

C11: Social, Ethical, Legal and Economic Issues (Part 3)

Understand the importance of ethics in the conduct of Computing Professionals

Be aware of the impact of Computing in different real-life situations.



Contents

3.4.1 Understand the code of ethics (conduct) of a Computing professional.

3.4.2 Describe the impact of computing on lifestyle and workplace for social and economic developments.

3.4.3 Discuss the social, ethical, legal and economic issues of computing and technology.



Social Issues: Use of Info-Media

Info-media

creation, spread and use of data and
content on digital platforms



Real or Fake?

Forwarded

Breaking News from CNN :-

Dr. Li Wenliang, China's hero doctor who was punished for telling the truth about Corona Virus and later died due to the same disease, had documented casefiles for research purposes and had in the casefiles proposed a cure that would significantly decrease the impact of the COVID - 19 Virus on the human body. The chemical **Methylxanthine, Theobromine and Theophylline** stimulate compounds that can ward off these virus in a human with atleast an average immune system. Whats more shocking is that these complex words that were so difficult for people in China to understand is actually called **Tea** in India, YES, our regular Tea has all these chemicals already in it. The main **Methylxanthine** in tea is the

Forwarded

SERIOUS EXCELLENT ADVICE by Japanese doctors treating COVID-19 cases. Everyone should ensure your mouth & throat is moist, **never DRY**. Take a few sips of water every 15 mins at least. WHY? Even if the virus gets into your mouth...drinking water or other liquids will WASH them down through your oesophagus and into the stomach. Once there in tummy...your stomach ACID will kill all the virus. If you don't drink enough water more regularly...the virus can enter your windpipes and into the LUNGS. That's very dangerous. Please remind everyone about this !

日本

Forwarded

From tomorrow onwards there are **new** communication regulations.

All calls are recorded

All phone call recordings saved

WhatsApp is monitored

Twitter is monitored

Facebook is monitored

All social media and forums are monitored

Inform those who do not know.

Your devices are connected to ministry systems.



The authority is very serious about it, they don't give any chance. At Ya Kun Compass1, 1 of their customers was fined \$300 for sitting in the **X** space. So don't sit on the tape with (/) or (X) ya. Same as queue up.

Forwarded

Information from patients recovering from the Hospital ...

Every day we are there:

1. Take Vit C-1000
2. Vitamin E
3. 10:00 - 11:00 sunlight for 15-20 minutes.
4. Egg one item
5. Take a rest /get a 7-8 hour min sleep
6. Drink 1.5 L of water daily and every meal, should be warm not cold. That's what we do at the hospital.

This is to tell all of us that the pH for the coronary virus varies from 5.5 to 8.5

What we need to do, to defeat the coronary virus, is to consume more alkaline foods above the virus's pH level.

Some of them are:

- * Lemon - 9.9 pH
- * Lime - 8.2 pH

Good news, Wuhan's corona virus can be cured by one bowl of freshly boiled garlic water.

Old Chinese doctor has proven it's efficacy. Many patients has also proven this to be effective. Eight (8) cloves of chopped garlics add seven (7)cups of water and bring to boil., Eat and drink the boiled garlic water, overnight improvement and healing. Glad to share this.

2:56 PM

Forwarded

All Singapore Citizens Entitled to withdraw \$2000 Dollars a one time payment **from 1st April 20** due to the spread of COVID-19; Novel Coronavirus.

Read full article here on how to make claim:

<https://bit.ly/2vvme6X>

1:216:56





By Chew Hui Min

21 May 2020 06:50PM
(Updated: 21 May 2020 07:02PM)

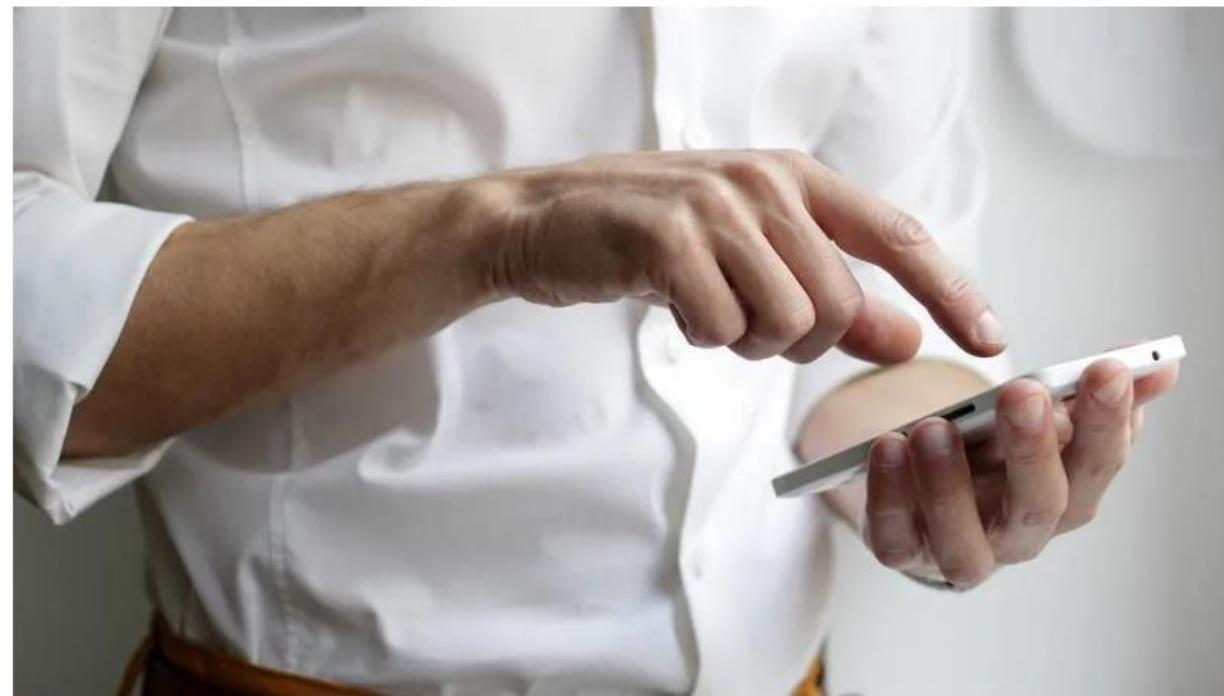


Bookmark



Singapore

6 in 10 people in Singapore have received fake COVID-19 news, likely on social media: Survey



(Photo: Unsplash/NordWood Themes)



Fake News

Deliberate disinformation or hoaxes

Spread via traditional news media or online social media.



Cyber propaganda

Misuse, alteration and spread of biased content with political agenda

Disinformation campaign: Modern warfare?



Russian involvement in 2016 US Presidential Elections



How Fake News Fanned The Flames Of War in Ukraine |

THE TRUTH ABOUT FAKE NEWS | CNA INSIDER



Singapore Fake News Laws: Guide to POFMA (Protection from Online Falsehoods and Manipulation Act)

Last updated on February 3, 2020



What is POFMA and What Does It Cover?

POFMA seeks to prevent the electronic communication of falsehoods (i.e. false statements of fact or misleading information), as well as to safeguard against the use of online platforms for the communication of such falsehoods.

POFMA also puts in place various measures to counteract the effects of such communication and to prevent the misuse of online accounts and bots (i.e. computer programmes that run automated tasks).

Why was POFMA implemented?

Fake news has been an ongoing phenomenon in Singapore. As early as 2007, a picture of “halal pork” allegedly being sold in FairPrice outlets island-wide went viral, forcing the supermarket chain to lodge a police report and assure customers that this was a falsehood.

