source: mdu.com.my
SilTerra: Member since 2003*



MDV Partners Codemasters Studios to Launch Malaysia's First Locally Designed Computer Game

KUALA LUMPUR, Wednesday, 11 June 2008: Reinforcing its commitment to develop emerging ICT and high growth sectors, Malaysia Debt Ventures Berhad (MDV), a wholly-owned subsidiary of the Minister of Finance, Inc. partnered Codemasters Studios to launch the first-ever Malaysian-made computer game.

Entitled *Racedriver GRID*, the game is designed for racing enthusiasts and is available on the PC as well as PS3 and Xbox 360 gaming consoles. It is the first new-generation console and triple A rated game produced in the country.

Encik Md. Zubir Ansori Yahaya, Managing Director and Chief Executive Officer of MDV states that MDV is proud to partner Codemasters Studios and to play a major contributive role in a historic milestone for the Malaysian gaming industry.

"As a financier and development facilitator of Information and Communication Technology (ICT) and high-growth sectors, MDV is proud to be associated with a world-renowned gaming developer such as Codemasters. To be able to finance and

be an active contributor in the design of Malaysia's first-ever locally produced computer game is a privilege and we are glad to be a part of it."

"We believe that Malaysia has the capability and infrastructure to design state-of-the-art games as well as to nurture local talents, shaping them into world class designers. Codemasters has today paved the way for aspiring designers to step forth and we are certain that it will only be a matter of time before Malaysia's gaming industry takes off."

MDV has identified creative content as one of the high growth sectors in Malaysia and hopes to be able to fund many more aspiring entrepreneurs with the aim of putting Malaysia on the world map as a producer of quality creative content.

Maxime Villandre, General Manager of Codemasters Studios Sdn Bhd said, "The establishment of Codemasters Studios in Malaysia is part of Codemasters aggressive growth effort and we are thankful to MDV for providing us the support to expand in this region. We are also looking into other new growth opportunities which hopefully will have Malaysia and MDV collaborat-

ing with Codemasters' future venture successes."

To date, MDV has provided funding totalling RM283 million to 17 companies in the content industry.

Beyond financial accessibility, MDV also provides value-added nurturing services encompassing advisory services in project management, marketing conceptualisation and the adoption of industry best practices to ensure that their clients are competitive and sufficiently resilient for the global platform.

"We want to partner and support our clients at every stage of development. Our philosophy is to ensure that they maintain full ownership of their business while benefiting from the value-added services that MDV provides", added Zubir.

Also present from the UK, at the launch were Ralph Fulton, Chief Game Designer for GRID, Gavin Cheshire, Vice President of Codemasters Studios, and Simon Parson, Chief Finance Officer of Codemasters Studios ■

Source: *mdv.com.my*
Malaysia Debt Ventures Bhd: Member since 19-12-2006



Is Malaysia's Apex University

PUTRAJAYA, 3 September (Bernama) – Universiti Sains Malaysia (USM) was on Tuesday chosen for the Accelerated Programme for Excellence (Apex), beating three other universities, including the country's oldest, University of Malaya (UM).

Higher Education Minister Datuk Seri Mohamed Khaled Nordin said USM was selected based on the university's transformation plan and its preparedness to make changes to its proposal paper.

"The selection for the Apex programme is not only based on past achievements and excellence, but more on the planning for the future and whether the university is able to achieve a world-class status within the stipulated period of five years," he said when announcing USM's selection for the programme.

During the five-year period, USM must be able to put itself among the world's Top 100 universities and among the Top 50 by 2020, he said.

He was confident that USM would be able to achieve world-class standards. "Let's see how USM fares and then we will decide whether to choose another for the programme," he added.

Mohamed Khaled said USM's selection for the programme did not mean that other universities were sidelined. On the contrary, this should spur them to further improve their position, he said when asked why UM was not selected.

Nine public universities nationwide had submitted their application for the programme but only four – USM, UM, Universiti Putra Malaysia (UPM) and Universiti Kebangsaan Malaysia (UKM)

were shortlisted.

