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# Content 目錄

#### About the Smart City Consortium (SCC)

The Smart City Consortium (SCC) comprises a group of professionals from different corporations and organizations with the aim to provide opinions and suggestions to the Government for formulating related policies and standards in the development of Hong Kong as a world-class smart city. We encourage worldwide collaboration with different stakeholders to create the right ecosystem, which fosters innovation and sustainable economic growth for Hong Kong.

#### 關於智慧城市聯盟(SCC)

智慧城市聯盟(SCC)匯聚一群來自不同公司和機構的專業人士,為香港發展成為一個世界級的智慧城市,在政策和標準層面提供專業意見和建議。我們鼓勵與全世界不同的持份者合作以創造合適的生態系統,促進香港創新及經濟的可持續增長。

#### Messages to Public

給公眾的話

## Exclusive Interview Chow Sang Sang Securities Kicks Off eID Pilot Program for Financial Industry — Susan Mak

企業專訪

周生生證券為金融業試行數碼個人身份 —— 麥惠怡

#### **Event Review**

活動回顧

#### 16 Event Highlight Smart Banking W

Smart Banking Way Forward Luncheon: Drive FinTech Innovations Towards A New Era of Smart Banking

活動精選

智慧金融研討會暨午宴 —— 開創金融科技 邁向智慧銀行新時代

#### **77** Feature Story

Sean Lee: CMHK Steps Up In 5G Technology To Match Smart City Blueprint

專題故事

李帆風:中國移動香港積極開拓5G領域 配合港府《智慧城市藍圖》

#### 24 SCC Corner

智城觀點

#### Singapore and UK Examples Show How Open Data Accelerates Innovation — Dr. Winnie Tang

星拓數據共享平台 港莫再歎慢板 —— 鄧淑明博士



Smart·智城 VICION



The HKSAR Government will introduce a new generation of electronic identity card and set up an electronic identity database. In the coming future, the electronic identification (elD) program will be fully implemented in the public and private sectors, by which people will be able to use more online services, such as online banking, online shopping and other electronic commercial services, with one single electronic identity.

The unification of identity authentication brings convenience to people's life, enhances the quality of services provided by many public and private enterprises, and supports the application of big data analysis. Apart from the convenience and benefits, in my opinion, security is also important. With the trust worthiness of the government, security can be assured if the government assumes the role of centrally handle the personal data, organizes the central digital database, and connects the eID system to other private sectors. Moreover, adding biometric authentication, such as fingerprint scanning, iris scanning and facial recognition, to identity verification and authentication, as well as incorporating technologies like blockchain help further ensure the security of people's personal data.

Smart City Consortium has been dedicated to promoting the cross-border elD development since 2017 through submitting reports to the government to suggest programs of electronic identity interconnection between Mainland and Hong Kong. Also, we have actively participated in different technology exhibitions and elD forums in the Guangdong Province and Hong Kong, in order to facilitate the financial, economic, and trading activities of Mainland and Hong Kong. This can help boost the integration of the Greater Bay Area.

As an important digital infrastructure of a smart city, the construction of elD system requires the effort of the government and the active collaboration and cooperation of public, research, academic and private institutions. In addition, people's acceptance and full coverage are key to the success of elD; otherwise, elD will only remain on the shelf.

In Estonia, the pioneer country of implementing eID, the locals can access all services with only one identity. Therefore, we expect that the introduction of eID will improve the quality of life of the Hong Kong people with convenience, benefits and diversity!



Mr. Eric YEUNG 楊全盛先生 President 會長

香一設資將(推機以用務網方港大數區。碼戶數數庫,數計營時不過數學來,自己至,的類如網外,與一個人不人會及下,的類如網外,與一個人不人會及下,的類型網以的與一個人不人會及一個數型網別,與一個人不人會不過數型,與一個人不人會不過,與一個人不人會不過,與一個人不人會不過,與一個人不是一個人不是一個人不是一個人不是一個人工。