Then in 2016, a hoax was widely shared about the [alleged collapse of a roof at Punggol Waterway Terraces](#). This false news caused anxiety among residents, and led to the wastage of substantial resources, as grassroots leaders, police and Singapore Civil Defence Force personnel had rushed down to the scene over fears of mass casualties.

The POFMA was therefore implemented to tackle growing concerns over the scourge of fake news and misinformation, communicated particularly through various online and social media platforms.



Fake News

Protection from Online Falsehoods and Manipulation Act

Facebook bows to Singapore's 'fake news' law with post 'correction'

© 30 November 2019



Facebook has added a correction notice to a post that Singapore's government said contained false information.



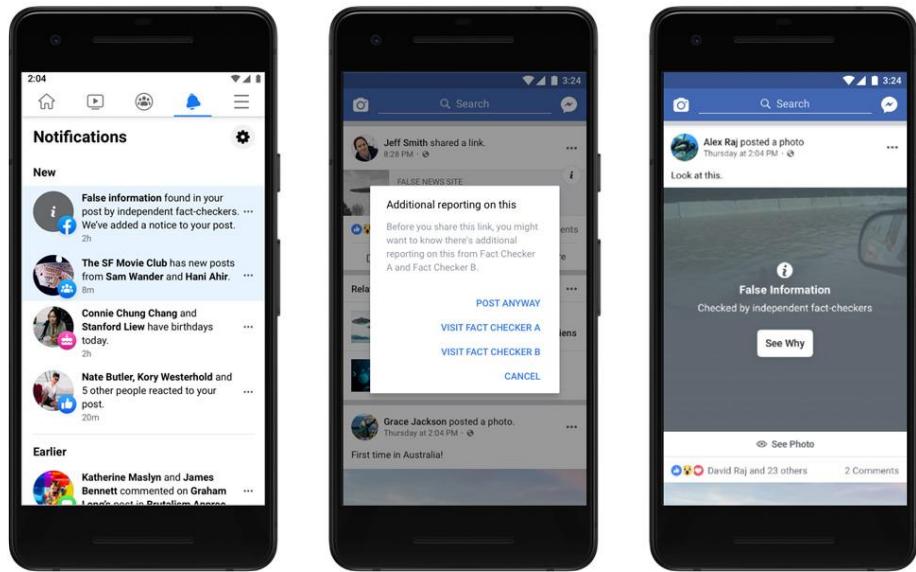
It is the first time Facebook has issued such a notice under the city-state's controversial "fake news" law.

Singapore claimed the post, by fringe news site States Times Review (STR), contained "scurrilous accusations".

The note issued by the social media giant said it "is legally required to tell you that the Singapore government says this post has false information".



Fact Checkers





A Singapore Government Agency Website



Friday

26 - 33 °C

22 May 2020

24Hr PSI 56-64PSI

FACTUALLY

EXPLAINERS

ARTS & CULTURE

DEFENCE & SECURITY

E & MORE

FEATURES

RESOURCES

CONTACT

Q

Clarifications: Misinformation, rumours regarding COVID-19

Not sure, don't share.

11 min read | Published on 23 Apr 2020

Share :



PART OF A SPECIAL FEATURE

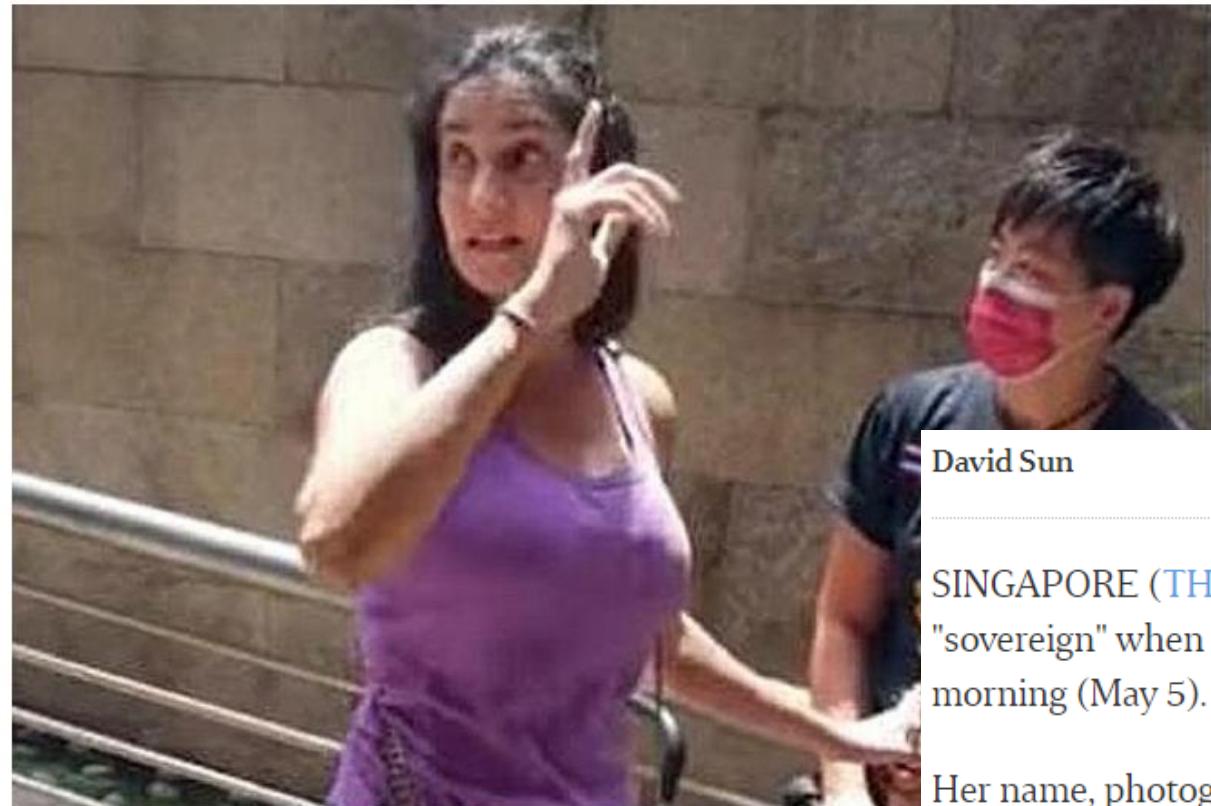
**COVID-19
(Coronavirus
Disease 2019)**

There have been a number of fake messages and unfounded rumours circulating related to the COVID-19 (Coronavirus Disease 2019).

If you receive these messages or any other unsubstantiated information over WhatsApp or other online platforms, we urge you not to forward or circulate them. Remember, if you are not sure, don't share.



Doxxers wrongly identify tech CEO as 'sovereign' woman



David Sun

What is doxxing?

Paramjeet Kaur was charged in court with breaching safe distancing regulations and being a public nuisance. LEONG/FACEBOOK

SINGAPORE ([THE NEW PAPER](#)) - A woman who made headlines after claiming to be a "sovereign" when she refused to wear a mask in public was apparently outed on Tuesday morning (May 5).

Her name, photographs and personal details were revealed on social media, prompting a string of racist and xenophobic comments against her.

But in identifying her as the chief executive officer of a tech company, the doxxers had targeted an innocent party who was not involved in the incident at Shunfu Mart on Sunday.

Condo resident, who verbally abused security guard, makes police report against harassment

By JANICE LIM



SINGAPORE — A police report against harassment was made by a condominium resident who was **filmed abusing a security guard** in a video that has gone viral.

In response to TODAY's queries, the police confirmed that the report has been filed by the resident. A separate police report was made by the security guard.