USM's winning proposal paper is entitled "Transforming Higher Education for a Sustainable Tomorrow".

The Apex university programme is proposed in the National Higher Education Strategic Plan where universities will be divided into three groups namely Apex University, Elite University and Competitive University.

An Apex University is a university of excellence, used as a yardstick in higher education worldwide. Under the programme, the Apex University has been promised autonomy in finance, service scheme, management, student intake, study fees and in determining the top leadership ■

Source: *Bernama*
Universiti Sains Malaysia : Member since 20-12-1994



RHB Banking Group Upgrades Infrastructure with IBM System z10

Adoption of the World's Most Powerful Computer to Cater for Progress and Expansion

Kuala Lumpur, Malaysia – 28th August: RHB Banking Group today announced its new unit, Central Technology Team, to enhance product development and delivery to customers with the IBM System z10 mainframe as the foundation of its new enterprise data centre. The investment will also support the critical processing capacity for the banking group's clients throughout Malaysia, Singapore, Brunei and Thailand.

With the z10, RHB's goal is to become a one-stop banking institution, covering a range of services from Islamic banking to insurance banking, with the advent of the business and Information Technology (IT) transformation exercise.

The banking group recently underwent a strategic transformation exercise which brought its IT operations under a single umbrella unit called the Central Technology Unit, which will be responsible for the delivery of enhanced shared IT services to the Group.

RHB Banking Group IT Operations is poised to have shared services such as IT solutions and services delivery and IT infrastructure to enable leveraging on its skilled workforce to achieve the Group's Vision to be among the top three financial institutions in ASEAN by the year 2020. The integration also reflects the Group's commitment to taking new business approaches and using the latest technology to sustain growth in the long term.

Michael J. Barrett, Group Managing Director, RHB Banking Group said that the banking group is confident that IBM system z10 will help serve its customers better especially now that banking group offers more

holistic financial services such as retail banking and wealth management, corporate and investment banking, and Islamic banking, and insurance, in its move towards emerging as a one-stop financial solutions centre for its clients.



“We are proud to be the forerunner in having this system that, amongst other things, is highly scalable to cater for business growth, mergers and acquisitions. The RHB Banking Group, in line with its aspiration to be a convenient one-stop financial institution, has continually explored all possibilities in integrating all its available products and services,” said Barrett.

“This investment and collaboration with IBM is the platform that will help us realise the objective of providing continuous banking services to our customers. In making this choice, we have also taken into account how this mainframe system will enable us

to consolidate and streamline our core banking systems and the day-to-day operations of other businesses within the RHB Banking Group,” he added.

IBM's strong performance in the second quarter this year was partly attributed to the growth of IBM System z10 mainframe which delivered a 32% increase in revenue. IBM has driven mainframe revenue growth in seven of the last nine quarters, and MIPS growth in 10 of the last 12 quarters. IBM has doubled its market share in the high end server space since 2000. More than 600 new applications were introduced last year, bringing the total to more than 4,000 applications available on the System z platform.

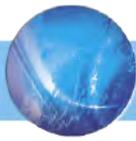
IBM Malaysia's managing director, Ou Shian Waei has this to say: “RHB has proven its innovation stance as it leads the way in adopting the world's most powerful computer, the IBM System z10 Enterprise Class, to meet the escalating needs of its clients, locally and regionally.”

IBM System z10 which made its debut early this year also offers security controls which are synonymous with the system as the only server on the planet that has achieved this level of certification for security and partitions from the United States government's highest level of security, E valuation Assurance Level 5 (EAL5), via z/VM.

