

KERATAN AKHBAR-AKHBAR TEMPATAN
TARIKH: 07 APRIL 2014 (ISNIN)

Bil	Tajuk	Akhbar
1	Pusat komersial inovasi Negara dibina	Kosmo
2	Pusat komersial produk ditubuh	Utusan Malaysia
3	Cabinet acts on water shortages	The Sun
4	Getting clearer view of satellites' capabilities, limitations	The Sun
5	Two 'pings' appear to be strong lead	The Sun
6	Experts cautious about signals	New Straits Times
7	Rethink cutback in R&D funds for varsities	New Straits Times
8	Mavcap forges regional partnerships	The Sun

Pusat komersial inovasi negara dibina

ARAU - Kementerian Sains, Teknologi dan Inovasi akan membina Pusat Pengkomersialan Inovasi Negara bernilai RM250 juta di Technology Park Malaysia di Bukit Jalil, Kuala Lumpur pada hujung tahun ini.

Timbalan Menteri, Datuk Dr. Abu Bakar Mohamad Diah berkata, pusat itu untuk memperkenalkan dan pengkomersialan produk-produk inovasi universiti tempatan di pasaran tempatan dan antarabangsa.

"Pusat ini turut berperanan sebagai pusat penyelidikan universiti agensi kerajaan yang lain.

"Sementara itu, pihak swasta yang lebih berminat dengan produk di pusat ini boleh dibeli secara pukal dan murah," katanya pada Majlis Waticah Pelantikan Majlis Penghuni Kolej Kediaman (MPKK) 2014 Dan Penghargaan MPKK 2013 Universiti Malaysia Perlis (UniMAP) di Auditorium Perpustakaan Tuanku Syed Faizuddin Putra, Pauh Putra di sini semalam.

Jelasnya, sebagai usaha menarik penglibatan pihak swasta, pihak universiti boleh menangguhkan kos pembayaran royalti selama tiga tahun un-



ABU BAKAR (tengah) bersama penuntut UniMAP pada Majlis Waticah Pelantikan MPKK 2014 Dan Penghargaan MPKK 2013 UniMAP di Auditorium Perpustakaan Tuanku Syed Faizuddin Putra, Arau, Perlis semalam.

tuk memastikan produk itu sudah mendapat tempat di pasaran tempatan dan antarabangsa.

"Pelawat dari dalam dan luar negara terutama pihak swasta akan dapat melihat produk inovasi keluaran tem-

patan terutama dari universiti tempatan

"Pusat ini juga dapat mengurangkan kos perbelanjaan universiti terlibat dalam pameran di dalam dan luar negara," katanya.

KERATAN AKHBAR
UTUSAN MALAYSIA (DALAM NEGERI) : MUKA SURAT 13
TARIKH: 07 APRIL 2014 (ISNIN)

Pusat
komersial
produk
ditubuh

ARAU 6 April - Kementerian Sains, Teknologi dan Inovasi (MOSTI) bercadang menubuhkan Pusat Pengkomersialan Produk Inovasi Negara selewat-lewatnya akhir tahun ini supaya semua produk inovasi yang dihasilkan dari universiti tempatan dapat dipasarkan.

Timbalan Menteri, Datuk Dr. Abu Bakar Mohamad Diah berkata, pihaknya bercadang mewujudkan pusat tersebut di Taman Teknologi Park Malaysia di Bukit Jalil, Kuala Lumpur.

"Ini juga selaras dengan pengumuman MOSTI pada tahun ini untuk menjadikan 2014 sebagai tahun pengkomersialan produk inovasi," katanya dalam sidang akhbar selepas merasmikan majlis Watikah Pelantikan Majlis Penghuni Kolej Kediaman (MPKK) 2014 dan Penghargaan MPKK 2014 Universiti Malaysia Perlis (UniMAP) dekat sini hari ini.

Sebanyak 50 pelajar menerima watikah pelantikan tersebut. Yang turut hadir, Naib Canselor UniMAP, Prof. Datuk Dr. Kamaruddin Hussin.