ADVERTISEMENT

In May, Parliament passed amendments to the Protection from Harassment Act, which made it a crime for online vigilantes to publish someone's personal information with the intention to harass, threaten or facilitate violence — an act known as doxxing. It is unclear if the amended laws have come into force. TODAY has sent a query to the authorities.

The video was first posted last Saturday (Oct 26) morning. It showed the resident of Eight Riversuites — who identified himself as Ramesh and is understood to be a Singapore citizen — having a dispute with the security guard over a condominium rule requiring guests who arrive after 11pm to pay for parking.

Since then, the video has been reposted and commented upon by many online users, including some who dug up personal information about the resident, based on his now-defunct LinkedIn profile, for example.

Many slammed his behaviour, while others called on his company, JP Morgan, to fire him. A petition urging the multinational investment bank to do so has gathered more than 18,000 signatures as of 10pm on Tuesday.



Cancel Culture: A Grey Area



WORLD

Cancel culture: Positive social change or online harassment?

^

23 Jul 2020 11:57AM

(Updated: 23 Jul 2020 12:12PM)



Bookmark



NEW YORK: Celebrities, brands, leaders and ordinary people are all falling foul of "cancel culture", a movement that seeks to call out offensive behavior but that critics denounce as excessive and contributing to increased political polarisation.

Whether it's a controversial tweet or video clip, social media users are quick to demand accountability - but detractors say it can amount to online shaming.

Advertisement

"Cancel culture" involves a concerted effort to withdraw support for the figure or business that has said or done something objectionable until they either apologise or disappear from view.

Author JK Rowling, for comments deemed deeply insulting to transgender people; YouTuber Shane Dawson, for old videos of him in blackface; and singer Lana Del Rey, for a controversial Instagram post contrasting herself with black artists, have all been caught in the wave.



Protection from Harassment Act (POHA)

Examples of Doxxing

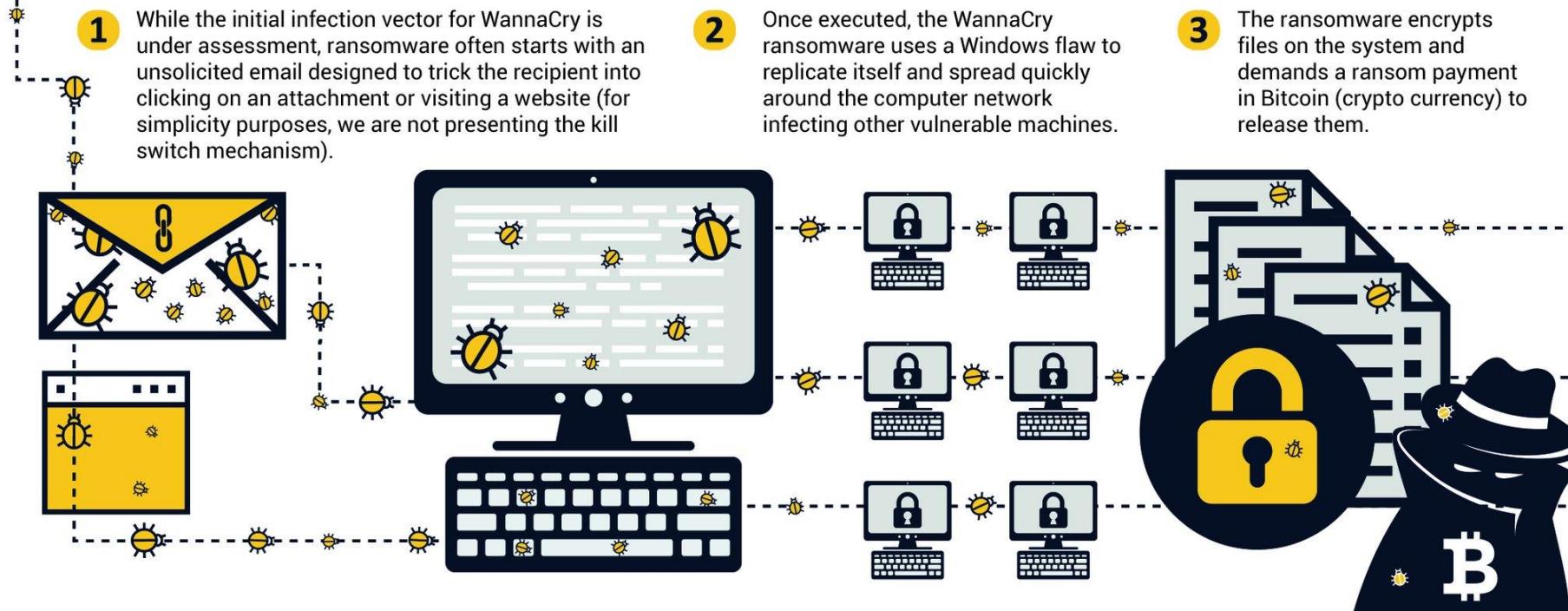
What is considered doxxing:	What is not considered doxxing:
Publishing abusive and insulting comments about a person's alleged sexual promiscuity and including that person's contact details and photos to allow others to contact him	Posting a video of reckless driving on an online forum with the intention to warn people to drive safely
Sharing a person's personal information on social media and asking others to "teach him a lesson"	Posting a video of a public dispute on social media in order to provide a factual account of the incident
Posting a person's personal information on an online forum where other users have called for that person to be identified, so that he can be attacked	Sharing a person's personal information with the authorities or emergency services so that necessary action can be taken
Posting a video of a public figure that includes his contact details, and asking others to threaten the person	Posting a video of a public figure where that person is being interviewed about publicly known facts



Social Engineering



HOW DOES THE WANNACRY RANSOMWARE WORK?



Singhealth Data Breach

ST

SINGAPORE

POLITICS

ASIA

WORLD

VIDEOS

MULTIMEDIA

LIFESTYLE

FOOD

FORUM

OPINION

BUSINESS

SPORT

MORE ▾

SINGAPORE

Courts & Crime

Education

Housing

Transport

Health

Manpower

Environment

Personal info of 1.5m SingHealth patients, including PM Lee, stolen in Singapore's worst cyber attack



□ 1 of 3 About 1.5 million patients, including stolen. Some 160,000 people also ha

SINGAPORE - In Singapore's worst cyber attack, hackers have stolen the personal particulars of 1.5 million patients. Of these, 160,000 people, including Prime Minister Lee Hsien Loong and a few ministers, had their outpatient prescriptions stolen as well.

The hackers infiltrated the computers of SingHealth, Singapore's largest group of healthcare institutions with four hospitals, five national speciality centres and eight polyclinics. Two other polyclinics used to be under SingHealth.

In the light of the attack, all of Singapore's Smart Nation plans, including the mandatory contribution to the National Electronic Health Record (NEHR) project - which enables the sharing of patients' treatment and medical data among hospitals here - have been paused.

Specifically, mandatory contribution to NEHR is now on hold until further notice.

Mr Iswaran, who is also Minister-in-Charge of Cyber Security, will [convene a Committee of Inquiry \(COI\)](#) to conduct an independent external review of the incident. Retired district judge Richard Magnus will chair the committee.



Initial investigations showed that one SingHealth front-end workstation was infected with malware through which the hackers gained access to the data base. The data theft happened between June 27, 2018, and July 4, 2018.