“Our relationship with RHB is one which we have built for more than a decade and we have seen the banking group grow and prosper and we are confident that they will reach their goals while keeping clients' needs at heart,” added Ou ■

Source: rhh.com.my

RHB Bank Berhad: Member since 14-10-1994



Malaysian Herbal Corporation

Initiatives to Strengthen Herbal and Natural Products Industry



In the light of Malaysian Herbal Corporation's role to promote and strengthen the herbal industry, several activities have been conducted beginning with the launch of the Herbal Plaza on 15 February 2008 by the former Minister of Entrepreneur and Co-operative Development (MECD), Datuk Khaled Nordin. This collaboration between MHC and MECD is expected to serve as a platform for herbal players including entrepreneurs, manufacturers, planters, importers and exporters, to display their products or services in the Herbal Plaza. MHC will further facilitate their business by organising business matching, exhibitions and events to help create awareness among the public, both local and foreign, of our local herbal industry and its products. MECD will provide the grants to Herbal Plaza's participants and entrepreneurs who qualify under the entrepreneur programme and who are keen to participate in Herbal Plaza.

There are over 300 exhibition showcases displaying many different products that come under the categories of natural products, herbs, botanicals, cosmetics, dietary supplements, nutraceuticals and phytomedicines.

Twenty-five companies, previously registered with Herbal Plaza took part in the Mini Herbal Fest, organised in conjunction with the launch. The Fest

went on for six days from 9am to 6pm and served to attract large crowds, both local and foreign. Trade visitors from various countries such as Taiwan, China, India, Bangladesh, Italy and Indonesia also attended the event.

Among the programmes organised for the participants as part of the promotional activities were:

- Mini Herbal Fest, Kuala Lumpur (15 February 2008)
- Gerak Usahawan, Skudai (29 Feb. – 2 March 2008)
- The 5th Asia Pacific Natural Products Expo (27 – 29 March 2008);
- MiGHT Consultation on Herbal Industry (27 March 2008);
- Mini Herbal Fest, Putrajaya (25 – 27 April 2008)
- Malaysia International Halal Showcase (7 – 11 May 2008);
- Seminar Peluang-Peluang Perniagaan Dalam Industri Herba dan Produk Asli (17 May 2008);
- Gerak Usahawan, Tanjung Karang (17 – 19 May 2008);
- Ekspo Peluang Perniagaan dan Usahasama Pelaburan 2008 (24 – 25 June 2008);
- SMIDEX 2008 (4 – 6 June 2008);
- MAHA 2008 (11 – 23 August 2008)

In addition to the promotional activities by MHC and Herbal Plaza, educational and business programmes

were organised for members of the public and the participants of Herbal Plaza. This programme kicked off with a successful seminar on 'Vanilla in the Global Market.'

Organised by Rentak Timur and Universiti Putra Malaysia on 26 February 2008 in the campus itself, it attracted 330 participants from various industries and backgrounds. Eight prominent speakers were invited to share their knowledge and experience in vanilla planting and its marketing strategies. The speakers were:

1. Tn. Syed Isa Syed Alwi (CEO, Rentak Timur)
2. En. Asmadi Md. Said (Executive Director, MHC)
3. Dr. Noh Bin Jalil (Retired Research Officer, MARDI)
4. Dr. Ir Mesak Tombe (BALITRO, Indonesia)
5. En. Fadzhairi B. Abd Jabar (GM, Rentak Timur)
6. Mr. Olivier Bernard (Trippers Inc, Indonesia)
7. Prof. Madya Dr. Asmah Rahmat (UPM)
8. En. Mahfoor Harun (UPM)



This seminar resulted in some participants indicating their interest to take part in the contract farming programme. Similar seminars will be organised more frequently in the future as MHC has received requests and feedback from many interested parties in other parts of Malaysia who were unable to attend the seminar. By 2009, MHC hopes that its target of 2,500 acres of vanilla crop will be achieved. Vanilla crop cultivation is expected to provide a promising return in the near future.



MIGHT 13th Annual General Meeting Centre for Malaysian Futures announced



the 'MIGRATE' program by promoting the collaborative approach for research and technology investment, establishment of myFutures, and strengthening the 'Technology Nurturing Management Systems' (TeNMS) for technology transfer facilitation and commercialisation intermediary roles.

