

Put an end to house 'pests'

WE often worry about unwanted "guests" like intruders, stray animals and pesky insects that may affect our security and health.

Majestec Premium Security Doors and Windows are an effective way to maintain security while allowing clear vision and ventilation. This aesthetic and functional product comes from Australian ingenuity.

Majestec's screens use the latest Japanese high-tensile wire materials interwoven into strong stainless steel mesh for maximum strength.

The screens allow a free flow of fresh air into your home, naturally cooling the living space. At night, windows can be left open without worries. The high-tensile mesh is resilient and almost impossible to cut or break through.

Majestec products have met the requirements of Australia and Malaysia Sirim Standards (AS 5039:2008) for security screen doors and window grilles.

In an emergency, locks and handles can be easily released from inside. Window locks and removable handles are also available.

Majestec security screens are custom-made and come in a variety of colours. The frames are powder-coated to fulfil a product lifetime of over 10 years.

The frames are made from heavy-duty aluminium and Majestec's product development team can custom design its products to meet your architectural design and security requirements.

Majestec's product range includes awning windows, casement windows, hinged doors, French doors, bi-fold doors, sliding doors



Majestec security screens are custom-made and come in a variety of colours to match your home décor.

and windows, stacker doors, fixed panels, pool fencing, balustrades and fire escapes.

When choosing an important component of home security, check for proof of claims made by the sellers.

Majestec has spent considerable resources on engineering its products to pass the many tests they are subjected to.

Majestec products are sold in many coun-

tries, including Australia, South Africa and the United States.

These countries require products to be subjected to stringent testing before being sold to the public.

■ To see Majestec's products, visit the showroom at The Curve Shopping Mall, Lot 219B, 2nd Floor, Jalan PJU 7/3, Mutiara Damansara (from 10am to 7pm, Monday to Sunday).

Call for appointments on public holidays. Dealer queries are welcome.

Call 1300 88 MESH (6374) or 03-6156 1615 or visit www.meshtec.com.my for more information.

PROTECTING THEIR WELFARE

Skilled workers ensure excellence

In conjunction with Labour Day, the Human Resources Ministry is committed to building human capital so Malaysia can achieve developed nation status by 2020

THE Labour Day theme "A skilled workforce propagates national excellence" is apt and timely, given the government's focus to build human capital that can help the country achieve its aspiration of becoming a developed nation by 2020.

The theme is in line with the first thrust of the Human Resources Ministry's strategic plan, which is to produce competent and competitive workers to fulfil Malaysia's economic needs.

Ministry secretary-general Datuk Dr Mohd Gazali Abas says the aim is to create 1.5 million jobs, of which 60 per cent will require Technical and Vocational Education and Training (TVET) qualifications.

"TVET is a vital platform to increase the number of skilled workers in the country. We are targeting a 35 per cent skilled workforce by 2020. In fact, we anticipate that by 2023, three million jobs will require skilled workers," he says.

Based on data from the Statistics Department, the country's skilled manpower during the fourth quarter of last year stood at 27.2 per cent, an increase of 2.6 per cent compared with 2014.

Currently, skilled manpower comprises 31.5 per cent of the nation's workforce. The majority are semi-skilled workers, who make up 60.5 per cent, while non-skilled workers are the least, comprising only eight per cent.

To realise the 35 per cent skilled workforce target, Gazali says several

initiatives have been carried out.

They include the setting up of Pembangunan Sumber Manusia Bhd, an agency under the ministry to train and upskill workers.

The workers are given the opportunity to undergo TVET training at 534 skills training institutes nationwide.

Those who have no formal training, but with years of working experience, can get their skills certified through the Recognition of Prior Experiential Learning programme. To date, more than 300,000 workers have been certified.

The ministry is also devising a TVET masterplan, which will oversee the demand and supply of TVET courses to produce workers who are adept to Industry 4.0.

Recently, the government has launched the MyApprenticeship programme, an initiative under the National Blue Ocean Strategy. MyApprenticeship places youths and women in public and private companies to help them gain skills and expose them to working experience.

"The government has targeted one million participants in this programme. The trainees will benefit from hands-on training, and we can reduce the number of unemployed youths," said Gazali.

As industries move towards modernisation and advanced technology, the demand for skilled workers keeps growing, while the dependency on semi-skilled workers is expected to decrease.



Prime Minister Datuk Seri Najib Razak launching the MyApprenticeship programme at the Putra World Trade Centre in Kuala Lumpur recently. With him are Human Resources Minister Datuk Seri Richard Riot Jaem (third from left), Chief Secretary to the Government Tan Sri Dr Ali Hamsa (left) and Human Resources Ministry secretary-general Datuk Dr Mohd Gazali Abas (second from right).



Prime Minister Datuk Seri Najib Razak visiting an exhibition booth during the launch of the MyApprenticeship programme.

The government will always encourage the utilisation of technology and automation to increase demand for skilled workers.

Reliance on unskilled foreign labour will gradually be reduced and currently, it has been capped to no more than 15 per cent of the country's manpower. With this, the government is confident of achieving its 35 per cent target of a skilled workforce by 2020.

However, there is always the outstanding issue of fair wages, especially when companies refuse to pay salaries that commensurate with the workers' skills.

To resolve this, the ministry has implemented a minimum wage for all sectors, that is RM920 for Sabah and Sarawak, and RM1,000 in the peninsula," says Gazali.

"We also have a guideline of starting salaries for 160 selected occupations based on the national skill certification levels."

Another important issue, says Gazali, is the quality of the training programmes.

To improve the delivery of skills courses and increase their graduates' marketability, TVET pro-

grammes will be accredited by the Malaysian Qualifications Agency and the National Skills Department, and written instructional materials will be standardised.

Training centres will be upgraded to centres of excellence, with emphasis on emerging skills.

Industry-institution collaborations will be expanded. Professional recognition will be given to graduates via the Malaysian Board of Technologies (MBOT) to attract students to enrol in TVET courses.

The ministry is also working towards the development of skilled teaching staff.

A database will be created to profile the teaching manpower and identify competency gaps. The latest e-profiling has found a competency gap of 16,000 instructors nationwide.

The government has never neglected the welfare and wellbeing of the nation's workers.

Gazali says besides raising the retirement age to 60 years due to the population's longer lifespan, the government is also planning to amend the Employment Act 1955 to protect more workers

Social Security Organisation (Perkeso) coverage will be extended to all, regardless of the salary drawn. The insured contribution ceiling will be increased from RM3,000 to RM4,000.