統一身份認證能為市民帶來生活上的便

利,並提高不少公私營企業的服務質素,更有利 於大數據分析的科技發展。除了便利,我認為安 全性同樣重要。政府擁有公信力,由政府牽頭處 理個人資料及組織中央數碼資料庫,再讓eID系統 連結其他私營機構,在安全性上有一定的保障。 此外,在身份核實及認證方面加入生物認證例 如指紋、虹膜、人面識別,並考慮加入區塊鏈技 術,有助進一步保障市民個人資料的安全。

智慧城市聯盟一直致力於推動跨境eID發展,由2017年起開始向政府提交具體報告,建議兩地電子身份互聯互通方案。同時,我們亦積極參與粵港兩地不同的科技展覽及舉辦電子身份認證的論壇,以促進兩地金融經貿,這些項目對大灣區融合均具實際意義。

作為智慧城市的一個重要數碼基建,建設eID系統除了需要政府的努力,公營、科研、學術,以及私人機構的積極配合和攜手合作亦不可或缺。同時,市民的認受性和全面應用亦是eID成功的關鍵,否則eID只是空有技術的軀殼。

我們期望在elD推出後,一如推行elD的先驅國家 愛沙尼亞,單一身份可在全城貫通所有服務,為 香港市民提供更便利多元的生活!

企業專訪 Exclusive Interview



Smart·智城 **VISION** 





# Susan MAK

**Chow Sang Sang Securities Kicks Off elD Pilot Program** For Finance Industry

# 麥惠怡

周生生證券為金融業 試行數碼個人身份

#### 企業專訪 Exclusive Interview



To most people, the name Chow Sang Sang is synonymous with the business of glittering jewelry and gold, but in fact it also participates in the financial industry through its wholly owned subsidiary, Chow Sang Sang Securities.

Over the last two years, under the Framework for the Mutual Recognition of Electronic Signature Certificates, Chow Sang Sang Securities, in collaboration with several securities firms, banks and local financial institutions, has engaged in work to incorporate China's electronic identification (eID) authentication system into their operations. In this issue, Ms. Susan Mak, General Manager of Chow Sang Sang Securities Limited, shares with us the impacts of eID on the development of financial services and cross-border trading.

Susan joined Chow Sang Sang Group in 2001. Previously, she had worked in several international financial institutions, mainly in trustee and corporate management services. It was a dramatic shift in her career, when her former colleague and wife of Chow Sang Sang's Chairman and Group General Manager, invited her to join Chow Sang Sang Securities, which mainly serves retail investors. Since then, Susan has been supervising the securities business for Chow Sang Sang Group for about 18 years.

As the general manager, she needs to keep a close watch on all operations, this is especially true for a manager of a regulated financial institution. In 2017, the Securities and Futures Commission (SFC) officially launched the Manager-In-Charge regime to raise the accountability of senior management of licensed firms. On a daily basis, Susan oversees the company's daily operations to ensure strict compliance with all the SFC's rules and regulations.

談及周生生,多數人第一時間都會聯想到珠光寶氣的黃金首飾,但其實它旗下的周生生證券不單積極協助數碼個人身份(eID)發展,兩年前更與多個券商、銀行及本地機構,聯手推出粵港兩地電子簽名證書互認。今期《智城》邀請了周生生證券總經理麥惠怡女士(Susan),為我們談談eID對金融發展及跨境經貿的好處。

Susan於2001年加入周生生,一直為集團營運證券業務。 周生生證券的主要業務是零售服務,Susan加入集團前, 已在國際金融機構任職多年,期間主理信託及企業服務居 多。當中的大轉變,全因獲當年的舊同事——周生生老闆 娘的邀請,自此轉投服務一般市民的周生生證券,至今已 近18年。

總經理的職務,說穿了就是事事關心,處處為公司把關。2017年,證監會更開始實施核心職能主管制度,提高金融持牌機構高級管理層的問責性。而確保公司符合證監會各種守則及規定,就是Susan日常工作的核心。





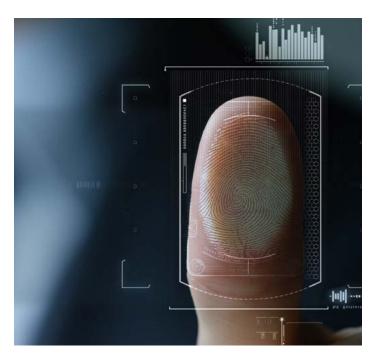
#### elD Clears The Way For Cross-border Remote Account Opening