MIGHT's 13th Annual General Meeting, held on 19 June 2008 at Kuala Lumpur, saw very encouraging participation from more than 200 MIGHT Members from both the Government and Industry. Prior to the AGM, all participants were enlightened to a briefing on the National Innovation Agenda as well as highlights on MIGHT's activities, by the newly appointed President/CEO of MIGHT, Mohd Yusoff Sulaiman.

Mohd Yusoff also announced the establishment of the 'Centre for Malaysian Futures' or 'myFutures™', a pioneering initiative dedicated to research in foresighting and future studies at the national level. myFutures™ will work closely with centres of excellence in Malaysia and the Institute of Future Studies in San Jose, US to advance this strategic initiative in Malaysia. Among the services to be provided by myFutures™ are toolkits for global brainstorming and networking; foresight and futures research that identifies trends, emerging issues and scenarios; and consulting

services to advise the Government and industry on strategic future scenarios.

At the media conference, Mohd Yusoff said, "Futures including foresight studies are used by many of the world's most successful corporations and governments to model, understand and shape the future to their advantage. The main objective of myFutures™ is to provide a common platform to share experiences, insights and expertise on futures studies locally and globally. As innovation is based on collaborative efforts, MIGHT has initiated this national futures and foresighting platform to provide a promising tool for global interactive sessions in encouraging open and network innovation," he added.

The Joint Chairman (Industry) of MIGHT, Tan Sri Dato' Ir. Muhammad Radzi Mansor, chaired the AGM this year and in his welcome address highlighted the delivery of MIGHT's first Corporate Plan for 2007-2011. In enhancing the delivery system, the focus will be on strengthening MIGHT's services, amongst others, consolidating



As for the AGM proper, the Audited Accounts of the Company for the year ended 31 December 2007 together with the Reports of the Directors and Auditors were received and adopted by the meeting. Members agreed to the re-appointment of BDO Binders as Auditors of MIGHT for the ensuing year until the next Annual General Meeting ■

To acquire feedback and direct response from the industry players, MHC along with its parent company, MIGHT, had organised MIGHT Consultation on Herbal Industry 2008 in conjunction with The 5th Asia Pacific Natural Products Expo 2008 (NATPRO 2008) on 27 March 2008 with the theme 'Enhancing Value in the Herbal and Natural Products Industry.'

The Consultation also featured

new ideas and helped facilitate the exchange of knowledge from successful companies and the appropriate agencies related to the herbal industry.

Reputable speakers were invited to present their ideas and share their experience in developing the industry. Over 150 participants participated in the event and shared their experience and knowledge on the herbal industry.



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MIGHT Autotronics Roundtable 2008



Malaysian manufacturers of automotive electronics (autotronics) components now have the opportunity to tap into the global market through a recent initiative by the Malaysian Industry-Government Group for High Technology (MIGHT).

MIGHT in collaboration with Frost & Sullivan Malaysia, organised the inaugural Automotive Electronics Roundtable (Autotronics 2008) in April, aimed specifically at creating business opportunities through business matching between selected international and local companies in autotronics components. The global demand for autotronics components is expected to increase significantly especially in the Asian region and will in turn further promote the business growth of automotive-related industries in Malaysia.

“Autotronics 2008 provided the platform for the local companies to come face-to-face with the procurement directors of selected major global autotronics players to market their products/services and capture outsourcing and contract

manufacturing works” said Mohd Yusoff Sulaiman, the President/Chief Executive of MIGHT. “Through MIGHT and our partner’s extensive industrial global network, we managed to convince key automotive companies to come to Malaysia and to be aware of the existence and capability of our local players. They were very impressed.”

On the outcome of the roundtable meeting, he concluded that “the local companies that participated in Autotronics 2008 have successfully used the opportunity to the fullest not only to present their products and services but also their capacity and capability to fulfil the requirements of the global players. We received feedback on some possible deals to be sealed.”