This move is expected to benefit an additional 500,000 workers, raising the number of workers covered to 6.5 million.

Through Pembangunan Sumber Manusia Bhd, lifelong-learning opportunities have been opened up to 2.21 million workers last year compared with 1.68 million in 2010.

This learning incentive will help workers develop a specific skill to increase their expertise, advance their careers and earn better income.

The ministry, through its Occupational Safety and Health Department, has implemented the Occupational Safety and Health Master Plan (OSHMP) 2016-2020 to create awareness about workplace safety, and reduce incidents of death, accidents and health problems.

"The implementation of the previous OSHMP 2011-2015 has successfully reduced workplace accidents from 41,593 cases in 2010 to 38,753 cases in 2015," says Gazali.

"The death rate has also been lowered from 6.45 in 2010, to 4.84 in 2015."

This year, the government has introduced the Employment Insurance System (EIS) to help retrenched workers, therefore ensuring that they have something to tide them over in the event of difficulties.

"With the scheme, workers who lose their jobs will receive a stipend while they undergo a reskilling process to find new jobs. The scheme provides job-seeking and matching services, career counselling and training," says Gazali.

As of April 20, the Human Resources Ministry has received 6,602 claims and paid compensation to 4,204 beneficiaries.

Accept palm oil as a wonderful gift

FOOD security is a major concern throughout the world with global population now exceeding seven billion. Coupled with the increasing per capita food consumption worldwide, it is understandable that many countries are anxious about having enough food to meet their growing demand.

As countries become more developed and purchasing power increases, not only would the demand for growing food change, so also would the people's diet preferences.

Studies have shown that when people have more money at their disposal, their intake of meat products also rises. It has also been shown that in more developed economies like the United States and European Union, food consumption may be more than three to five times that in developing economies. China is a clear example of a country which has witnessed a dramatic increase in the per capita intake of meat as the economy expands.

The growing demand for meat proteins has also translated into an expanding demand for animal feed. In the last decade or so, the world has witnessed a large expansion in the cultivation of such major feed crops, especially soybean and corn. Large tracts of land have been cleared to grow these crops.

Take, for example, the expansion of land for soybean farming in Brazil and Argentina. Many have expressed outrage since much of the expansion has encroached into sensitive forest areas where environmentalists are also concerned



about loss of biodiversity and reduction in the global sinks for greenhouse gases.

Along with the expansion in soybean farming, large areas are also cleared to support livestock farming, especially cattle, which present another problem. Methane gas from the metabolic habits of cattle and other livestock complicates the global effort to reverse climate change. At 21 times more potent than carbon dioxide, methane is more devastating as a greenhouse gas.

Similar expansion in the livestock business is also being seen in the US and China.

However, the global warming potential of the livestock industry has not attracted as much attention as the misguided environmental perception on palm oil. This is explained by some as the developed versus developing country syndrome. Palm oil is a product of only developing nations, especially Malaysia and Indonesia, while the livestock business is also massive among the developed economies,

especially the US. Palm oil is therefore regarded as a much easier target to pick a fight with.

But this is where the critics of palm oil are very much mistaken. Looking at the many credentials of palm oil, we should actually be grateful for this unique product of nature. Palm oil is truly nature's gift to the world.

Firstly, it is clear that the world is running short of arable land to grow food. At the same time, the global food demand continues to rise, driven by the growth in popu-

lation as well as better purchasing power among world consumers. It would therefore be in the global interest to plant food crops with higher yields on the limited land available.

In the edible oil crops category, no other oil can match the high productivity of palm oil, which is almost 10 times higher.

Secondly, unlike the other competing oil crops, oil palm is a perennial whereas the others are all annuals. Annual crops such as soybean, sunflower and rapeseed disturb the soils more. This means that in order to restore the virility of the soils, massive amounts of chemical fertilisers have to be deployed. And we all know this is environmentally unhealthy.

Oil palm, on the other hand, is the closest one can get to the natural forest. Once planted, the land remains undisturbed for at least the next 25 years after which it will be due for replanting.

Add these to the fact that oil palm is the only oil crop which gives two different oils, palm oil and palm kernel oil, and it helps cushion the global oil prices, many wonder why some are still critical of this wonderful oil.

By right, the entire humanity should be grateful for having palm oil. It is a clear example of a crop which can help us overcome the global food security issue. We should stop ridiculing palm oil!

**PROFESSOR DATUK DR AHMAD
IBRAHIM**
Fellow Academy of Sciences
Malaysia
UCSI University

LAMPIRAN 4
NEW STRAITS TIMES (KLASSIFIEDS) : MUKA SURAT C2
TARIKH : 2 MEI 2018 (RABU)

HOW INDUSTRY 4.0 WILL IMPACT TECHNOLOGY?

INDUSTRY 4.0, or the fourth industrial revolution, is a collective term embracing a number of contemporary automation, data exchange and manufacturing technologies. It had been defined as "a collective term for technologies and concepts of value chain organisation", which draws together Cyber-Physical systems, the Internet of things and the Internet of services.



The idea is that we are going through a fourth industrial revolution – therefore, 4.0. This revolution is digital and is driven by technology: Internet, artificial intelligence, automation, machine learning and the improvement of sensors, making them smaller and enabling to become part of the so-called "Internet of things" (IoT), are just a few examples of that.

Many argue that great deals of these technologies have, in fact, come from the third industrial revolution, but they themselves have developed a great improvement in recent years. The enhancements of these

technologies, combined with the recent innovations, have brought unprecedented possibilities that can characterise the fourth industrial revolution.

There are several aspects that characterise Industry 4.0, including (but not limited to): automated robots, additive manufacture, simulation, horizontal and vertical system integration, industrial IoT, big data and analytics, cloud, cybernetic security, augmented reality and more.

However, beyond the technologies involved in this new industry, the fourth industrial revolution proposes a different form of human relations in business. Smart companies will require a more multidisciplinary professional – fewer and fewer professionals will be hired to do

what they studied in college.

Apart from the need for professionals to adapt to machines and technology, and also robots that are also intelligent, interaction with them will go beyond simply pushing buttons. Only the future will tell what else is coming and what are the advantages and limits of the new technologies imposed by these imminent changes.

Traditional companies and corporations, which still had doubts about the benefits of digital transformation, also need to accelerate the transition to fit the new business model and not be outdated with obsolete technology. With an automated, agile and less error-prone process, the industries ahead will have positive results and conditions to compete in the globalised world, in which we live.