Investors, especially those from the mainland and overseas, faced difficulty opening brokerage accounts in Hong Kong, even though the SFC has loosened the Know Your Customer (KYC) rules by accepting investors to provide a signed cheque or deposit drawn on a Hong Kong bank for identity verification. However, mainland and overseas investors without a Hong Kong bank account still remain deadlocked. This led Chow Sang Sang Securities to start studying the use of elD systems in crossborder account opening activities two years ago, in conjunction with the Hong Kong Association of Online Brokers Limited (HKAOB), the Smart City Consortium (SCC) and the Asia PKI Consortium.

There are two basic important requirements in the KYC process. Firstly, the identity of the client must be clearly identified. Secondly, the customer signature must be legally recognized. These are the two core issues that must be addressed for cross-border account opening.

"We hope that eID can help solve the difficulties in opening accounts for mainland customers. By connecting to the mainland government's eID face recognition system for identify verification and adding a legal e-certificate (e-Cert), mainland clients can open account remotely, without the need to come to Hong Kong in person and face the current complicated procedures," said Susan.

As Susan said, the process goes as follows. As a start, local broker firms or banks, with the client's consent, will submit a verification request to the Hongkong Post. The Hongkong Post will then act as a certification authority to compare and verify the client's identity documents and relevant data against the national database in China.





#### 電子身份實現跨境遙距開戶

內地及外國投資者經常投訴香港開戶難。雖然證監會多年前 已放寬要求,讓投資者用具簽名的香港銀行支票或存款,滿 足開戶時銀行必須識別及核實客戶身份的「認識你的客戶」 (KYC)程序。但對內地及外國投資者而言,本身沒有香港

銀行户口,便意味他們難以在香港開戶。為此,周生生證券兩年前與香港網上經紀協會、智慧城市聯盟及亞洲公匙基建聯盟合作,共同研究如何讓內地居民利用eID進行跨境遙距開戶。

「認識你的客戶」程序内有兩點基本的要求:第一,須清楚識別客戶身份;第二,須有具法律效力的客戶簽署——這是進行跨境遙距開戶時必須要解決的兩個核心問題。Susan指出,「我們希望elD能有助解決內地客戶開戶困難的問題。透過連接內地政府的elD人面識別系統作身份核實認證,加上具法律效力的電子證書(e-Cert),內地客戶便可遙距開戶,毋須親身來港,免卻當中繁複的過程和手續。」

Susan指出,本地券商及銀行獲客戶授權後,會向香港郵政申請認證,香港郵政便會以認證機構身份,將相關資料及識別認證與內地官方資料庫核對。整個過程中,香港郵政確保本地券商及銀行不會從內地機構獲取客戶資料,而內地機構亦不會得知客戶在香港進行甚麼活動。如此一來,在確保認證可信性的同時,客戶私隱亦得以保障。



#### 企業專訪 Exclusive Interview

On one hand, the Hongkong Post will ensure that local broker firms and banks will not be able to extract client's other irrelevant data throughout the application process. On the other hand, mainland institutions will have no access to the client's activities in Hong Kong territories. In other words, the system can guarantee both credible certification and data privacy.

"SFC was generally satisfied with the proposed authentication system which, from their point of view, meets the current KYC requirements. But as the whole procedure relies considerably on the facial recognition system, they need more information about the successful rate," she said.

The theory must be put into practice. Susan with the endorsement from the Group will mobilize hundreds employees to participate in the pilot program in the mainland to evaluate the accuracy of the facial recognition technology and collect relevant data for the bilateral authentication framework. She stressed that all the system development work had been completed and all legal and compliance checks have been validated, they are all set to carry out the final part of the pilot program in mid September, and look forward to a successful completion of the pilot program.

#### eID Kicks Off Trial In Financial Sector

The trial use of eID technologies among financial institutions came not by coincidence, but as the result of the Common Reporting Standard (CRS) promulgated as early as in 2014.