The international companies that participated in Autotronics 2008 were Arvin Meritor, Geotel, Magna International, Lear Corporation and Robert Bosch with a collective annual turnover estimated at USD150 billion. The local players were DRB-HICOM, Supercomal Technologies Sdn. Bhd, Sapura Industry Berhad, Permintex Holding and Mems Technology Berhad.

One participating local company has already exported its products to other countries including Germany.

According to one of the Autotronics 2008 participants, Jack Huang, Director of Supplier Development of Magna International Inc, “Malaysian companies need to ‘advertise’ their competencies to the global automotive industry.” He added that since the automotive industry is very competitive in nature, international companies are required to look for good suppliers to meet the market demand. Huang sees the South-east Asian region as a good opportunity for Magna to expand its operations. Magna is currently operating in Thailand, supporting the Thai automotive Industry.

Autotronics 2008 is an initiative of MIGHT under its InnoXchange™ programme. MIGHT is a non-profit Industry-Government partnership organisation striving towards the creation of businesses and investment opportunities for Malaysian high technology industry ■



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Among the topics discussed and presented were:

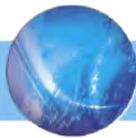
- 1 Enhancing the Herbal Value Chain by Dr. Joerg Gruenwald, Biotropics Malaysia Berhad.
- 2 Ensuring Quality Raw Material Supply via Contract Farming by Dr. Hairuddin Md. Bakri, FELDA Herbal Corporation.

- 3 Fulfilling Market Needs of Herbal and Natural Products by Prof. Dr. Zhari Ismail, Universiti Sains Malaysia (USM).

Most participants were of the opinion that MIGHT Consultation continue its role of not only voicing the industry’s hopes and needs but also to continue serving as a platform for the exchange of ideas and information

to help further develop the nation’s herbal industry.

The programs and activities organised for the first quarter of 2008 were in line with MHC’s role towards the development of the herbal industry. MHC hopes to continue its marketing activities while carrying out promotion exercises and conducting awareness programmes from time to time ■



Open Forum & Exhibition in conjunction with Defense Services Asia Exhibition & Conference

One of Asia's largest defence exhibitions, Defence Services Asia (DSA), this year saw an open forum organised by the Malaysian Industry-Government Group for High Technology (MIGHT).

The three-day forum beginning 22 April 2008 was held at the Putra World Trade Centre (PWTC) — the venue for the DSA 2008 exhibition, as well. MIGHT Senior Vice President/Chief Operating Officer, Mohd Yusoff Sulaiman declared that the objective of the forum was to provide a platform for sharing knowledge, experiences and insights into the industry.



“DSA involves foreign and local participation from various backgrounds, so the forum could actually be the focal area for people to get an idea or insight into the defence sector,” he said at a conference here, today.

Mohd Yusoff said, the informal free-of-charge forum allowed participants to attend short sessions involving subjects of interest, without missing the entire exhibition.

Among the speakers were representatives from the Armed Forces, universities and key players in the defence industry such as Boustead Heavy Industry Corporation Bhd and Composites Technology Research Malaysian Sdn Bhd.

The topics covered were ‘Implementation Challenges in Defence Acquisition’, ‘Local Capability in Rocket, Missile and Satellite Technology’, ‘Defence Communication Through Satellites’ and ‘Defence Industry Development’.

Mohd Yusoff said, MIGHT as the secretariat to the Malaysian Aerospace Council (MAC) would also hold a special booth-MAC Pavillion, at DSA 2008 to promote government initiatives and incentives, as well as industry products and services, besides providing opportunities to prospect for potential business.

DSA 2008 will see the participation of 701 exhibitors from 49 countries ■



MIGHT Membership Visits

Beginning this year, MIGHT conducted several visits to MIGHT Member's facilities to strengthen rapport and enhance communications with the esteemed Members and stakeholders. Furthermore, it is strategic to institutionalise the foundation of close collaboration and partnership between MIGHT and its Members in relation to the advancement of the high technology agenda.