Abu Bakar berkata, dengan adanya pusat itu, kesemua produk inovasi yang dihasilkan oleh penyelidik di universiti tempatan akan dipamerkan untuk dibeli oleh pihak yang berminat untuk melabur.

Katanya, mana-mana universiti yang berminat termasuk UniMAP boleh mempamerkan produk inovasi masing-masing di pusat tersebut.

Cabinet acts on water shortages

> National action committee set up to monitor and provide answers to problem

PETALING JAYA: In the face of water shortages in several parts of the country, the Cabinet has ordered the setting up of a national action committee to monitor and analyse the problem and make recommendations.

It issued this directive to the

Ministry of Energy, Green Technology and Water at its meeting on Friday.

Its minister, Datuk Seri Maximus Ongkili said his deputy, Datuk Seri Raja Mahdzir Khalid, will chair the panel.

The panel will identify short- and medium-term mitigation measures to ease the problem.

Ongkili said committee members will include representatives from ministries and agencies such as the National

Security Council, Natural Resources and Environment Ministry, Ministry of Federal Territories, the Malaysian Meteorological Department and the National Water Services Commission (SPAN).

It will also include representatives from state governments.

While the committee looks into how to overcome the problem of water shortages, especially in the Klang Valley, Ongkili said the

public should use water sparingly.

He said they should try as far as possible to reduce activities that consume large amount of water.

"During hard times, we need the cooperation of everyone to use water prudently and store water just enough for basic needs during days without normal supply," he added.

SPAN implemented the fourth phase of water rationing in Selangor on April 4 with rationing expanded to areas not covered in

previous phases.

The third phase of water rationing covered a total of 722,032 households or 3.6 million people with affected areas including Gombak, Kuala Selangor, Hulu Selangor, Petaling, Klang, Shah Alam, Kuala Langat, USJ and Kuala Lumpur.

Meanwhile, rationing continues for another 60,185 households affected by the closure of the Batu 11 (Cheras) and Bukit Tampo water treatment plants.

Getting clearer view of satellites' capabilities, limitations

BY LEE CHOON FAI
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PUTRAJAYA: The mysterious disappearance of MH370 has unveiled the capabilities, and limitations, of satellites.

National Space Agency (Angkasa) director-general Dr Noordin Ahmad said he understood why people are puzzled about how the Boeing 777 200-ER vanished without a trace when satellites are capable of detecting objects as small as a football on the ground.

He said the capabilities of satellites have been grossly misunderstood, perhaps due in part to fictional portrayal of the technology.

"Satellites do not follow criminals around, they don't work like they do in movies; satellites orbit the earth," he told *theSun*.

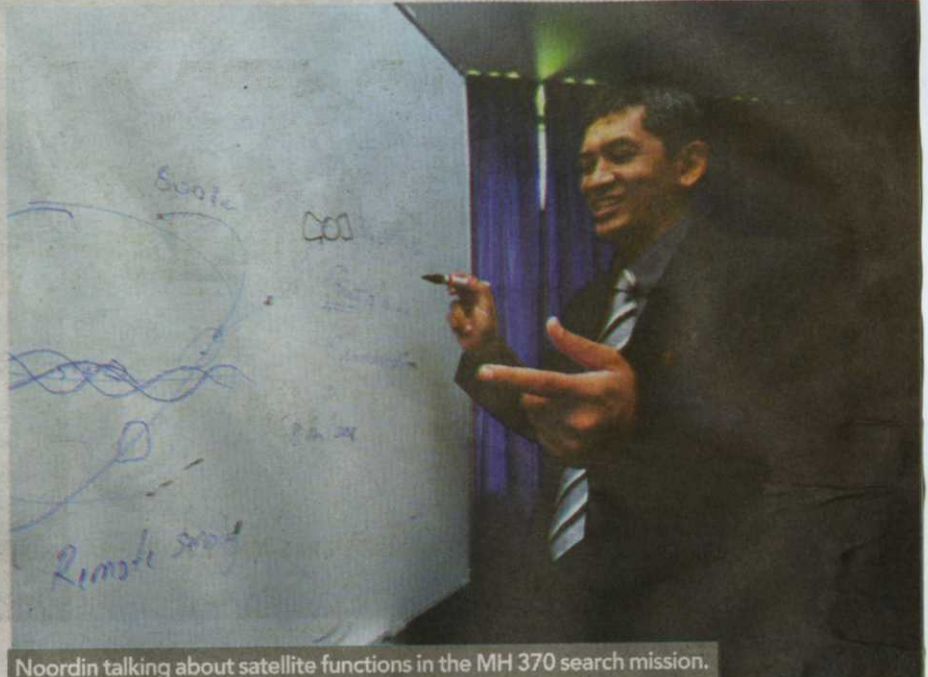
Noordin said three types of satellites are being used in the search for the missing aircraft and they function in the way it is designed to as commercial satellites.