The CRS is a global standard endorsed by the OECD that requires financial institutions to report and exchange financial account information of taxable residents in different jurisdictions on an annual basis. Hong Kong enacted the CRS regulations in 2017 for the implementation of automatic exchange of financial account information in tax matters (AEOI).

As Susan recalled, local financial institutions applied for the e-Cert (Organisational) with AEOI Functions to streamline the reporting process. e-Cert not only provides electronic identity for the financial institutions, but the AEOI Cert system itself also lays a strong foundation for implementing the latest pilot project.

"A contract only takes effect when it's signed by both parties. Both parties also need their e-Cert to conduct online transaction. Although companies in other sectors have not yet obtained





「經我們講解,證監會對認證程序大致滿意,認為符合現時KYC程序的要求。然而由於整個認證過程相當依賴人面識別系統,他們希望能更充分了解具體的認證成功率。」

理論需要通過實踐的檢驗。為進一步驗證人面識別系統的可靠程度,Susan取得周生生集團的支持,動員了集團在內地數百名員工參與先導計劃,透過測試獲取相關數據,以支持整個跨境認證框架。她強調現時所有系統開發工作已經完成,而且相關法律和合規的檢查都已經過驗證,他們準備在9月中旬執行最後的點對點測試,並期待計劃成功。

#### 以金融業為起點

由金融行業率先就數碼個人身份應用進行測試,絕非偶然。究其原因,就要追溯至2014年的共同匯報標準 (Common Reporting Standard)。

經濟合作暨發展組織(OECD)實施的共同匯報標準,要求各國金融機構每年匯報並交換不同「稅務居民」的財務帳戶資料。本港於2017年完成法定程序,宣布參與自動交換資料(AEOI)。

Susan憶述,當時本地金融機構為配合匯報程序,申請了 具自動交換財務帳戶資料功能的電子證書。這電子證書仿 如金融機構的數碼身份,為今天推行先導計劃奠定基礎。

「合約的落實,需要雙方的簽署。使用電子身份進行網上服務,同樣需要交易雙方持有電子證書。現時其他行業機構大多未有電子證書,但只要先導計劃測試成功,加上法規制度配合,未來要將認證程序應用於其他範疇,絕對可行。」

現時網上服務非常普遍,但每個服務機構都有自己的登入認證,不便之餘,背後更存在安全隱憂。因此Susan





e-certificates, a successful eID test and coherent regulatory framework would foster the cross-sector extension of eID authentication system," pointed out Susan.

E-services commonly exist in our daily life. The fact that each service provider adopts different login authentication systems is disturbing and vulnerable to security threats. Therefore, Susan is looking forward to the widespread use of eID technologies.

"We could lower the risks of identity theft by integrating the e-Cert system and biometric authentication technology like facial recognition. I hope that companies in different sectors could team up with the government to foster the eID development," she said.

The use of digital personal identity in the Hong Kong financial industry only marks a starting point. Susan hoped that the eID framework will soon be extended to the Greater Bay Area, countries along the "Belt and Road" corridors and, in the long run, spanned all corners of the globe.

"Digital networks know no boundaries. Someday, talents, capital and services could freely move across borders with our eID," concluded Susan.

十分期待數碼個人身份的普及:「以人面識別等生物認證,配合電子證書共同使用,身份被盜用的機會便會大大降低。希望不同行業機構能與政府合作,加快推動數碼個人身份的應用。」

數碼個人身份應用於金融行業只是一個起點。Susan希望能於不久將來,將此一智慧城市基礎建設拓展到大灣區,以至一帶一路沿線國家,長遠實現全球通行。「數碼世界無疆界。地區之間所存在的地理界限,將能透過數碼個人身份而徹底跨越。屆時,人才、資金及服務的互聯互通,自然指日可待。」







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# EXCELLENT SERVICE CONTINUOUS COMMITMENT



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#### 活動回顧 Event Review

1 1<sub>th</sub>
Jun, 2018

Hong Kong Smart City Summit 2018 cum Hong Kong Smart City Awards 2018

香港智慧城市峰會2018暨香港智慧城市大獎 2018



Under the theme of "Smarter Innovations for a Better Hong Kong", Hong Kong Smart City Summit cum Smart City Awards 2018 was successfully held on 11<sup>th</sup> June, 2018. SCC was honored to be the Strategic Partner of the event. Dr. Winnie Tang, SCC's Founder & Honorary President represented SCC to give a speech on public-private-people-partnership being the essence of smart city at the opening ceremony.