The biggest challenge for companies is to identify the opportunities and benefits of Industry 4.0.

The speed of adoption of Industry 4.0 will give companies a competitive edge. Trainings and workshops are the preferred means to access knowledge. Topics generating most interest include hands-on guidance on how to gain value from and introduce Industry 4.0 features into existing processes.

Digital Lync is an autonomous institute to train the tech passionate youth in their interested area and make them industry ready with an innovative mindset to solve real time problem. Their vision is to revolutionise the education system and scale it up to global standard. Making a mark in San Francisco and Hyderabad and shaping career of thousands of individuals in a span of two years, it has

achieved the first milestone. They are here to expand to overseas market like Malaysia and they will tie up with Asian Management Development Academy a HRDF registered company to provide training and development in Industry 4.0.

ROBUST CURRICULUM

The courses curriculum are formulated in consultation with industry experts. They have partnered with extraordinary MNC's like Salesforce, AT&T and VoltusWave which are in constant support to them. Recently they also collaborated with iBot, a world renowned IoT startup, which makes them aware of the industry trends and product development in nascent technology like IoT. All these help them to be at par with market requirement and make the student industry ready.

INDUSTRY EXPERIENCED TRAINER

The first eligibility criteria to be trainer at Digital Lync is to have minimum industry exposure of five years. All their trainers are exposed to different facets of technology and worked with product development team at multi-national corporation and start-up. Hence, they formed their training materials and assignment as per their market requirement and gibberish topics are avoided.

MARKET EXPERIENCE

We are living in a world where yesterday's innovation may become obsolete tomorrow. Thus, students need to understand the market dynamics and client facing complexities.

ENVIRONMENT FOR INNOVATION AND RESEARCH

This is exclusive facility provided just to make students smart enough to challenge their innovation quotient. Companies are looking out for people who can come out with innovative solutions to a challenged issue. They have environment for people to experiment their research and build up a new product under guidance of their trainer. You can collaborate with in-house team and begin working on your research which eventually launching up your product in the market.



DR G. VIZAYER RAJ is the director of programmes in Asian Management Development Academy collaborating with Digital Lync Technologies, Hyderabad, India. He can be reached at vizayer@gmail.com or **016-2093156**.

INDUSTRI AEROANGKASA

KE ARAH
KEMAHIRAN
BERFIKIR
ARAS TINGGI
(KBAT)



**PICU PELANCAR
DILEPASKAN,
MENGHASILKAN
DAYA TUJAH KE ATAS
(MEMATUHI HUKUM
NEWTON)**

➔ Jana pendapatan lebih RM12.2 bilion, membabitkan lebih 200 syarikat, lebih 20,000 tenaga mahir

Oleh Mohd Khairul Anam
Md Khairudin
khairul.anam@bh.com.my

► Kuala Lumpur

Bajet 2018 meletakkan industri aeroangkasa dalam kategori tunjang pertama iaitu sebagai pelaburan industri berimpak tinggi dengan industri itu menyumbang angka yang agak besar kepada pertumbuhan ekonomi negara.

Buktinya, pada tahun 2015, pendapatan yang dijana menerusi industri berkenaan merekodkan lebih RM12.2 bilion, memba-

bitkan lebih 200 syarikat, selain mempunyai lebih 20,000 tenaga mahir profesional.

Menyedari kepentingan jangka panjangnya, suntikan motivasi menggalakkan lebih ramai modal insan yang menerokai bidang berimpak tinggi itu perlu diperluaskan terutama pada peringkat sekolah lagi.

Antaranya, menerusi pendedahan inovasi roket air yang menggunakan air sebagai bahan bakar yang menggabungkan air dan angin daripada pam, sekali gus dapat mewujudkan kekuatan daya tujuh untuk membolehkan roket terbang ke udara.

LAMPIRAN 6 BERITA HARIAN (BH SKOR) : MUKA SURAT S32 TARIKH : 2 MEI 2018 (RABU)



Interaktif



Saya amat meminati bidang aeroangkasa ini dan berharap cita-cita menjadi angkasawan terkemuka negara pada masa hadapan dapat terlaksana"

Dennylyson Primus,
Pelajar Tingkatan Empat SMK Sungai Besi



Kejayaan sekolah dalam pertandingan roket air mendorong kami untuk terus berusaha gigih mencipta produk baharu yang berimpak tinggi"

Amelia Areesa Nasri
Pelajar Tingkatan Lima SMK Sungai Besi

Pembabitan pelajar dalam teknologi roket air mampu memupuk kecintaan mereka terhadap bidang aeroangkasa, sekali gus melahirkan lebih ramai tenaga mahir dalam industri ini"

Encik Mahyudin Mamat
Guru Sains Inovasi Roket
Air SMK Sungai Besi

Mendalami teknologi roket

● Dari muka S31

Guru Sains Inovasi Roket Air Sekolah Menengah Kebangsaan (SMK) Sungai Besi, di sini, Encik Mahyudin Mamat, berkata pembelajaran teknologi inovasi berimpak tinggi membolehkan pelajar mengaplikasikan Hukum Newton yang dipe-

lajari melalui subjek Fizik dalam kehidupan seharian mereka.

Terdapat dua jenis roket air yang didegahkan kepada pelajar iaitu roket payung terjun dan roket sasaran iaitu bergantung kepada jumlah air serta angin yang dipam pelancar.

Beliau berkata, pendekatan menerusi tayangan

video penting untuk memberi pelajar pendedahan awal mengenai tujuan, kaedah dan proses yang perlu dilakukan sebelum memulakan projek inovasi roket air.

Katanya, aktiviti itu biasanya dilakukan secara berkumpulan dengan pelajar perlu mencari bahan dan maklumat berdasarkan kreativiti tersendiri daripada pelbagai sumber seperti internet, selain menyuntik semangat mereka untuk melakar kejayaan membanggakan dalam setiap pertandingan inovasi disertai.

Anjur pertunjukan

"Hukum Newton Pertama menjelaskan sesuatu objek itu akan kekal dalam keadaan asalnya jika tiada daya luar bertindak ke atasnya, manakala Hukum Newton Kedua menyatakan kadar perubahan momentum adalah berkadar terus dengan daya paduan yang bertindak ke atas objek pada arah sama dengan arah bertentangan.