The first are remote-sensing satellites which are capable of taking extremely detailed photographs, usually of a 10km x 10km area at a one square metre per pixel resolution.

"A pixel is equal to one square metre on the ground, and the best commercially available satellite can take photographs with pixels of 50 square cm," he said.

However, remote-sensing satellites are also orbital in nature and will not be at a fixed spot, such as over the search area in the south Indian Ocean, over any amount of time.

Orbiting the earth at about 8km per second, the satellites only have a small window of opportunity to take photographs of the area before they can get back into position, which could take anywhere from a day to two weeks depending on the satellite's



Noordin talking about satellite functions in the MH 370 search mission.

programmed orbit.

Images taken over the search areas are processed to interpret the content and it takes considerable time and effort to scrutinise the photographs.

The other two types of satellites being used for SAR operations are navigation and positioning satellites, like the Global Positioning Systems (GPS), and communications satellites used for communicating and broadcasting purposes.

Noordin said these satellites play a very big role but produce limited results due to

the mysterious circumstances in which MH370 disappeared.

"There were no distress signals from MH370, so the communications satellites cannot detect the flight; the plane's transponders were also turned off, so you can't track it with GPS either.

"It is as if someone walked into the jungle and threw away his phone; all we know is the time when the last call was made and in MH370's case, its last detected ping," he said.

"As long as there is no distress signal, it won't work," Noordin said.

Two 'pings' appear to be **strong lead**

PETALING JAYA: An important and encouraging lead in two "pings", one detected by a Chinese ship and another by an Australian vessel, saw interest rekindled in the search for missing MH370 which will record its 31st day today.

The possibility that the signals are from the black box of the ill-fated Malaysia Airlines flight is being treated with the utmost care by the international team handling the search and rescue operations.

The authorities have taken care to stress that these reports have not been verified yet.

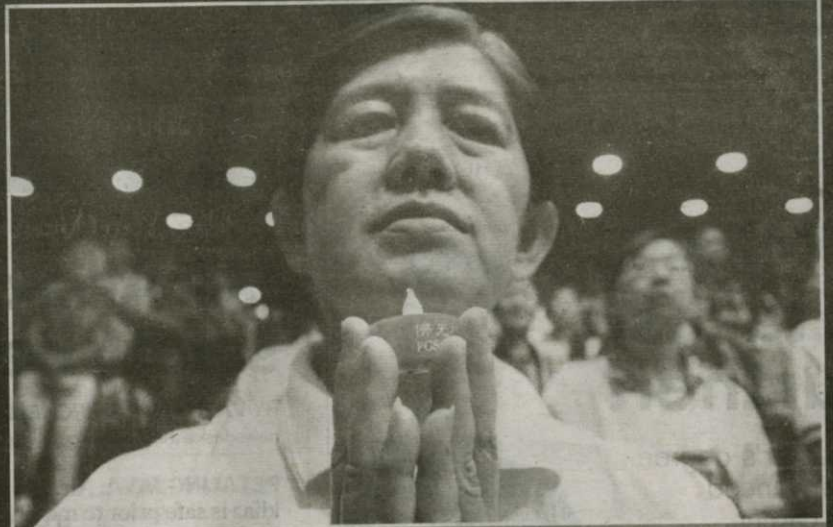
In another development,



National Space Agency (Angkasa) director-general Dr Noordin Ahmad says the disappearance of MH370 has unveiled the capabilities – and limitations – of satellites.