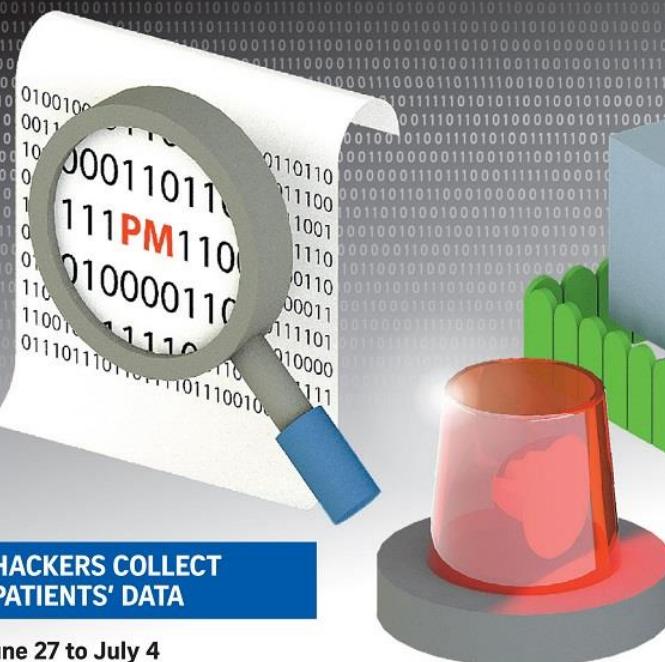
How SingHealth's database was hacked

Personal data of 1.5 million SingHealth patients was stolen in Singapore's largest data breach to date, where hackers infiltrated the healthcare group's database through a deliberate, well-planned cyber attack. Here is how it happened.



THE INITIAL BREACH

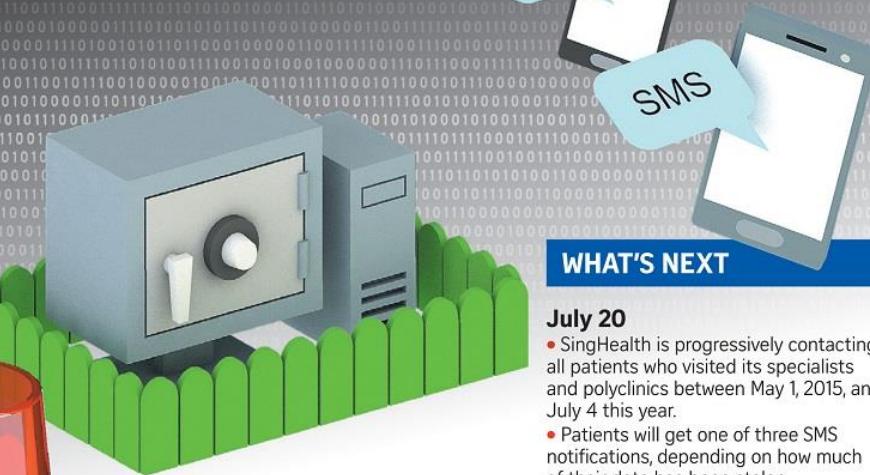
- A SingHealth front-end workstation is breached, likely through malware that was downloaded through a compromised website or a phishing e-mail.
- The malware allows hackers to obtain account credentials, such as the username and password. This gives them privileged access to the SingHealth database.



HACKERS COLLECT PATIENTS' DATA

June 27 to July 4

- Using the stolen login credentials, hackers use malicious software to access patient data, steal them, probe for more entry points and cover their tracks.
- The hackers specifically target Prime Minister Lee Hsien Loong's personal particulars and prescription information.
- At the same time, hackers steal the demographic data of 1.5 million patients. This includes name, IC number, address, gender, race and date of birth.
- Outpatient prescription details of 160,000 patients are also stolen.
- The affected patients had visited SingHealth outpatient clinics and polyclinics between May 1, 2015, and July 4 this year.



ACTION AND PRECAUTIONS TAKEN

July 4

- Administrators of the Integrated Health Information Systems (IHIS) detect unusual activity on one of SingHealth's IT databases. They investigate the incident and additional cyber-security measures are put in place to stop the unauthorised activity.
- Hackers continue to mount repeated attacks on different fronts to gain access to the database, but are detected due to increased monitoring.
- No further data is leaked.

July 10

- Internal investigations confirm it is a cyber attack. SingHealth informs the Ministry of Health and the Cyber Security Agency of Singapore. Given its scale and sophistication, the cyber attack was not the work of casual hackers or criminal gangs, say the authorities. It was deliberate, targeted and well planned.
- SingHealth breaks the communication link used by the malicious software. It increases monitoring across all public information technology systems.
- Connections and systems logs are monitored and computers with malware are seized.
- SingHealth resets network servers and forces all employees to reset their passwords.

July 12

- SingHealth lodges a police report.



WHAT'S NEXT

July 20

- SingHealth is progressively contacting all patients who visited its specialists and polyclinics between May 1, 2015, and July 4 this year.
- Patients will get one of three SMS notifications, depending on how much of their data has been stolen.

- Those without mobile phone numbers registered with SingHealth will be informed via post.
- Patients can also check if their data was stolen by going to the SingHealth website at www.singhealth.com.sg or by using the Health Buddy mobile app.
- Minister-in-charge of Cybersecurity S. Iswaran has also convened a Committee of Inquiry, led by retired senior district judge Richard Magnus.



Ethical Issues

Getting AI to do your homework?



Marrying an AI?



Ethical Issues

Equifax Data Breach: Lack of Responsibility and Competence

Equifax Staff failed to install the security updates for Apache Struts exploit in a timely manner.

[Link to Equifax Article](#)



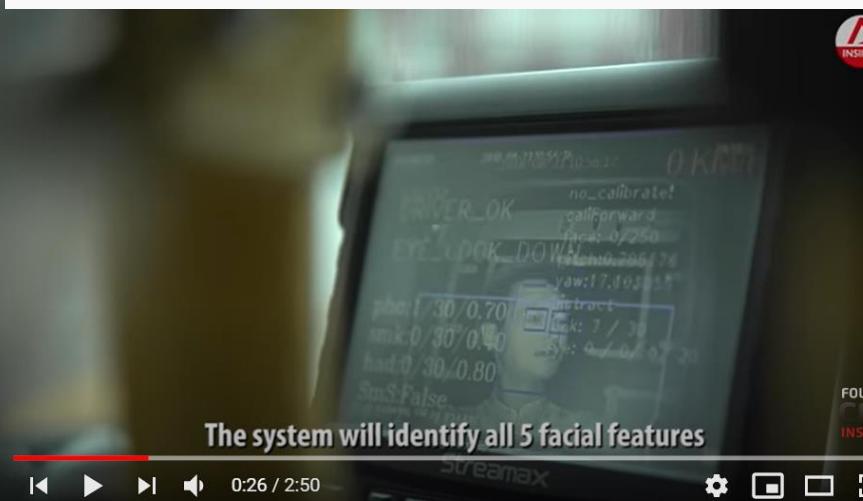
AI Facial Recognition: Surveillance vs Privacy



#PrisonBreak #CaptainofLives
Breaking Up Prison Fights With Artificial Intelligence



#10yearchallenge #WhyItMatters
China Foils Toilet Paper Thieves With Facial Recognition Tech | CNA Insider



Curbing Unsafe Bus Driver Habits In China, With Artificial Intelligence



#WhyItMatters
We Try To Outwit China's 'Big Brother' Cameras



Man abducted as child in China reunited with family after 32 years, thanks to facial recognition

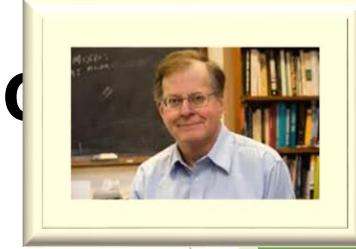


<https://www.straitstimes.com/asia/east-asia/man-abducted-as-child-in-china-reunited-with-family-after-32-years-thanks-to-facial>



Legal Issues

**Computers are Revolutionary due to
Logical Malleability.** - James Moor



malleable → can be shaped and molded easily

computer → do any activity that can be characterized in terms of **inputs, outputs, and connecting logical operations.**

The logic of computers can be massaged and shaped in endless ways ...