"Hukum Newton Ketiga pula terdapat satu daya tindak balas yang mempunyai magnitud sama dan

bertindak pada arah bertentangan pada setiap tindakannya," katanya kepada BH Skor, baru-baru ini.

Menjelaskan lebih lanjut, Encik Mahyudin berkata, bagi menarik keseronokan pelajar mempelajari bidang teknologi roket dan aeroangkasa, pihak sekolah sentiasa mengadakan pertunjukan serta demonstrasi kepada mereka termasuk menggalakkan mereka mengambil bahagian dalam setiap acara dianjurkan.

Fikir luar kotak

Beliau berkata, pembabitan pelajar dalam acara seumpama berkenaan penting dalam mengumpul markah yang baik dalam Pentaksiran Aktiviti Jasmani Sukan dan Kokurikulum (PAJSK) yang ditekankan Kementerian Pendidikan kini.

"Tidak dinafikan pembabitan mereka dalam pertandingan pada peringkat daerah, negeri, kebangsaan mahupun antarabangsa berpotensi menyumbang markah cemerlang dalam PAJSK terutama bagi calon Sijil Pelajaran Malaysia (SPM).

"Lebih penting, dalam menghasilkan sesuatu ino-

vasi kreatif yang berkualiti tinggi, pelajar mestilah memiliki pemikiran idea di luar kotak dan Kemahiran Berfikir Aras Tinggi (KBAT), seterusnya membolehkan mereka mengharumkan nama sekolah pada persada antarabangsa," katanya.

Keistimewaan roket air

→ **Gabungan air dan angin** mampu menghasilkan pergerakan roket yang berkelajuan tinggi

→ **Pembinaannya** tidak memerlukan kos tinggi kerana menggunakan bahan kitar semula dan terpakai

→ **Pelajar** boleh mempelbagaikan rekaan roket seperti mereka bentuk sayap dan jisim tersendiri

→ **Langkah** memotivasikan minat dan kebolehan pelajar perlu dimulakan seawal peringkat sekolah rendah



Encik Mahyudin (tengah) dan dua pelajarnya cuba melancarkan roket air.

Peluang kerjaya dalam bidang aeronautik, astronautik

Shah Alam: Seiring era globalisasi teknologi kini, industri aeroangkasa adalah antara bidang yang mampu meningkatkan ekonomi negara, sekali gus melonjakkan nama Malaysia pada peringkat antarabangsa.

Ketua Pusat Pengajian Siswazah Fakulti Kejuruteraan Elektrik, Universiti Teknologi Mara (UiTM), di sini, Dr Nur Emileen Abdul Rashid, berkata sektor

berimpak tinggi itu menawarkan peluang kerjaya cerah terutama bagi pelajar yang berminat mengikuti jurusan bidang berkenaan di universiti.

Beliau berkata, aeroangkasa ialah bidang berkaitan reka bentuk pesawat dan kapal angkasa memabatkan aeronautik serta astronautik.

Katanya, aeronautik menjurus kepada bidang rekaan

bentuk, pembangunan dan operasi memabatkan pesawat terbang, manakala astronautik ialah bidang berkaitan reka bentuk operasi kapal angkasa.

Pemintaan tenaga

"Kerajaan sudah menetapkan industri aeroangkasa sebagai sektor strategik, terkawal dan bernilai tinggi, di samping menggalakkan pertambahan tenaga

mahir dalam bidang yang menawarkan peluang kerja meluas ini.

"Selain itu, industri astronautik juga semakin membangun di Malaysia dengan pihak industri kini memerlukan lebih ramai jurutera dan mekanik satelit untuk merealisasikan sasaran yang diharapkan," katanya kepada BH Skor.

Sehubungan dengan itu, Dr Nur Emileen berkata,

pelajar perlulah komited merebut peluang berkenaan yang turut menawarkan pendapatan gaji lumayan.

"Sebagai contoh, negara amat memerlukan jurutera bertauliah dalam bidang kejuruteraan mekanikal atau aeronautik khususnya bagi mereka bentuk pesawat dan membangunkan sistemnya termasuk elektrik, aspek komunikasi serta integrasi sistem," katanya.



Dr Nur Emileen

LAMPIRAN 7
BERITA HARIAN (BH SKOR) : MUKA SURAT S32
TARIKH : 2 MEI 2018 (RABU)

Peluang kerjaya dalam bidang aeronautik, astronautik

Shah Alam: Seiring era globalisasi teknologi kini, industri aeroangkasa adalah antara bidang yang mampu meningkatkan ekonomi negara, sekali gus melonjakkan nama Malaysia pada peringkat antarabangsa.

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Pemintaan tinggi

"Kerajaan sudah menetapkan industri aeroangkasa sebagai sektor strategik, terkawal dan bernilai tinggi, di samping menggalakkan pertambahan tenaga

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Dr Nur Emileen

LAMPIRAN 8
HARIAN METRO (HATI) : MUKA SURAT H57
TARIKH : 1 MEI 2018 (SELASA)



PESERTA yang hadir ketika MyGeekMovement 2018.

SEDIA PENDEDAHAN AWAL STEM

Pertandingan #MyGeekMovement 2018 dapat perkasakan bakat muda

Menurut Ketua Perhubungan Luar Negara Shell Malaysia Nimmi Kamal, Pertandingan #MyGeekMovement 2018 ialah kesinambungan daripada program pendidikan menyeluruh dalam bidang Sains, Teknologi, Kejuruteraan dan Matematik (STEM) oleh Shell dengan sokongan Kementerian Pendidikan Malaysia (KPM).



PERBENTANGAN wakil SMK Lutong Miri Sarawak.



SAINGAN sengit oleh wakil dari SM St Michael Panampang Sabah.



WAKIL semenanjung SMK Bukit Jalil.

"Kami mengharapkan inisiatif ini dapat menyumbang ke arah memenuhi sasaran dan aspirasi dalam peningkatan jumlah graduan STEM. Inisiatif kami memberi tumpuan kepada menyediakan pendedahan awal kepada STEM dengan mencetuskan minat pelajar dalam bidang seperti kejuruteraan, teknologi maklumat dan automasi," katanya.

Kata Nimmi, sesuai dengan latar belakang Industri Shell berkait rapat dengan bidang tenaga dan teknologi, pihaknya teruja dengan komitmen yang dapat memperkasakan bakat muda STEM.