The objectives of the visits are as follows:

- To update our latest initiatives, activities and programmes on high technology and vice-versa
- To exchange perspectives on a wide range of issues relating to stakeholder involvement opportunities with public-private partnerships

- To strengthen the innovation drive and industrial transformation in Malaysia
- To establish focal points for networking and potential collaboration between MIGHT and its stakeholders.

Visits accomplished are as follows:

- Universiti Sains Malaysia (USM) – 12 February 2008
- Universiti Teknologi Malaysia (UTM) – 19 February 2008
- CCM Pharmaceuticals Sdn Bhd – 25 February 2008
- Muhibbah Engineering (M) Bhd – 11 March 2008
- Pharmaniaga Berhad – 1 April 2008
- Bank Pembangunan Malaysia Berhad – 17 April 2008

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MIGHT & AIC Forge Collaboration on Technology Transfer & IP Commercialisation



MIGHT has recently inked a Memorandum of Understanding (MOU) with the Australian Institute for Commercialisation (AIC) to promote the sharing of knowledge, market insights and business intelligence for promoting the growth of new technology-based start-ups and businesses.

AIC is an independent, not-for-profit leading service organisation helping innovators achieve commercial success. The MOU will complement MIGHT's catalytic role along the innovation continuum in the areas of market intelligence and research and technology transfer and acquisition.

"Through this initiative, MIGHT also aims to further enhance its Innovation Gateway Resources,

known as 'InnoXchange™', launched in the middle of last year, to promote a common exchange platform for the sharing and management of technology and R&D resources, and to facilitate technology transfer and commercialisation," said Mohd Yusoff Sulaiman, the President/Chief Executive of MIGHT. "This encompasses the trading of technology, IP management, technology verification, technology assessment and valuation, as well as market scanning, foresighting and business opportunity identification. Complementing this initiative is our newly established Technomart Malaysia™, a technology marketplace to promote technology trading and outsourcing."

The MOU was signed on behalf of MIGHT by Mohd Yusoff Sulaiman

whilst AIC was represented by its Chief Executive Officer, Dr Rowan Gilmore.

The MOU is an initiative under the MIGHT@International programme, whereby strategic tie-ups with like-minded overseas organisations are established for a mutually beneficial exchange of knowledge, technological resources and networks at regional level. Korea Technology Transfer Center (KTTC) and Thailand NSTDA are key partners of MIGHT that were inked through this programme.

MIGHT, a government-industry partnership platform, under the purview of MOSTI, will continue to harness its core competencies to build on the networks, scale and linkages in the development of high technology advances ■

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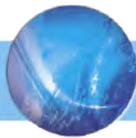
- System Consultancy Services Sdn Bhd – 22 May 2008
- Satang Jaya Holdings Berhad – 29 May 2008
- Kay Marine Sdn Bhd – 2 June 2008
- Tenaga Nasional Berhad (TNB) – 4 June 2008
- University of Sheffield – 23 June 2008
- RHB Bank Berhad – 4 July 2008
- Composites Technology Research Malaysia Sdn Bhd (CTRM) – 10 July 2008

Emanating from the highly interactive discussions during the visits, MIGHT has facilitated its Members with a number of mutually benefiting efforts. For example, securing a science fund grant worth RM2million, initiating networking with international institutions on the possibility of commercialising Member's products/services, technology evaluation assistance as well as engaging all Members with the offset programme

that covers aspects of technology acquisition, human resource development, renewable energy and quality of life with funding support from the Ministry of Finance (MOF) to the tune of RM6 billion.

The positive response from its Members and stakeholders has given much encouragement to MIGHT to ensure a win-win relationship and achieve the national agenda through consensus building and networking.

MIGHT looks forward to scheduling more working visits to Member's organisations to further strengthen partnership ties and explore future collaboration opportunities. Nonetheless, should any Members be interested in having us visit the organisation in the immediate future, please contact Ms Emi Fatmawaty Ariffin at **03-8315 7856/7888** or email **emi@might.org.my** for an appointment.