Computers provide us with **new capabilities** and these in turn give us **new choices for action.**



Computing's property of logical malleability means society isn't always prepared for the introduction and widespread adoption of computing.

What are the implications of such new capabilities and new choices of action?



A typical problem in computer ethics arises because there is a **policy vacuum** about how computer technology should be used.

- James Moor

Policy Vacuum → no policies for conduct exist or existing policies seem inadequate

A difficulty is that along with a policy vacuum there is often a conceptual vacuum.



Whatsgoodbro : *** kid
ravion : lol
Itsukix : have 4 12 gauge
Whatsgoodbro : go cut ur wrists
Whatsgoodbro : no1 likes u
Itsukix : 2 20 gauge
Whatsgoodbro : go suicide off a bridge
Daetor : Now Lamitrov
Itsukix : 2 .22 rifle
Itsukix : s
Whatsgoodbro : fking ***
Aluto : that escalated quickly
Daetor : I'm fine, but...
Itsukix : 5 different hacdguns
Daetor : If I get hit while I'm playing music
Whatsgoodbro : ur mom escalateed on this diq



Laws Catchup to Ensure Ethical use of Data: Including Reporting of Breaches



SINGAPORE

Privacy watchdog proposes mandatory notification for certain data breaches



By Rachelle Lee



Privacy watchdog proposes mandatory notification for certain

SINGAPORE: Singapore's privacy watchdog has announced proposed changes to the Personal Data Protection Act (PDPA), including the required reporting of certain data breaches to customers.

This is to "give affected individuals the opportunity to take steps to protect themselves from the risks and impact of a data breach", the Personal Data Protection Commission (PDPC) said in a press release on Thursday (Jul 27).

To avoid imposing "overly onerous regulatory burdens on organisations" or "inadvertently create notification fatigue for individuals", the commission proposes that the notifications be mandatory only when there is a risk of impact or harm for the customers.



From Ethics to Law

- ▶ Copyright and Patents Act
<https://sso.agc.gov.sg/Act/CA1987> <https://sso.agc.gov.sg/Act/PA1994>
- ▶ Computer Misuse Act:
<https://sso.agc.gov.sg/Act/CMA1993>
- ▶ Personal Data and Protection Act
<https://sso.agc.gov.sg/Act/PDPA2012>
- ▶ Protection from Harassment Act
<https://sso.agc.gov.sg/Act/PHA2014>
- ▶ Cybersecurity Act
<https://sso.agc.gov.sg/Acts-Supp/9-2018/>
- ▶ Protection from Online Falsehoods and Manipulation Act
<https://sso.agc.gov.sg/Acts-Supp/18-2019/>



Economic Issues

Intellectual Property
Copyright
Patents
Trademarks



WHAT THE HECK IS A MEME?



**FORCED TO PAY LICENCE FEES
FOR USING A POPULAR MEME**



**NOT SURE IF
FUNNY**

OR COPYRIGHT INFRINGEMENT

memegenerator.net



What is Intellectual Property?



What is Intellectual Property?

Intellectual Property (IP) refers to the labour of the mind (e.g. inventions, literary and artistic works, business ideas, design, names) that has commercial values.

IP is protected in law by patents, copyright and trademarks.

Content on the internet are protected by IP laws which specify how they should be used and distributed.

Why do you think IP should be protected?

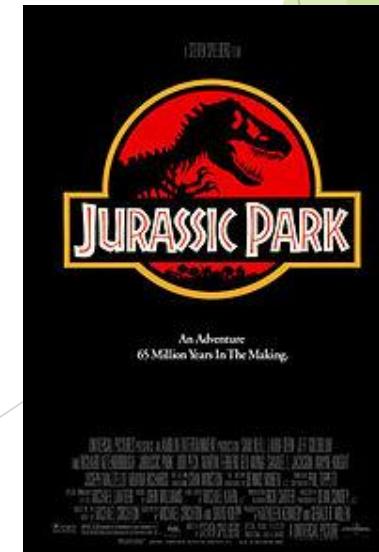
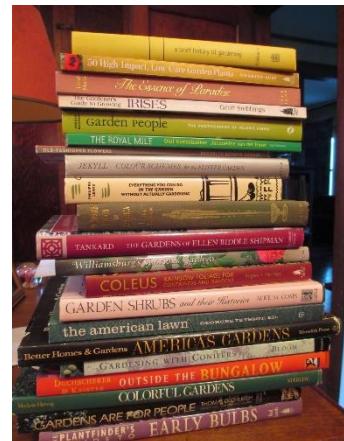


What is Copyright?

Copyright is a legal term used to describe the rights that creators have over their literary and artistic works. It protects the skill, labour, judgement used in creating that expressed form.

Works covered by copyright range from books, music, paintings, photographs, sculpture and films, to computer programs, databases, advertisements, maps, and technical drawings/models.

These rights enable a copyright owner to control the commercial exploitation of his/her work.



Copyright Act

In Singapore, the legislation is the [Copyright Act](#).

It gives owner of the copyright the rights to:

- (i) to reproduce the work in a material form;
- (ii) to publish the work if the work is unpublished;
- (iii) to perform the work in public;
- (iv) to communicate the work to the public;
- (v) to make an adaptation of the work;

Essentially copyright is a negative right to prevent others from copying, selling, distributing, trading works without license/consent of the copyright owner.

There is infringement of copyright if the above is done without license/consent from the owner.



Acquiring Copyright

You do not need to register for copyright protection. Copyright is automatically granted as soon as you create and express your original work in a tangible form, such as in a recording or writing.

There are a few things you can do to protect yourself and your original work. Click here to find out:

1. Include a copyright symbol © on your work, followed by your name, and year the work was first created.

Example: © John Tan 2017

This symbol is a notice of your claim to the work. While it does not give you any substantive right, the use of this symbol could come in useful if you are involved in an infringement proceeding. If the infringement party claims that he did not know the material was protected under copyright law, the use of the symbol would generally stop him from successfully relying on this argument.

<https://www.ipos.gov.sg/protecting-your-ideas/copyright>

2. Maintain your proof of originality

There are a number of ways you can maintain proof that you are the original author of the work:

1. Deposit a copy of your work with your lawyers or in a depositor
2. Send a copy of your work to yourself by post, leaving the envelope unopened so that the date stamp and the unopened work could establish the date of the work's existence
3. Make a declaration before a Commissioner of Oath stating the fact of ownership and the date of creation.



Copyright FAQs

What if two identical or similar works were in fact produced independently of each other?
There is no infringement of copyright by one of the other.

Are ideas protected by copyright?

No. The following are not protected by copyright: Ideas (e.g. a new business idea that have not been documented), Concepts (e.g. an idea for a new app that has not been documented), Procedures (e.g. the steps involved to create a new cloud-based legal services), Methods (e.g. the unique solution to a mathematical problem), subject matter that has not been made in a tangible form in a recording or writing (e.g. speech or dance that has not been written down or recorded)

Duration of copyright?