He feels the capabilities of satellites have been grossly misunderstood, perhaps due in part to fictional portrayal of such technology.

**REPORTS ON
PAGE 04 & 05 ►**



COLLECTIVE PLEA ... A mass prayer session was held at Wisma MCA in Kuala Lumpur yesterday for the missing MAS plane. About 4,000 people attended the ceremony, including family members of Chinese passengers on board MH370 and the Chinese ambassador to Malaysia Huang HuiKang.

Experts cautious about signals

NEW CLUES?: Sounds must be confirmed to be from plane's flight data recorder

ALIZA SHAH
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EXPERTS have greeted with caution the latest clues from undersea pulses that searchers hope can lead them to exactly where Malaysia Airlines flight MH370 ended its journey.

National Space Agency director-general Dr Noordin Ahmad said he would have harboured greater hopes that the signals indeed came from the Boeing 777-200ER twin-jet's black box if the search party could say for certain that the sounds detected by two ships scouring the Indian Ocean were acoustic pulses and not mere electronic signals.

China's search ship *Haixun 01* first detected a signal at 3.57pm on Friday, but could not record the sound because it stopped abruptly.

The black box detector aboard the ship some 24 hours later de-

tected an ultrasonic pulse, which had a frequency of 37.5kHz, the same as those emitted by flight recorders.

This was detected at about 25° south latitude and 101° east longitude in the 216,000-square-kilometre search zone, a location that authorities said was "a high-probability area", reportedly 4.5km deep.

The two detections, where the pings were heard for about 90 seconds, took place some 2km apart.

A video on Chinese state-run CCTV that captured the Chinese vessel's second detection showed *Haixun 01* crew members using what appeared to be a hand-held hydrophone.

The three men on board lowered the device into the water on a pole.

The handheld ping-locating technology is not as versatile as the United States Navy's towed locator, which is currently on board *Ocean Shield*, and is said to be able to cover as deep as 20,000 feet, far from surface noise.

Yesterday morning, Australian Navy ship *Ocean Shield* detected a third signal some 555km (300 nautical miles) away from *Haixun 01*'s location.

The black box, which is fitted



with a low-frequency underwater locator beacon that is activated as soon as it comes in contact with water, has a signal range of between 2km and 3km.

Noordin said the detection by *Ocean Shield* would more likely be that of a black box.

This, he said, was because the Australian Joint Agency Coordination Centre (JACC), which oversees the search in the Indian Ocean, said what the Australian Navy had picked up were "acoustic noises", not electronic pulses.

"If the detection was a definite 'acoustic noise', and every moving object in the ocean naturally emits one, it should be a close bet that it was the black box.

"This is more so... if the acoustic noise was registered at the unique black box frequency of 37.5kHz."

He said the closest frequency to that of the black box in the ocean

would be the sound of currents clashing.

The black box's frequency is as such to avoid interference from ocean noise from whales, ships and ocean litter, among others.

Blue whales in the Indian Ocean emit sounds at a frequency of between 0.015kHz and 0.02kHz.

Asked why the second signal was detected only for 90 seconds, Noordin said if it was from the black box, it would indicate that the flight data recorder's battery had weakened.

Australian Prime Minister Tony Abbott had yesterday expressed caution about the unconfirmed findings and making conclusions.

"We are hopeful, but by no means certain" that the reported pulse signals were related to MH370.

"We need to be very careful about coming to hard and fast conclusions too soon.

"This is the most difficult search in human history.

"We are searching for an aircraft that is at the bottom of a very deep ocean and it is a very, very wide search area," Abbott told reporters in Tokyo, where he is on a visit.

Anish Patel, president of Dukane Seacom, which manufactured the batteries in the two black boxes on the missing aircraft, told CNN that his level of scepticism was high

after hearing reports that a Chinese patrol ship had detected a single pulse signal in the Indian Ocean.

"My degree of scepticism is high... have to get some corroboration.