October

Special Meeting with the Patron

The special meeting with YAB Prime Minister of Malaysia Dato' Seri Abdullah Ahmad Badawi, the Patron of MIGHT with the Board of Directors, will be held on 20 October 2008 at Parliament. The meeting will also be attended by the Minister of Science, Technology and Innovation (MOSTI), Datuk Maximus J. Ongkili, Joint Chairmen of MIGHT, senior Government officials and captains of Industry.

Malaysian Aerospace Council Meeting

The 5th Malaysian Aerospace Council (MAC) meeting will also be held on 20 October 2008 and will be chaired by YAB Dato' Seri Abdullah Ahmad Badawi, the Prime Minister of Malaysia. The meeting will focus on 'Preparing the Aerospace Manufacturing Industry for the Next Generation Aircraft Program'; 'Locally Developed Unmanned Aerial Vehicle (UAV)', and 'Incentive Strategy for the Aerospace Industry'.

MAC is the national level steering body that provides the vision, direction and overall development plan for the aerospace industry and MIGHT functions as the Secretariat.

Launching of MYKOR

MIGHT has collaborated with the Korea Technology Transfer Centre (KTTC) to set up Malaysia-Korea Technology Centre (MYKOR). MYKOR will be a gateway for the industries to promote technology transfer and commercialisation for both countries. Prime Minister Datuk Seri Abdullah Ahmad Badawi will be launching MYKOR in Kuala Lumpur on 20 October 2008 after witnessing the Memorandum of Understanding between MIGHT and KTTC.

The MOU will focus on collaborative efforts to strengthen technology transfer initiatives to bring innovative ideas to market. MYKOR will operate at MIGHT's office in Putrajaya with direct liaison counterparts in KTTC, South Korea. It will provide a bi-directional channel that allows industries and research institutions to prospect and trade intellectual property and technologies at the regional level.

MYKOR will also provide a technology marketplace to translate the commercial use of technology into industrial applications and products. KTTC is the premier organisation for technology transfer and commercialisation in South Korea.

November

TECHNOMART MALAYSIA 2008

Numerous dynamic Malaysian companies and Universities will be brought together by MIGHT in its latest technology commercialisation business pitching event, TECHNOMART MALAYSIA 2008 on 19 November 2008.

TECHNOMART MALAYSIA 2008 serves as a platform for businesses, universities and research institutes to transfer and trade technologies, products and services. It provides an ideal one-stop platform for technology-based companies to seek technology partners and funding, and for Venture Capitalists and Financial Institutions to source out technology deal flows.

With the theme "Matching right ventures to realise true value of technology", the participants range from technology-oriented companies who want to demonstrate advanced technologies or to seek collaboration with Venture capitalists and other investors. These efforts would be able to identify promising high-tech companies and investment opportunities from Malaysia and abroad. It also includes Entrepreneurs who are seeking market expansion to the region.

MIGHT is an independent, industry-driven, non-profit organisation created in 1993 under the patronage of the Prime Minister of Malaysia. Since its inception, MIGHT has continued to add value to industry in Malaysia by bringing organisations together in partnerships, working jointly on technology development, guided by clear targets, specific deliverables and achievable milestones.

One of the key roles of MIGHT is nurturing techno-business innovation in our key niche areas and offer the best opportunity for developing Malaysian growth and productivity. Leveraging on our Members, networks and experience, we deliver services to achieve that by establishing partnerships, building competencies, and providing technology nurturing advice.

To stimulate technology-enabled innovation, we have developed a number of key products/services to assist the Government, industry and academia which will benefit society in many ways. We will work with entrepreneurs, businesses, research organisations and governments to identify new business opportunities and convert them into successful outcomes.

We look forward to partnering with you.

Funneling Ideas Harnessing Partnerships Creating Values

An agency under MOSTI



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