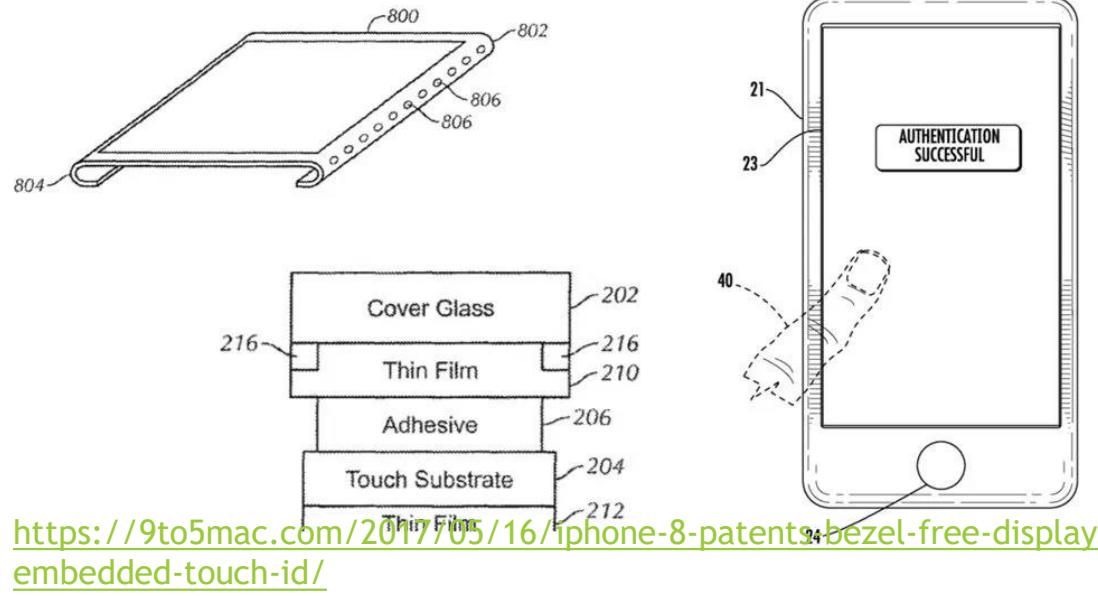
Copyright in a literary, dramatic or musical work, or in an artistic work other than a photograph, subsists during the life of the author plus 70 years after his/her death. For sound recording and film, copyright subsists until the expiry of 70 years after the expiry of the calendar year in which the recording of film was first published. Duration of copyright protection for a broadcast and cable programme is 50 years from the end of the calendar year in which the broadcast was made or the programme was first included in a cable programme service.



What is Patent?

A patent is a right granted to the owner of an invention that prevents others from copying, replicating, using, selling, trading or licensing the invention without permission or consent of the patent owner.

Patent for edge-to-edge display, touch ID in screen: Apple iPhone 8



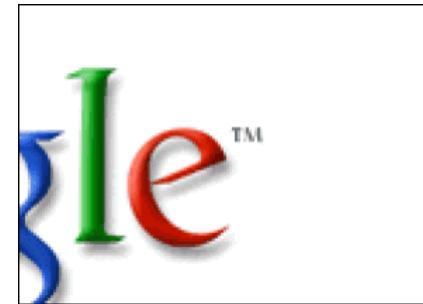
Patent for vertical farming:
Sky Greens



What is Trade Mark?

Any sign (e.g. logo) capable of being represented and of distinguishing one's goods or services from those of others.

A passing off action involves a deception made by a person or a legal entity (such as a company) to sell his own goods or services as if they are the goods or services of another. Such unfair business practice affects the brand or goodwill of another.



Facebook sued over Calibra's look-alike logo

Over the summer, [Facebook unveiled its Libra cryptocurrency](#) and the Calibra subsidiary that would help manage it. Facebook also unveiled a logo for Calibra and, well, it looks [somewhat similar](#) to the logo of Current, a startup bank. Apparently, Current agreed, so much so that it [has filed a lawsuit](#) against Facebook, alleging trademark infringement.

The suit names four defendants: Facebook, Calibra, a Facebook subsidiary that owns IP related to Calibra, and Character, the design agency that made the Calibra logo. You might be surprised to see a design agency named in the lawsuit — but Character apparently designed *both logos*, according to the lawsuit.



Enterprise blockchain news

Facebook rebrands Libra wallet as Novi, will offer refund for fraud

Today Facebook announced that the Calibra wallet has been rebranded as [Novi](#). The CEO of the Facebook subsidiary, David Marcus, said that the Calibra name had caused some confusion, hence the rebrand. It didn't provide a specific date but says it is preparing to launch this year.

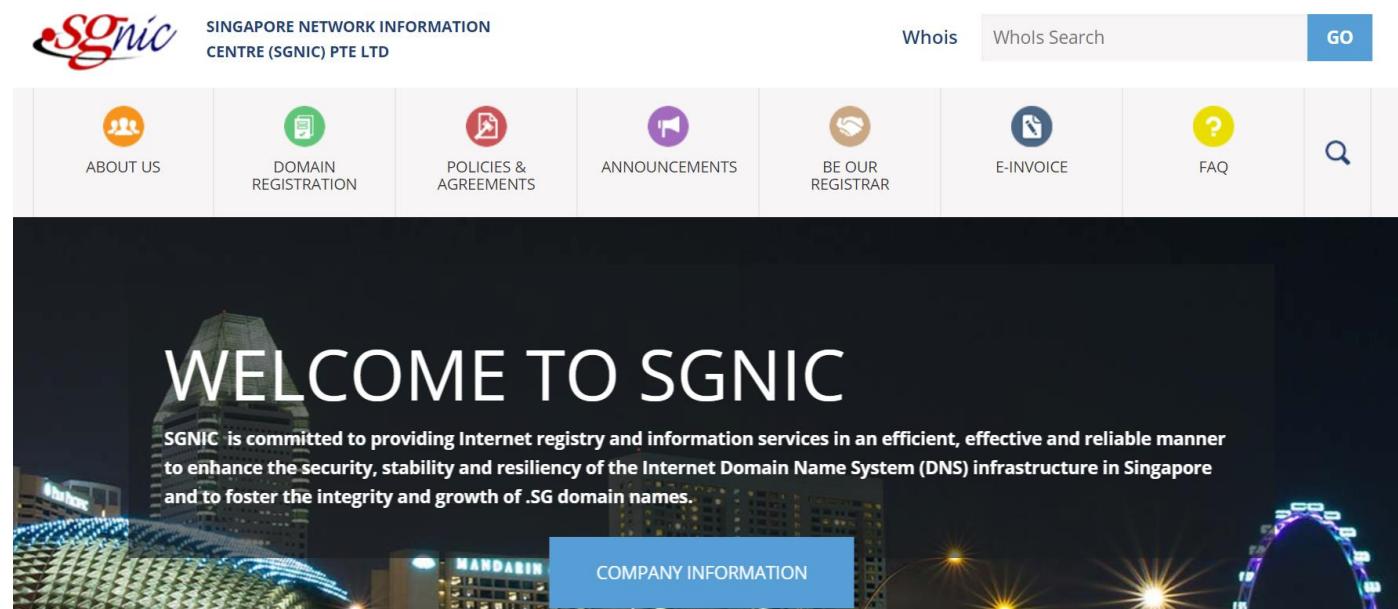


Trademarks (Domain Names)

Domain names are key to branding. Domain names that are unique can be trademarked.

Booking of domain names is on a first-to-register basis, except that one cannot register a domain that is the trade mark of another
(e.g. www.Microsoft.sg)

Domain registration can be done at Singapore Network Information Centre (SGNIC): <https://www.sgnic.sg/home.html>



Common Violations of IP

Copyright infringement

- Piracy (e.g. software, music, video games)
- Plagiarism (of content)

Trademark infringement

- Passing off action
- Domain name squatting

Business IP infringement

- Patent/IP thefts
- Leaking of confidential or critical information by business/political rival



WikiLeaks



Apple Files Copyright Infringement Lawsuit

"Corellium's business is based entirely on commercializing the illegal replication of the copyrighted operating system and applications that run on Apple's iPhone, iPad, and other Apple devices.