"STEM adalah subjek yang dekat di hati Shell. Industri kami memerlukan orang

Kami berhasrat menyumbang usaha menggilap bakat dan kemampuan pelajar berkualiti dengan penganjuran #MyGeekMovement bagi tahun ini

NIMMI

yang herbakat dengan pengetahuan dan kemahiran yang relevan dalam bidang mahupun program berkaitan STEM. "Kami berhasrat menyumbang usaha menggilap bakat dan kemampuan pelajar berkualiti dengan penganjuran

#MyGeekMovement bagi tahun ini.

"Berdasarkan landasan itu kami dapat menyediakan kandungan pembelajaran yang melengkapkan struktur kurikulum sekolah dengan matlamat jangka panjang meningkatkan jumlah pelajar yang

memilih aliran sains di sekolah terpilih selain meningkatkan minat terhadap sains dan teknologi dalam kalangan generasi muda.

"Ini menyokong kuat matlamat pendidikan nasional untuk mencapai nisbah 60:40 membabitkan aliran sains dan seni di peringkat sekolah menengah. Usaha menarik pelajar untuk minat terhadap subjek STEM dilihat sebagai satu keperluan kritikal demi memenuhi keperluan modal insan masa depan Malaysia," katanya.

Selain KPM, Shell Malaysia juga bekerjasama dengan Perbadanan Ekonomi Digital Malaysia (MDEC) dalam penganjuran program STEM. **Nurul Husna Mahmud**

LAMPIRAN 9
UTUSAN MALAYSIA (FORUM) : MUKA SURAT 14
TARIKH : 1 MEI 2018 (SELASA)

Inovasi lampu isyarat

SAUDARA PENGARANG,

SAYA pernah menulis dalam ruangan *Forum Utusan Malaysia* yang tersiar pada 16 Februari 2007 berkaitan perlunya pihak yang menguruskan perbandaran satu-satu kawasan memikirkan konsep bandar tanpa lampu isyarat.

Setelah 10 tahun berlalu, pengguna melalui laluan jalan lama dari Ipoh ke Kuala Lumpur bakal melalui dua lampu isyarat yang wujud berdekatan antara satu sama lain, berhampiran Taman Wangsa Maju, Tanjung Malim, Perak.

Tidak dinafikan bahawa kewujudan lampu isyarat itu adalah atas permintaan masyarakat setempat di satu-satu kawasan yang terpaksa dipenuhi kerana faktor 'menjaga hati' mereka tambahan ketika musim pilihan raya.

Namun perlu juga difikirkan penduduk setempat lain yang terpaksa kerap berhenti ketika melalui jalan tersebut.

Tambahan pula, lampu isyarat itu terletak di kawasan perjalanan ke Kuala Lumpur yang turut dilalui pengguna lain.

Terlalu banyak lampu isyarat berdekatan juga antara punca

kesesakan selain menggalakkan budaya melanggar lampu isyarat.

Pemasangan lampu isyarat baharu juga mengganggu keselesaan pemanduan kerana jalan menjadi sedikit bonggol akibat kontraktor yang memasang lampu isyarat sekadar menampal laluan bagi menyalurkan saluran elektrik.

Ini yang berlaku di kawasan lampu isyarat baharu berhampiran Taman Wangsa Maju, Tanjung Malim, Perak. Bayangkan betapa tidak selesanya pengguna kerana terpaksa melalui jalan itu setiap hari.

Justeru, saya mencadangkan

agar pihak berkaitan mencari alternatif lain dalam menangani perkara ini seperti yang dibuat di bandar-bandar agar hasrat bandar bebas lampu isyarat boleh direalisasikan.

Jika pihak berkenaan masih merasakan lampu isyarat perlu wujud maka carilah inovasi dalam pelaksanaannya seperti penggunaan sensor bagi memastikan peralihan masa lampu isyarat dibuat dengan cekap kerana agihan masa juga perlu diambil kira.

AHMAD FIRDAUS
Tanjung Malim

LAMPIRAN 10
UTUSAN MALAYSIA (LUAR NEGARA) : MUKA SURAT 16
TARIKH : 2 MEI 2018 (RABU)

Jam pintar buktikan bukan sekadar sains fiksi

PENNSYLVANIA 1 Mei - Penyelidik di Universiti Carnegie Mellon memperkenalkan sebuah jam pintar yang mempunyai projektor secara binaan dalaman untuk menjadikan lengan pemakai sebagai skrin sentuhan.

LumiWatch yang mempunyai ruang permukaan 40 sentimeter persegi, iaitu lima kali lebih besar daripada jam pintar biasa dan menyokong sistem operasi Android serta boleh disambungkan ke

WiFi dan Bluetooth, lapor *Daily Mail*.

Pereka cipta LumiWatch berkenaan telah memuat naik sebuah video prototaip jam pintar tersebut pada minggu ini yang memaparkan demonstrasi mekanisme leret-untuk-buka dan kemampuan berterusan pengesanan-jari 2D.

Video itu menunjukkan pengguna mengakses jam itu selain membuka aplikasi dan mendedit

gambar pada lengan kanannya.

Peranti berkenaan dijangka bernilai AS\$600 (RM2,353) jika dipasarkan, harga yang lebih murah berbanding kebanyakan jam pintar kini yang terdapat di pasaran.

Laser unjuran 15-lumen itu menawarkan kecerahan yang cukup untuk dilihat walaupun pada siang hari.

Menurut penyelidik, LumiWatch dilengkapi CPU quad-core

Qualcomm 1.2 GHz dengan Android 5.1, RAM sebanyak 768MB, 4GB memori serta 740 mAh bateri lithium-ion yang mampu bertahan sepanjang hari dengan penggunaan sederhana.

"Jam pintar ini kompak, menggunakan perisian komputer, paparan muka secara sentuhan pada kulit yang lama diimpikan tapi sukar untuk dihasilkan dan akhirnya menjadi sebahagian daripada fiksi sains," kata penyelidik.

JAM pintar pertama yang memaparkan skrin sentuh di lengan pemakai.



Teknologi cari penumpang sesat diuji

➔ Lapangan Terbang Changi guna sistem pengesanan wajah

► Singapura

Lapangan Terbang Changi, di sini, sedang menguji sistem pengesanan wajah, mungkin digunakan pada masa hadapan untuk membantu mengesan penumpang yang sesat atau menghabiskan terlalu banyak masa di kedai bebas cukai.

Lapangan terbang itu, tersenarai sebagai terbaik di dunia untuk enam tahun berturut-turut dalam satu tinjauan syarikat perunding perjalanan udara, Skytrax, meneliti bagaimana ia boleh menggunakan teknologi terbaharu itu untuk menyelesaikan banyak masalah, daripada

mengurangkan masa pesawat di landasan, sehinggalah ramalan segera ketibaan pesawat.