以「智慧創新引領更理想香港」為主題的香港智慧城市峰會暨智慧城市大獎2018已於6月11日完滿舉行。智慧城市聯盟很榮幸擔任該活動的策略夥伴,聯盟的創辦人及榮譽會長鄧淑明博士於開幕儀式上致辭,談及政府、公私營企業和市民合夥,集思廣益是智慧城市的成功關鍵。

1 7 /th
Jul, 2018

Smart Banking Way Forward Luncheon 智慧金融研討會暨午宴

Smart Banking Way Forward Luncheon hosted by SCC was successfully held on 17<sup>th</sup> July, 2018. Mr. Norman T. L. Chan, GBS, JP, Chief Executive of the Hong Kong Monetary Authority and Mr. Neil Pabari, Managing Director for Thomson Reuters Financial and Risk Business in North Asia, together with a number of related industry professionals were invited to share and discuss the applications of financial technology.

Meanwhile, SCC signed a MoU with the Institute for Public Policy of The Hong Kong University of Science and Technology so as to facilitate researches and promote academic studies on related industries. SCC will continue to explore more collaborations with different organizations and connect with different smart cities around the world to turn the vision of smart city into reality.

由智慧城市聯盟(聯盟)主辦的「智慧金融研討會暨午宴」 於2018年7月17日完滿舉行。金管局總裁陳德霖先生應邀出 席午宴,聯同湯森路透公司財務及風險(北亞區)董事總經 理 Mr. Neil Pabari,以及有關行業的多位專家一起探討金融 科技的發展。

同時,聯盟於午宴期間與香港科技大學簽署備忘錄,促使業界 和學術領域的研究合作。聯盟會繼續與不同企業合作,以連結 全球不同的智慧城市,實現智慧城市的願景。







# Aug, 2018

#### HKIM Symposium 2018 香港市務學會座談會 2018





On 3<sup>rd</sup> August, 2018, Mr. Gary Yeung Man Yui, M.H, Vice President of SCC was invited to give a talk at HKIM Symposium 2018. He shared with the audience his experience on digital engagement in smart city, which covered the overview of smart city, eID and big data.

智慧城市聯盟副會長楊文銳先生於8月3日代表聯盟,到「香港市務學會研討會2018」演講。他以智慧城市的數碼互動為題,講述智慧城市的概要,以及電子身份和大數據的應用。

#### 活動回顧 Event Review

# 21,-23,rd Aug, 2018

## The Fourth China Smart City International Expo 2018 2018(第四屆)中國智慧城市國際博覽會

More than 80 IT professionals joined SCC's Hong Kong delegation on 21st August, 2018, Tuesday to attend The Fourth China Smart City International Expo 2018, a three day event held in Shenzhen. Chen Rugui, Mayor of Shenzhen Municipal Government, visited our Hong Kong Smart City Excellence Solutions Pavilion and expressed his interest in cooperating with Hong Kong to develop both into smart cities.

SCC signed a MoU with E-commerce Association of Hong Kong and Shenzhen Electronic Commerce Association, and another MoU with Cambodia during the Expo. This totals 30 MoUs of cooperation which SCC has signed with 13 countries and regions.

Dr. Hon Elizabeth Quat, Founder & Honorary President of SCC, represented Hong Kong to participate in the panel discussion of 2018 China Smart City (International) Innovation Forum, and shared with the representatives from the United Kingdom, Singapore, Cambodia and South Korea her insights into the development of smart city.