The product Corellium offers is a "virtual" version of Apple mobile hardware products, accessible to anyone with a web browser. Specifically, Corellium serves up what it touts as a perfect digital facsimile of a broad range of Apple's market-leading devices—recreating with fastidious attention to detail not just the way the operating system and applications appear visually to bona fide purchasers, but also the underlying computer code.

Corellium does so with no license or permission from Apple.



Microsoft suing to evict ‘cybersquatters’

Maija Palmer in London MARCH 14 2007



Microsoft will on Wednesday launch a series of lawsuits in the US and Europe against “cybersquatters”, and will urge other companies to help tackle what it says is a growing problem on the internet.

Cybersquatting is the registration of a trademarked domain name – or one very similar to it, such as “microsoft.com” – with the intent to profit from it.

Cybersquatters will generally either offer to sell the name back to the trademark owner for an extortionate price, or make money from internet traffic accidentally landing on their page. The practice is a nuisance for the growing number of companies that do business over the internet and are loath to lose valuable traffic to rogue websites.



Intellectual Property (Alternatives)

The creative commons



Intellectual Property (Alternatives)

Free and Open-source software (FOSS)



Meme copyright- Fair Use Doctrine

An Internet Meme is in legal terms, *a derivative work*, and usually copyright owner is the only party with the legal right to create a derivative work.

However, the rights of the copyright owner are not exhaustive or absolute.

If the person who makes the “derivative work” makes “fair use” of the copyrighted image, this is a defense to a claim of Copyright Infringement.

<https://thelawtog.com/memes-violate-copyright-law/>



<https://www.publicknowledge.org/blog/copyright-for-meme-makers/>



Fair Dealing/Fair Use

- ▶ Singapore: Under the provisions for "fair dealing" in the Copyright Act, a certain amount of copying for legitimate purposes, such as for the purpose of research or education, criticism/review, for reporting current events, is permissible as long as it is a 'fair dealing'.
- ▶ US: Fair use is a doctrine in the law of the United States that permits limited use of copyrighted material without having to first acquire permission from the copyright holder. Unlike "fair dealing" rights that exist in most countries with a British legal history, the fair use right is a general exception that applies to all different kinds of uses with all types of works and turns on a flexible proportionality test that examines the purpose of the use, the amount used, and the impact on the market of the original work.



Intellectual Property & Computing

Will Singapore stay ahead of the IP game?

Republic needs to step up to challenges and threats regarding use and abuse of intellectual property rights emerging around the world

TUE, AUG 21, 2018 - 5:50 AM

FRANCINE TAN



Singapore came in 9th in a recent global IP index, ahead of Switzerland and second to Japan in the Asia-Pacific. The ranking was carried out by the Global Innovation Policy Centre. PHOTO: EPA-EFE



Maintaining Singapore's position

As a well-regarded pioneer on many fronts (from water innovation and management, to smart city technology solutions) and as a thought leader in Asia in the world of IP, Singapore has to be resilient in tackling and responding to new issues and challenges and to guard against an erosion of all it has achieved.

Government agency leaders and representatives from the industry from countries far and wide including the Cook Islands, Mongolia and Myanmar have visited Singapore's shores to learn about IP administration, protection and its importance to the economy.

They appreciate there is an economic value in protecting brands and IP, which translates to jobs and tax dollars.

Trademark-intensive industries directly contribute half of Singapore's GDP, and indirectly contribute to 55 per cent of GDP, according to an analysis by economics consultancy firm Frontier Economics in 2017.



Multiple Issues (Social/Ethical/Legal/Economic)

THE STRAITSTIMES

SINGAPORE



Contact-tracing device will not track location; people can use TraceTogether if they prefer, says Vivian Balakrishnan

THE STRAITS TIMES

SINGAPORE



New changes to law strictly limit use of contact tracing data

It can be used only in the battle against Covid-19 and investigations into the most serious crimes



Facebook Privacy Scandal



Facebook could be fined billions of dollars following data breach of millions of users



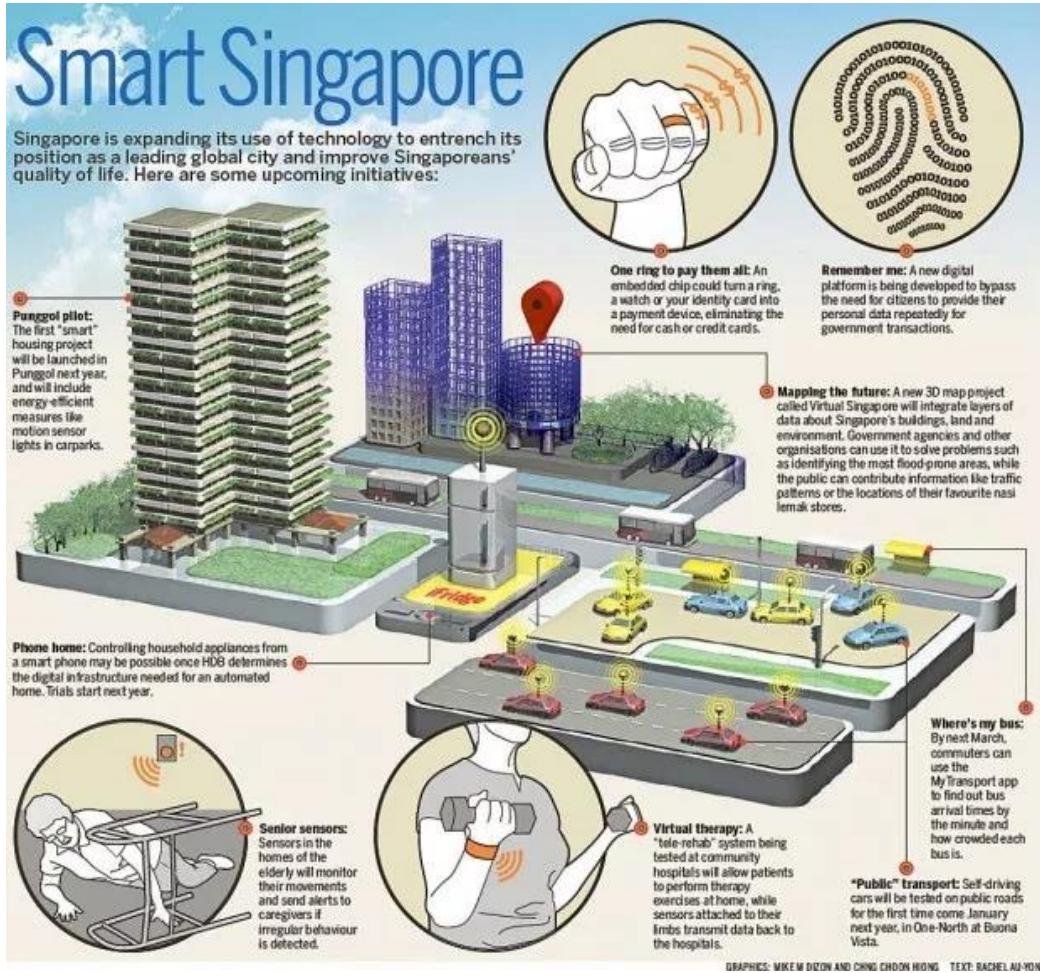
Six million Coffee Meets Bagel dating app accounts hacked



What was acquired were app users' names and e-mail addresses prior to May last year, CMB said in its e-mail. The CMB accounts were on sale for 0.13 bitcoin on the Dark Web, The Register said.



