

Information Security Summit 2017

“Effective Use of Analytics and Threat Intelligence to Secure Organisations”

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Privacy Implications for the Use of Data Analytics (Opening keynotes)

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Chairman of the Information Security Summit 2017 Organising Committee,
Mr **Dale Johnstone**,
Distinguished Guests,
Ladies and Gentlemen,

Good morning!

First of all, I would like to pay tribute to the Hong Kong Productivity Council for their staunch support and expert advice on our data protection work, especially over a few data security incidents lately.

Emergence of ICT

More than 20 years ago, in 1996, when the Internet was still in its infancy, Bill Gate predicted that there were remarkable business opportunities in creating contents for the Internet because anyone with a computer and a modem could publish whatever content they created, and distribute it worldwide at almost zero marginal cost. He also predicted that advertising would be promising, with the advantage of interactive advertising, i.e. a user could click on the ad to get additional information, and an advertiser could detect how many people were doing so¹. This is the embryo of online behaviour tracking.

20 years on, we now have some stunning figures about the Internet. According to Internet World Stats, as at 31 March 2017, there were

- 3.7 billion Internet users in the world, or 50% of its population²;
- of which 731 million were in the mainland of China, making up of 53% of its population³; and
- 6 million were in Hong Kong, making up of 82% of the population⁴.

¹ “Content is King”, Bill Gate, 1996

<http://web.archive.org/web/20010126005200/http://www.microsoft.com/billgates/columns/1996essay/essay960103.asp>

² <http://www.internetworldstats.com/stats.htm>

³ <http://www.internetworldstats.com/stats3.htm#asia>

In Hong Kong, we also have more than 5 million Facebook accounts, making up of 68% of our population.

With the increase in the Internet users, revenue from online behavioural advertising also soared. According to PricewaterhouseCoopers' report, Internet ad revenue in the US alone in 2016 reached US\$72.5 billion, which was more than four folds when compared with the figure in 2006 (US\$16.9 billion).

In the mainland of China, online shopping has gone viral. On 11 November 2016, i.e. the Singles Day (光棍節), Alibaba's Taobao recorded RMB 10 billion transactions within the first 7 minutes of the day⁵. Total transaction value of the day exceeded RMB 100 billion⁶.

The above figures cannot fully illustrate the penetration of the Internet and ICT into our daily lives. To celebrate the Singles Day in 2016, Taobao officially launched virtual reality (VR) shopping, by which customers can have real shopping experience in a virtual environment⁷. A couple in Beijing even used QR code to collect cash gifts from guests in their wedding⁸. You may also have heard of the story of beggars soliciting money from pedestrians by using QR Code or electronic wallet along the famous Xi Hu (or West Lake)⁹. Indeed, a number of mainland cities plan to turn themselves into cashless economy, in which many of the brick-and-

⁴ <http://www.internetworldstats.com/stats3.htm#asia>

⁵ <http://news.qq.com/a/20161111/001946.htm>

⁶ http://www.bbc.com/zhongwen/trad/china/2016/11/161111_alibaba_singles_day_e-shopping_2016

⁷ <https://walkthechat.com/taobao-releases-vr-shopping-singles-day/>

⁸ <http://www.appledaily.com.tw/appledaily/article/international/20170426/37630452//>

⁹ <https://udn.com/news/story/7332/2426475>

mortar stores will only accept electronic payments¹⁰. In Hong Kong and many other first-tier cities all over the world, ambitious Smart City initiatives are in the pipeline, in which ICT and sensors will be adopted at a large scale.

By using the Internet and ICT, you inevitably will leave your digital footprints. Extensive use of ICT has led to the creation of data in a massive scale and at an unprecedented speed. Some studies suggested that the volume of digital data would approximately double every two years.

Data Analytics

There is little dispute that by applying analytics to these data, or more accurately the Big Data, you can get significant value from it by, for example, making smarter business decisions. I am sure you will also hear from the learned speakers at this conference about how data analytics can help you identify suspicious activities and pre-empt cyber-attacks. Big Data is no doubt so valuable that some people even call it the new oil of the 21st century.

Unsurprisingly, while data analytics can guide you to the correct business decisions and inform you of the risk of cyber-attacks, it can also reveal intimate details about an individual, which may cause serious privacy concern. One of the notorious examples relates to the US retailer, Target,

¹⁰ http://news.xinhuanet.com/fortune/2017-07/06/c_129648891.htm

which, by analysing the purchasing records, discovered that a teenage girl was pregnant well before her father did¹¹.