智慧城市聯盟香港代表團共80多位資訊科技代表,於8月21日前往深圳,參加為期三天的「2018(第四屆)中國智慧城市國際博覽會」。深圳市市長陳如桂亦到訪「香港智慧城市優秀項目展區」,更表示樂意和香港合作發展智慧城市。

聯盟與香港電商協會及深圳市電子商務協會,簽署了深港電子商務合作意向書,並和柬埔寨政府簽署了合作備忘錄。聯盟至今已經和13個國家及地區簽署了共30份合作備忘錄。

聯盟創辦人及榮譽會長葛珮帆議員下午代表香港參與「高端對話論壇」,與英國、新加坡、柬埔寨,以及南韓代表 交流智慧城市發展經驗。





# 21-23 rd Aug, 2018

# The Fourth China Smart City International Expo 2018(continue) 2018(第四屆)中國智慧城市國際博覽會(續)





On 22<sup>nd</sup> August, 2018, the three founders of SCC represented Hong Kong to join three important forums respectively.

Dr. Hon Elizabeth Quat, Founder & Honorary President of SCC together with Dr. David Chung, Under Secretary for Innovation and Technology, and other well-known entrepreneurs participated in a panel discussion titled "Coordinated Developments of the Guangdong-Hong Kong-Macao Greater Bay Area".

Speakers agreed that the most important objectives of the Greater Bay Area are how to connect talents, funds, and information in the region, and encourage cooperation to complement each other in competition. Above all, to attract and cultivate talents is of the highest priority.

Dr. Winnie Tang, Founder & Honorary President of SCC, was invited by iFLYTEK, a renowned Chinese information technology company to attend a conference titled "The Trends of Artificial Intelligence Boosting the Development of Smart Society & Unveiling of the Urban Superbrain Plan", which was hosted by iFLYTEK and the National Development and Reform Commission of China. During the conference, Dr. Tang discussed with participants how artificial intelligence drove industry synergy and innovation to promote social development.

Our President Mr. Eric Yeung was invited to give a speech in Smart City International Cooperation Seminar. He shared with the audience his insights about the Smart City development and international cooperation in Hong Kong.

2018年8月22日,智慧城市聯盟三位創辦人分別代表香港出席 了三個重要論壇。

聯盟創辦人及榮譽會長葛珮帆議員聯同創科局副局長鍾偉強, 以及粵港兩地多位知名企業家一同出席「粵港澳大灣區協同發展」論壇。講者認同大灣區發展最重要是區內人才、資金、信息等如何互聯互通,在競爭之中如何合作互補。其中如何吸納及培育人才是每一個城市及每一家企業的重中之重。

聯盟創辦人及榮譽會長鄧淑明博士應內地著名科技企業科大訊 飛之邀,參與由該企業和國家發改委合辦的「人工智能推動智 慧社會發展趨勢暨城市超腦計劃發佈會」,並和與會者探討人 工智能如何驅動產業協同和創新,並促進社會發展。

聯盟會長楊全盛先生則在「智慧城市國際合作研討會」中, 和多國代表交流智慧城市發展的機遇及挑戰。



#### 活動精選 Event Highlight



## **Smart Banking Way Forward Luncheon**

Drive FinTech Innovations Towards A New Era of Smart Banking

### 智慧金融研討會暨午宴

開創金融科技 邁向智慧銀行新時代

The Smart Banking Way Forward Luncheon, hosted by Smart City Consortium (SCC), was held with great success at the Conrad Hong Kong on 17<sup>th</sup> July, 2018.

SCC was honoured to have Mr. Norman T. L. Chan, GBS, JP, Chief Executive of the Hong Kong Monetary Authority (HKMA); Mr. Neil Pabari, Managing Director for Thomson Reuters Financial and Risk Business in North Asia; and Mr. William Gee, Vice Chairman of Asia PKI Consortium, attending and sharing their views on Smart Banking development. During the sharing sessions, Mr. Joseph H. L. Chan, JP, Under Secretary for Financial Services and the Treasury; Dr. David Chung Wai-keung, JP, Under Secretary for Innovation and Technology; Prof. Christopher Chao Yu-hang, Dean of Engineering at The University of Hong Kong, discussed with a number of financial service professionals, experts in smart city development and community leaders on the 7 initiatives introduced by the HKMA last year, and generated new ideas for the future of Hong Kong's Smart Banking development.