Mula inisiatif negara pintar

Langkah itu dilakukan ketika republik ini memulakan inisiatif 'negara pintar' untuk mengoptimumkan teknologi bagi memperbaiki kehidupan, mewujudkan peluang ekonomi dan membina hubungan komuniti.

Bagaimanapun, cadangan penggunaan kamera yang dihubungkan dengan perisian pengesanan wajah menimbulkan kebimbangan privasi.

Ketua Pegawai Maklumat Kumpulan Lapangan Terbang

Changi, Steve Lee berkata, percubaan lapangan terbang itu bukan daripada perspektif 'seorang abang mengawasi adik' namun menyelesaikan masalah sebenar.

"Kami banyak menerima laporan penumpang hilang, justeru satu cara mungkin ialah, kami perlu mengesan dan mencari penumpang dalam pesawat. Sudah pasti dengan kebenaran syarikat penerbangan," kata Lee.

Teknologi pengesanan wajah biasanya membenarkan padanan muka seseorang yang dirakam kamera bersama maklumat yang tersimpan dalam pangkalan data.

REUTERS



[FOTO REUTERS]

Sistem pengesanan wajah yang sedang diuji di Lapangan Terbang Changi bagi melancarkan banyak masalah di lapangan terbang.

EXPERIMENT

FACIAL RECOGNITION AT CHANGI AIRPORT

Singapore testing new technology to prevent delays and locate lost travellers

SINGAPORE

EVER been delayed on a flight because of straggling fellow passengers? That might be an annoyance of the past at Singapore's Changi Airport, which is testing

facial recognition systems that could, in future, locate lost travellers or those spending a little too much time at duty-free shops.

Changi Airport, ranked the world's best for six years straight in a survey by air travel consultancy Skytrax, is looking at how it can use the latest technologies to solve many problems – from cutting taxiing times on the runway to quicker predictions of flight arrivals.

However, the proposed use of cameras mounted on lamp posts linked to facial recognition soft-

ware has raised privacy concerns. Steve Lee, Changi Airport Group's chief information officer, said the airport's experiments were not from a "big brother" perspective, but to solve real problems.

"We have lots of reports of lost passengers... so one possible use we can think of is to detect and find people who are on the flight. Of course, with permission from the airlines," said Lee.

Facial recognition technology typically allows users to match the faces of people picked up on cameras with those in databases.

Lee said the airport had tested technology that could allow for this, and was working with various businesses, adding that they should have some capability to do this in a year's time.

France's Idemia, previously known as OT-Morpho, has provided facial recognition technology to Changi.

Chinese firm Yitu, which recently opened its first international office here, said it was in discussions with Changi Airport Group.

Yitu said its facial recognition

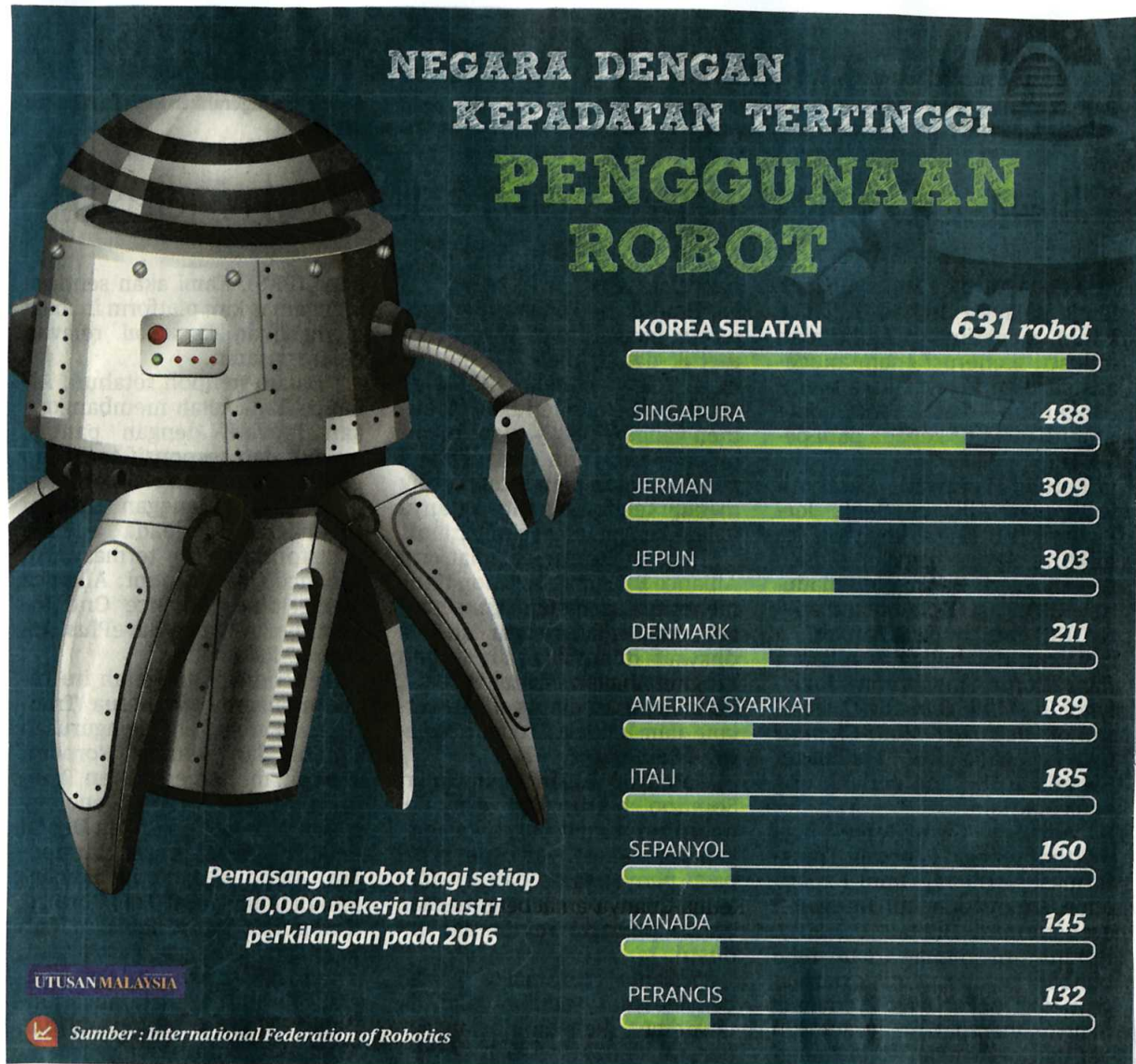
platform was capable of identifying more than 1.8 billion faces in less than three seconds.