More recently, Cambridge Analytica, a firm providing data analytics services, was being accused of meddling in the Brexit referendum and the 2016 US presidential election. The data mining firm reportedly obtained vast datasets about voters from a variety of sources, such as Facebook, airlines and magazines. The data assisted Cambridge Analytica to capture every single aspect of individual voters, finding out “persuadable” voters, and crafting personalised messages of propaganda¹², with a view to nudging the voters to vote for its clients at the polls. Reportedly, Cambridge Analytica was hence condemned for abusing data analytics and hijacking democracy.

Accountability in Data Processing

Nowadays, “notice and consent” alone may well be insufficient for protecting personal data privacy in the context of Big Data and ICT. As you can imagine, most of us tick “consent” right away without bothering to read the privacy statements in order to proceed with the registration of services. The fact that users do not have an option to disagree with or not to accept the privacy statements without being denied from services may well be one of the reasons that the privacy statements are always ignored. The variety and

¹¹ “How Target Figured Out A Teen Girl Was Pregnant Before Her Father Did”, Forbes, 2012: <https://www.forbes.com/sites/kashmirhill/2012/02/16/how-target-figured-out-a-teen-girl-was-pregnant-before-her-father-did/#78c0bab86668>

¹² “The great British Brexit robbery: how our democracy was hijacked”, the Guardian, 2017: <https://www.theguardian.com/technology/2017/may/07/the-great-british-brexite-robbery-hijacked-democracy>

unpredictability in the applications of Big Data analytics also add fuel to the burning issue of giving meaningful or affirmative notice.

Irresponsible use, or use not well considered or thoroughly thought out, of data analytics may have serious ramifications to both individual persons and society as a whole. The emerging trend for data protection in the age of Big Data and ICT is justifiably one of accountability.

In 2014, my office launched the Privacy Management Programme (PMP), in which organisations are encouraged to adopt a top-down approach in data protection, and make a paradigm shift from compliance to accountability.

The General Data Protection Regulation (GDPR) of the EU, which will come into force in all EU countries in May 2018, has taken a further step to bring accountability into law. Article 24 of the GDPR requires that a data controller has to implement appropriate technical and organisational measures to ensure that the processing of personal data is compliant with the GDPR, taking into account the nature, scope, context and purposes of processing, and the associated risks to the rights and freedoms of individuals. The sanction for failing to comply with the requirements of the GDPR relating to accountability is an administrative fine of Euro 10 million or 2% of global annual turnover, whichever is higher.

Without going into details about the implementation of accountability approach, I would like to highlight to you a few key principles of responsible processing of personal data:

- (1) Conduct Privacy Impact Assessment (PIA) at the project planning stage to identify and assess privacy risks, as well as incorporating proper safeguards to mitigate the risks.
- (2) Minimise the collection of personal data. Only collect personal data that is necessary for the purposes. Destroy or de-identify the personal data when the purposes of the original collection have been accomplished.
- (3) Be transparent. Provide sufficient but concise notifications to individuals about the collection and use of their personal data. For the purpose of transparency and meaningful notice, you may consider providing “just-in-time notification”. For example, you may provide pop-up notice in mobile apps or websites right before the collection or access to personal data is about to take place, rather than listing out all possibilities in a lengthy privacy statement at the outset. Consent obtainable from individuals should be realistic, meaningful and result in “No Surprises”.
- (4) Respect the personal data privacy of individuals. Give due consideration to the reasonable expectation of the individuals, as well as the possible harm that may cause to the individuals, before you use, process or transfer the personal data of the individuals concerned.

I understand that many of you are the senior management or chief information officers of your organisations. I hope you can bring the accountability principle of data protection back to your organisations, and

apply it in your day-to-day operations. Detailed guidelines on the PMP, including training kits, will soon be rolled out. More imminently, the issues will be visited at the forthcoming international conference to be hosted by Hong Kong next month. Adopting the principle of accountability, you will, I am sure, find the resulting reward in terms of improved reputation, confirmed confidence and fortified trust amazingly gratifying in the longer run.

Finally, let me re-assure you that whilst my Office has a statutory duty to protect the personal data privacy right of individuals, I am constantly mindful that privacy protection should not unduly compromise the legitimate interest of your organisations or stifle economic growth and ICT development in the interest of the community.

Ladies and Gentlemen,

It is indeed my distinct privilege to be able to data mine the wisdom of such a distinguished congregation of experts in information security at the summit today, which I am sure will be another success.

Thank you!