"I would like to see some additional assets put on site quickly... maybe some sonar buoys in (the) water in that location.

"(I would) also like to understand why not two signals.

"There should be a second beacon from either the flight data recorder or voice recorder.

"So, if the recorders are adjacent or near each other or in reasonable proximity... one (1.6km) or two miles (3.2km), they should have detected possibly two signals," Patel was reported as saying.

JACC had said the characteristic findings reported were consistent with the aircraft's black box.

Patel had also highlighted that a number of white objects were sited some 90km from where *Haixun 01* had picked up the signal.

However, both Patel and Noordin were hopeful, as the frequency detected from the first signal "bore the right number".

"But, it is the right number... hearing 37.5kHz... (is) fantastic," Patel told the international broadcaster. **Additional reporting by Balqis Lim**

Rethink cutback in R&D funds for varsities

GLOBAL COMPETITION: It may affect plan to increase number of research scientists and engineers to support nation's innovation aspirations

SPENDING on research and development (R&D) has always been under close scrutiny. This is understandable since the expenditure on research does involve significant sums of money.

Research is, after all, a long-term investment for the country. Unless carefully planned, research can end up with virtually no significant gains.

In the 10th Malaysia Plan, more than RM2 billion was allocated for R&D. Much of that money ended up in the country's higher-learning institutions, mainly the universities. Those researches, especially applied research which do not translate into commercial gains or beneficial use by society, may well be considered a waste.

Unfortunately, the success record for many years has not been encouraging. A very high percentage of R&D undertaken have not reached the market place.

Concerns have, therefore, been raised as to the wisdom of allocating funding for research in the country.



Dr Ahmad Ibrahim
Fellow, Academy of Sciences Malaysia

However, with the formalisation of the research university concept a few years ago, things started to look up. Backed with reasonably adequate funding support, coupled with improved management autonomy, a recent assessment shows that the five research universities in the country have performed extremely well.

Publications in many highly-cited and internationally-refereed journals were significantly up. Patent acceptance has also seen much improvement. So much so that all the research universities have confidently declared that they are destined for world-class performance in a matter of years.

In other words, they will soon be among the world's top universities in the global ranking. Each year, every one of the five universities received RM100 million funding for R&D.

But this year, though earlier promised the usual RM100 million, all the five universities were jolted by the news that their allocation would be reduced by half. Later, there were rumours that the cutback would be limited to only a quarter. This, however, could not be confirmed.

Whatever it is, the reduction would significantly derail the long-term plans that all the five institutions have worked out.

Some postgraduate research would have to be aborted. Not to mention the many postdoctorates and research assistantships that the universities have engaged.

Once such talents leave for other pastures, the country's research pool of human capital will be lost. A more concerned impact will be the growing ridicule over a career in research. As it is, the interest among students in science has yet to pick up momentum.

Yet, the country wants to increase the number of research scientists and engineers (RSEs) to help support the nation's innovation aspirations.

By 2020, the plan is to have at least 100 RSEs per 10,000 workforce. Developed countries have many more. Our Asean neighbours are aggressively pursuing programmes to increase their research talent. If we are not careful, we will soon be behind Indonesia, Vietnam and Thailand.

This does not augur well for the nation's competitiveness, even within the region. It is

already a widely accepted fact that in the coming years, nations which fail to measure up in terms of innovation have much to lose in the global competition. And a country may well allocate a lot of money for research, but nothing much will happen without the availability of good research talent.

The Academy of Science Malaysia (ASM) has been actively lobbying for continued support for science and innovation. This is because from the academy's Megascience Studies assessing the country's future, without adequate talent in science, we will have difficulties mitigating the business risks that will emerge.

In addition, we will not be in a position to capture many technology-driven opportunities that are sure to dominate future business. These will include new businesses in bio-economy such as new therapeutic drugs and vaccines, as well as the emerging opportunities in the green economy. Even our dreams to venture into new businesses based on nanotechnology will simply vanish.

We would like to appeal for a rethinking of the announced cutback for research universities. By sustaining the funding support, we may not reap the benefits now, but we will definitely harvest the rewards many times over in the coming years.