Internet of Things (Multiple Issues)

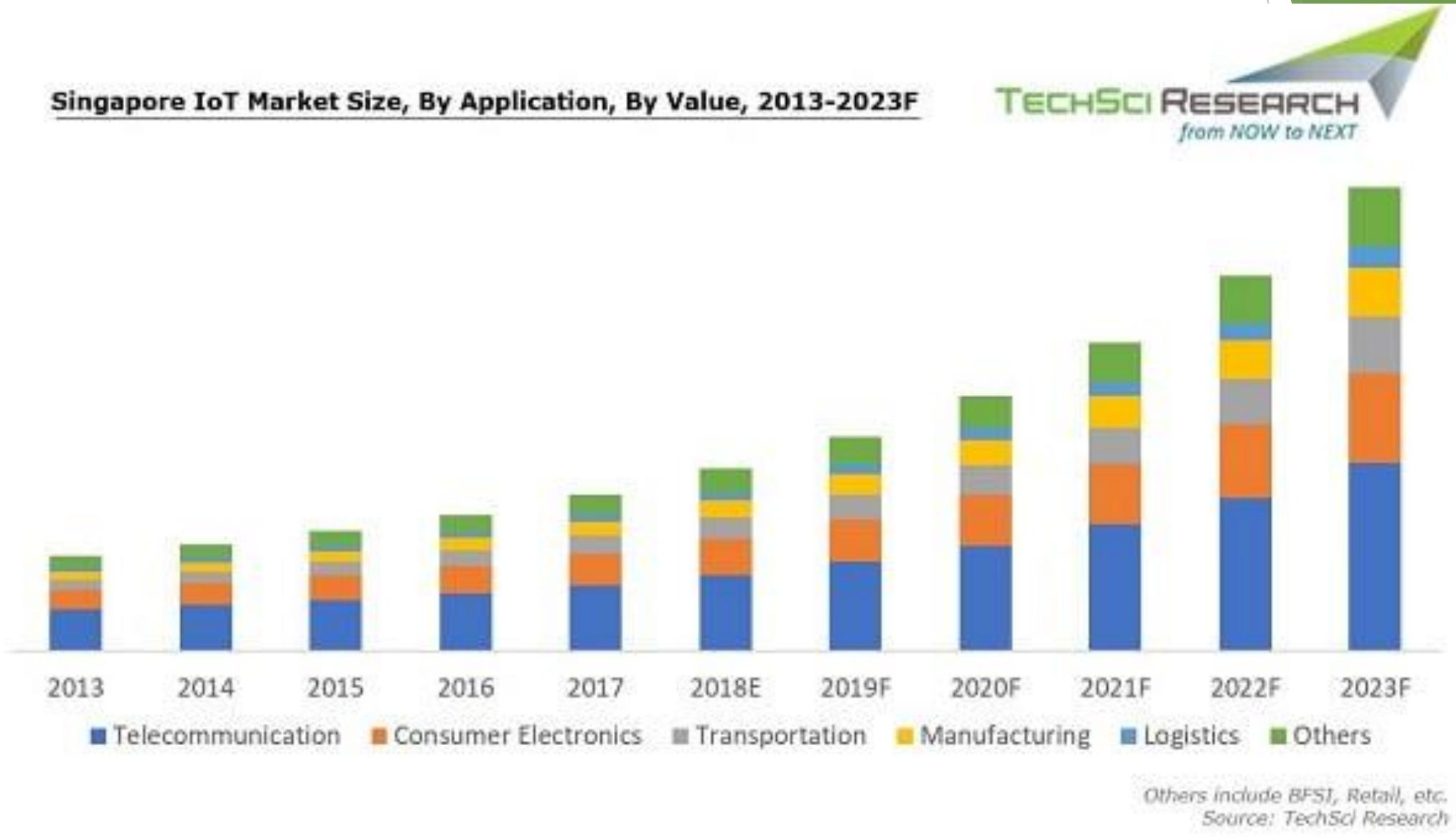


Unlike the infamous Skully helmet, the Argon Transform works with any helmet and won't cost you a bomb.

Singapore-based startup Whyre believes it has the perfect solution, and the result



Internet of Things- Trends



Are smart devices helping or harming?

TEDxSalem
x = independently organized TED event

<https://www.youtube.com/watch?v=ipdTLJclkWI>

Internet of Things-Threats



TECHNOLOGY

My baby monitor started a cyberattack? IoT industry suffering from security growth pains



By Kevin Kwang
@KevinKwangCNA

23 Jul 2018 06:15AM
(Updated: 23 Jul 2018 10:27AM)



Bookmark



Technology

My baby monitor started a cyberattack? IoT industry suffering from security growth pains

There are currently no established Internet of Things security standards, and Singapore recognises that steps need to be taken to ensure minimum standards of protections in this space, says CSA.



BRANDED CONTENT

Decoding cyber threats



Every day, the De

PUBLISHED ON

Every day, Mindef alone experiences hundreds of web exploitation attempts. These include cross site scripting (XSS) attacks, injection attacks, website defacements, or even intrusion attempts by Advanced Persistent Threats, which are more targeted in nature, and may be perpetrated by cyberwarfare agencies of foreign governments.

This is where the breakwater of DCO comes in. Even in peacetime, analysts like Ms Ong work tirelessly, standing steadfast against increasingly prevalent cyber threats.

“It is not an easy job,” says Ms Ong. “The heavy reliance that companies, government agencies and other organisations have on the Internet has given rise to new opportunities for malicious threat actors to exploit. And with every new technology, comes a new threat.”

The emergence of Internet of Things-enabled (IoT) devices opens up a whole new realm of vulnerabilities. For instance, in 2016, StarHub experienced a pair of outages that were eventually attributed to cyber attacks launched from customers’ compromised devices.

More recently, this past July saw the worst cyber attack in Singapore’s history, with the medical records of over 1.5 million Singaporeans compromised.

With the ever-changing nature of cyber threats, it takes highly trained cybersecurity specialists to try and cover every possible angle of attack.



'Internet of things' or 'vulnerability of everything'? Japan will hack its own citizens to find out



By **James Griffiths**, CNN

🕒 Updated 0259 GMT (1059 HKT) February 2, 2019



News & buzz



US arms sold to Saudi Arabia and UAE end up in wrong hands



Holy cabbage! Couple grows giant vegetable



Screenshots from a series of internet-connected cameras accessed by search engine Shodan. None of the cameras had any security checks.

As well as testing which servers have no security, the Japanese team will also test 100 common username and password combinations, such as "admin/admin" or "1234," the MIAC said in a statement.



Summary:

1. Explain how computing saves Time/Money/Effort
2. Check for the ease of copying Digital Media/Documents/Violating Copyrights and ease of transmitting data/news/malware over Networks/Email/Social Media
3. Question what data is collected? For what purpose? Is it unnecessary for the business? How long can you keep it for? How is it secured/stored?
4. Was there Permission/Consent/Agreement to Terms and Conditions sought?
5. Who has access to Customer Data/Big Data? Is it ok?
6. Are Customers Digital Natives, Immigrants or Aliens? Inclusivity? Or Alienating?
7. Is it fair to all customers? Or biased against age/race/religion/non-techsavvy?
8. Is the price reasonable, or is it price gouging?
9. Cybersecurity Education for Employees/Customers required?
10. Third-party vendors, Employees: Code-of-Conduct, NDA required?



Application: Insurance Business Scenario

An insurance business uses a combination of hardcopy documents before 2011, and database from 2011 onwards, to store customer details and insurance policies purchased.

Data Entry Assistants are hired for a 6 month contract, to help the business digitise customer information and policy information from the old files, to the existing database.

In this scenario, what are the positive impacts of Computing? What are the issues that need to be addressed from the use of computing?