Changi's newest terminal, T4, already uses facial recognition technology to offer self-service options at check-in, bag drop, immigration and boarding.

The technology means there are fewer queues and fewer visible airport or security staff.

Changi is exploring how facial recognition can be implemented in its three older terminals for automated bag drop and immigration. **Reuters**

LAMPIRAN 13
UTUSAN MALAYSIA (UTUSAN BIZ) : MUKA SURAT 18
TARIKH : 2 MEI 2018 (RABU)



LAMPIRAN 14
MALAY MAIL (FOCUS) : MUKA SURAT 2
TARIKH : 2 MEI 2018 (RABU)



A collaborative robot, or 'cobot', applies hot glue adhesive to a headliner intended for Chevrolet Bolt EV and Sonic vehicles on the assembly line at Orion Assembly in Lake Orion, Michigan. — Picture by Reuters

'Cobots' give future auto plants human touch

CARMAKERS have big plans for their next generation of factories: Smarter designs, artificial intelligence and collaborative robots building a wide range of vehicles on the same line.

The plants will also feature a component they say is the secret ingredient to flexible manufacturing: Humans.

SAIC-GM's factory in Shanghai, which opened in 2016, is one of the world's most advanced auto plants, assembling Buick minivans and Cadillac sedans and SUVs, including the CT-6 plug-in hybrid for US consumers.

GM's Shanghai plant is expected to eventually produce new electric vehicles, primarily for the Chinese market, executives have said.

The plant, which GM operates with Chinese partner SAIC Motor Corp Ltd, feels almost like a scene from a *Star Wars* film, with battalions of machines quietly working in self-directed harmony.

Collaborative robots, or "cobots", painted matte green and unrestrained by the steel cages that surround their larger industrial cousins, are being programmed to work alongside humans on the line. One unusual operation advanced models now handle is installing gears in transmissions.

"They can actually feel; they can pick up a gear set (and) mesh the gear into a transmission," Paul Buetow, GM's China manufacturing chief, said on a recent tour of the plant. The robots reduce strain on humans and improve quality and consistency.

Globally, automakers are embracing Industry 4.0 — a term coined by German manufacturers for the digitalisation and

automation of assembly processes — and the consensus is that fewer people will be required in future factories. But humans will still be needed.

"This is not about cutting head count," said an insider familiar with industry efforts to upgrade and streamline auto plants in the US, China and Europe.

The focus instead is on improving flexibility and efficiency between machines and humans as automakers figure out how to build multiple models — powered by gas engines, electric motors, or both — in the same factory.

"It's not just blood and sweat that goes into manufacturing on an assembly line," said United Auto Workers president Dennis Williams. "It's critical thinking that automation can't replicate."

A new generation of cobots is working alongside humans at General Motors Co plants from Shanghai to Orion Township, Michigan.

The Orion plant, north of Detroit, is one of the industry's most flexible. It builds three models on one line: The gas-engine Chevrolet Sonic, the battery-powered Chevrolet Bolt EV, and the self-driving Cruise AV.

More than 800 robots work there, including a half-dozen cobots painted green to denote they can safely operate around humans.

The machines handle the "dirty, dull, difficult and dangerous" tasks while people do the work requiring dexterity and intelligence, says Marty Linn, GM's principal engineer for robotics.

In one section of the plant, cobots glue protective pads onto headliners, a tough job

for humans because the glue is heated to scalding temperatures before it is applied.

At another station, a cobot takes new spare tyres off a conveyor belt and stacks them on a cart. This, GM's Linn said, was a job workers universally hated because it was repetitive and back-breaking.

At the end of the line, cobots ensure headlamps are properly aligned. They will also be used to test sensors on automated vehicles, Linn said.

Markus Schaefer, head of production and supply chain at Daimler AG's Mercedes-Benz Cars, said the German automaker is "paring back automation" in final assembly to boost flexibility.

"We need this because we are making a greater variety of derivatives and, as a premium automaker, we make highly individualised vehicles," he said.

Schaefer said Mercedes will eventually have plants that can build vehicles with different powertrains and with both front- and rear-wheel drive.

The automaker is converting its showcase Sindelfingen plant to build the GLA, a compact front-wheel-drive utility vehicle, as well as its rear-wheel-drive S-Class luxury sedan.

How collaborative robots and other digital tools are used will determine the size and layout of future factories — and how many humans work there.

Ford Motor Co executive Joe Hinrichs created a stir last October when detailing the automaker's vision of a future factory for electric vehicles, which have fewer parts than those with combustion engines and thus would require far less floor space, fewer workers and lower investment.

But like other major global carmakers, Ford appears reluctant to invest in dedicated electric-vehicle plants until there is sufficient — and consistent — demand to justify the expense.

Ford has years of experience building different types of vehicles on one line, including versions of the Focus compact with gasoline engines and electric motors.

Ford has installed a few collaborative robots at its recently renovated Louisville, Kentucky, truck plant. The company is also using digital tools such as augmented reality to map new assembly lines, and predictive analytics to schedule repairs and maintenance before machines break down.

The company has no immediate plans for a separate, highly automated plant for its next-generation electric vehicles, some of which are expected to share factory space with traditional combustion-engine models, according to sources familiar with Ford's strategy.

An April report by Barclays' global auto investment team predicted "robots won't kill all automotive jobs," at least not in the near term.

Auto companies are working on "perfecting the combination of human and robot," according to the report, because "the human touch is still necessary."

Even Tesla chief executive Elon Musk, who long praised robots' virtues and promised to turn his California electric car factory into a highly automated "alien dreadnought" has had something of an epiphany.

Bedeviled by technical glitches, Musk recently tweeted: "Excessive automation at Tesla was a mistake ... Humans are underrated." — Reuters

ASEAN

BUILDING TRUST IN CYBERSPACE

Management of data in Asean requires cooperation, compliance and accountability among member states, writes
FARLINA SAID

THE world of tomorrow promises to be data driven, arguably even more so than today. The advent of the Internet of Things and cloud computing means information can be transferred at any given moment, as long as the question of access is solved.