This has been demonstrated time and again by nations that invest heavily in science and research.

Mavcap forges regional partnerships

> Venture capital company to raise RM450m under the third Outsource Partners Programme

BY **PREMALATHA JAYARAMAN**
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KUALA LUMPUR: Malaysia Venture Capital Management Bhd (Mavcap) is partnering regional venture capital companies (VCCs) to raise funds and invest under its third Outsource Partners Programme (OSP 3), said its CEO Jamaludin Bujang (pix).

He said Mavcap will be raising a total of RM450 million, of which the first OSP 3 fund with a size of RM150 million will be launched soon. The remaining two OSP 3 funds of RM150 million each will be launched once the venture capital manager has concluded negotiations with its partners.

"For the past two years, we (have been) identifying the right partners (for OSP 3) to raise funds. We have been talking and developing the business plan together. We initiated the OSP 3 in early 2012, and 2014 is when we will be executing it," Jamaludin told *SunBiz* in an interview recently.

"We have done two OSP programmes previously. We found out that the first two programmes had limited fund size so we could not do many investments and diversify. So, we have to increase the fund size to be economically feasible," he added.

At the same time, Jamaludin said, Mavcap realised that it was difficult to raise the funds locally. "So, we try to partner with foreign VCCs (regionally) to raise the funds and invest," he said, adding that the two OSP programmes had a fund size of RM30 million.

Jamaludin said,

depending on the fund size, Mavcap hopes to invest in 10 to 15 companies.

As for its traditional investments, Jamaludin said the company did six investments valued at RM50 million last year. For this year, Mavcap plans to make similar investments, but it depends on the capital that is available with the company.

"We invest in companies based on referral and we also study the risk involved. At the end of the day, the deal must be good enough for us to invest. We also take some share or equity in the company," Jamaludin said.

At the moment, he said, the company is working with a potential party to fund start-up information and communications technology (ICT) companies.

Jamaludin said in February that the fund was expected to be launched in two months.

Mavcap is also exploring the possibility of setting up funds with the collaboration of major corporations in the country to invest in technology companies.

"We are talking with big Malaysian corporates on that. We are still in the preliminary stages. That is still ongoing. We are still discussing how to structure the whole programme," Jamaludin said.

Mavcap, established in 2001, is the country's largest venture capital company with investments in the ICT and other high-growth industries. It is a wholly-owned subsidiary of the Minister of Finance Incorporated.

Jamaludin said the company was formed to realise the

government's mission to support Malaysian-based ICT companies as well as the venture capital industry. It invests for a period of three to eight years in seed, start-up and early-stage companies.

Sharing the industry outlook, Jamaludin said given the current global economic situation, investors are still taking a cautious stance on investment. They will closely monitor the global economic environment before deciding on making any investments, he added.

There are now more quality start-up companies of global standard in the country that are run by young entrepreneurs with good vision.

According to the Securities Commission's annual report, the number of registered VCCs and venture capital management corporations (VCMCs) stood at 61 and 58 respectively as at the end of Dec 31, 2013. Out of the 119 registered VCCs and VCMCs, 99 are locally owned, 15 are joint ventures while five others are foreign owned.

Jamaludin said the number of venture capital professionals employed in the industry with at least four years of experience stood at 103 as at end-2013.

He said committed funds totalled RM5.79 billion, which represented an increase of about 1.7% year-on-year, while total venture capital investments increased by 24.5% to RM3.43 billion from RM2.76 billion.

Investments stood at RM264 million compared with RM230 million previously, representing an increase of 14.8% year-on-year. A total of 56 investee companies received venture capital funding compared with 47 before.

As for divestments, Jamaludin said there was an increase of 22.1% from RM235 million in 2012 to RM287 million 2013. A total of 33 investee companies were divested in 2013 compared with 52 companies in 2012. Divestments were mainly through share redemptions and trade sale.

Jamaludin said the government remained the main funder of the venture capital industry by contributing 61.36% of the total committed funds, or about RM3.56 billion.