In an environment where solution and answers are accessible with a single touch, the individual user surrenders much of their trust to systems, organisations, institutions, the public sector and algorithms. Bits and bytes are honed to assist in realising practical aims from hailing a ride, to addressing critical issues such as the management of water pollution and air quality.

The 32nd Asean Summit highlights building a resilient and innovative Asean. A concept note released by Asean aspired for the establishment of a Smart Cities network where technological and digital solutions can be used to resolve issues and enhance the quality and accessibility of services offered by states. Involved in the project are 26 cities to pilot the Asean Smart Cities network.

Despite this commendable thrust into the future, the adoption of technologies is not necessarily a new initiative with various digitalisation drives spurred across the region such as Thailand's Digital Government Plan 2017-2021 and Malaysia's own push to embrace Industry 4.0.

Mckinsey Global Institute estimates that disruptive technologies such as artificial intelligence (AI) can benefit the region up to US\$31 billion (RM1.22 trillion) in the manufacturing sector. The same report mentions that high tech, telecom and financial companies lead the way for AI adoption in Asean. Most of these are to



There must be responsible behaviour among member states in cyberspace to enhance trust and confidence.
FILE PIC

enhance customer experience. Although Asean's data ecosystem, development of talent, business experience and current labour conditions may slow the growth of AI in the region, conversations have to take place on the implications of its adoption.

Trust in cyberspace can be multi-pronged, especially if the ecosystem aims to ensure the security of all users, be they the state, the private sector or the individual.

The cybersecurity architecture is a multi-stakeholder environment where everyone is held in an ecosystem of trust to ensure services can carry on. Underpinning the entire ecosystem are regulations that aim to protect, be they critical infrastructure, cross-border data flows or an individual's privacy.

In recent regional trends, trust is emphasised in the verification of information. Campaigns such as Malaysia's "Tidak Pasti, Jangan Kongsi" and the recent Anti-Fake News Bill passed indicate the concern in information's destabilising factors. Less addressed are conversations of trust and cybersecurity in disruptive technologies such as AI, cloud computing and the Internet of Things.

Disruptive technologies indicate trust must be placed in systems and processes, which may differ from trust placed in traditional actors. Anticipating this, there are two considerations for the development of a trusted cyberspace.

FIRST, is to encourage domestic and regional conversations on cybersecurity and disruptive

tech. AI's greatest weakness is data bias, where the output can be limited by the availability of data, programmers and analysts involved. A greater pool of data means chances of thorough and inclusive intelligence increases.

However, this also indicates the need for users to part with information. In Southeast Asia, where the concept of privacy can be minimal, sharing of information may not be the greatest hindrance. Yet, the digital age exacerbates the collection and usage of data. The Cambridge Analytica case illustrates that collection of data can be used for other purposes. The usage of machine-learning services also raises concerns on accountability. For instance, if technology shapes the values of the output, are there mechanisms to contend with the results or responsibility for the outcome?

Essentially, the management of data in a multi-stakeholder environment requires cooperation, compliance and accountability.

SECOND, is the role of the international community in building the culture of trust and architecture of cybersecurity. Data and technology crosses borders, which will impact how some of the information is accessed and governed. While the Asean Smart Cities network does not explicitly indicate the management of data across borders, the nature of disruptive technologies means data will traverse borders and will be utilised by various stakeholders.

In great power rivalry, investment in the tech sector can ring alarm bells particularly where norms of state behaviour and con-

fidence-building measures are not developed. Also a product of the 32nd Asean Summit is the Asean Leaders' Statement on Cybersecurity Cooperation that addresses the need for international voluntary cybersecurity norms, an expression of commitment for a multi-stakeholder process across different domains and greater regional cybersecurity cooperation and capacity building to address cybersecurity and cyber-crimes.

The statement looks at the Asean region and emphasises the coordination of cybersecurity policy and diplomacy. The statement explicitly highlights responsible state behaviour in cyberspace so as to enhance trust and confidence in the use of cyberspace.

This remains an important subject as state behaviours in cyberspace affects the overall security architecture. Thus, conversations on norms are a step in the right direction for the maturity of such technologies in the region.

While one can argue that trust is a key factor in enabling a secure cyber domain, for those who are risk averse, greater trust in a system is the result of fortified cyberspace. The ecosystem of trust can bear fruit in Asean's drive to embrace innovation whilst building resilience as per the tagline of Singapore's chairmanship this year.

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Trust in cyberspace can be multi-pronged, especially if the ecosystem aims to ensure the security of all users, be they the state, the private sector or the individual.

LAMPIRAN 16
UTUSAN MALAYSIA (LUAR NEGARA) : MUKA SURAT 16
TARIKH : 1 MEI 2018 (SELASA)

Peranti bantu pengguna baca e-mel guna kulit

LONDON 30 April - Facebook membangunkan peranti futuristik yang membolehkan pengguna membaca e-mel dan teks mesej menggunakan kulit mereka.

Mail Online melaporkan, peranti tersebut akan dipasang pada lengan pengguna dan menggunakan pengesan haptik bagi meminimumkan gelombang dalam bentuk tertentu.

Peranti berkenaan dikatakan boleh mengurangkan ketagihan menggunakan telefon pintar dan juga membantu golongan kurang pendengaran serta penglihatan berkomunikasi.

Prototaip itu didedahkan dalam kertas penyelidikan yang diterbitkan pada awal bulan ini, tetapi Facebook mengumumkan-nya baru-baru ini di Kanada.

Dalam penyelidikan itu, para

saintis menunjukkan bagaimana pengguna boleh mempelajari cara menggunakan peranti terbabit dengan dibantu oleh aplikasi yang mudah digunakan.

Pengguna akan menerima getaran pada lengan mereka yang dikodkan ke dalam 'fonem', iaitu satu unit bahasa lisan yang boleh digunakan untuk semua bahasa, menjadikannya mudah dipelajari.

Saintis menyatakan mereka menggunakan fonem kerana ia lebih mudah dihantar melalui gelombang berbanding abjad.

"Kami menggunakan lengan sebagai medium kerana ia mempunyai kepekaan sentuhan yang lebih baik berbanding kebanyakan bahagian lain tubuh. Bahagian berkenaan juga tidak mengganggu aktiviti seharian berbanding tangan, dahi atau kaki," ujarnya.



PERANTI pembaca e-mel memindahkan gelombang yang dihasilkan menerusi getaran pada kulit lengan pengguna. - AGENSI