由智慧城市聯盟(聯盟)主辦的智慧金融研討會暨午宴, 已於7月17日假港麗酒店完滿舉行。

聯盟有幸邀請到香港金融管理局總裁陳德霖先生,GBS,JP;湯森路透公司財務及風險(北亞區)董事總經理Mr. Neil Pabari;亞洲公匙基建聯盟副主席季瑞華先生在研討會中出席分享。研討會同時獲財經事務及庫務局副局長陳浩濂先生,JP;創新及科技局副局長鍾偉强博士,JP;香港大學工程學院院長趙汝恆博士以及一眾金融界同業、智慧城市專家及社會賢達參與,就金管局去年推動智慧銀行的七大舉措,交流意見,並為香港未來智慧銀行的發展集思廣益。





#### Intersectoral Actions To Facilitate Smart-Banking Development

In her welcoming remarks, Dr. Hon Elizabeth Quat, BBS, JP, SCC's Founder, Honorary President and Chairman of Steering Committee, reported that SCC had organised and sponsored more than 250 events, in addition to signing 30 memoranda of understanding with different organizations and institutions across 13 countries and regions.

SCC has also played an active role in the implementation of Smart Banking strategies. Starting from last March, SCC submitted a proposal to the HKMA for the formulation of open application programming interface (API) framework and invited the first 5 Stored Value Facility (SVF) licensees to share relevant experience.

Dr. Quat highlighted the importance of Smart Banking technologies in Hong Kong's economic development, including the impacts of financial technology (FinTech) systems on crossborder cooperation and coordination of financial transactions in different sectors. In particular, the API framework would be an innovative online payment platform to boost innovation among enterprises to smooth the way in handling financial transactions and spur e-commerce growth.



#### Integrate FinTech To Reshape Customer Experience

During the sharing session, Mr. Pabari led the discussion with Mr. Chan and other guest speakers, sharing their insights on the impacts of Smart Banking technologies in the IT and banking industry, as well as changes in IT talent development across industries. They also talked about their vision of the future FinTech landscape.

With regard to the Smart Banking initiatives, Mr. Chan pointed out that losing edge in technology meant lagging far behind other competitors, though technology was not the only trump card for market dominance. He also urged the dominant banking players to deliver better customer service by harnessing the power of FinTech.

At the same time, Mr. Gee indicated that intersectoral efforts in integrating relevant technologies such as blockchain,



**感激各界支持** 齊推動智慧金融發展

聯盟創辦人、榮譽會長及督導委員會主席葛珮帆議員,BBS,JP於歡迎辭中,指出聯盟自成立以來舉辦並支持了超過250個活動,更與來自13個不同地區及國家的組織,簽訂共30份諒解備忘錄。

同時,聯盟亦一直積極推動智慧金融,早於今年3月便就開放「應用編程介面」(API)向金管局提交意見書,並邀請首5間獲批「儲值支付工具」(SVF)牌照公司分享相關經驗。

葛議員指出智慧金融對香港經濟發展的重要性,包括金融 科技系統如何加強跨境合作及匯聚各方龐大的資金交易, 更可透過API鼓勵企業創新,讓業界能暢通無阻地處理資 金交易,方便客戶體驗全新的快速支付系統,藉此帶動電 子消費。

#### 擁抱金融科技 提升客戶體驗

研討會的交流環節,由湯森路透的Mr. Pabari主持,他與金管局陳德霖先生及其他嘉賓大談推行智慧銀行於科技、銀行業界,甚至培育創科人才等各行業的影響,表達對未來金融科技的展望。談及香港智慧銀行發展,陳德霖先生表示不完全認同「得科技,得天下」的法,但如果銀行業界「失科技」,就肯定會「失天下」。他更呼籲即使現時處於市場領導地位的銀行,亦要別擁抱金融科技,改善客戶體驗。亞洲公匙基建聯人內擁抱金融科技,各行業結合相關技術如區塊鏈、不要等時和電子身份,有助推動科技發展,香港擁有優良之間,是以令金融科技走得更前。而香港大學趙汝恆博士指出,學界不少教材來自業界多於教科書,



#### 活動精選 Event Highlight

Al and eID technologies brought significant impacts on technological development. He believed that Hong Kong could take advantage of its well-developed facilities and soft power in driving FinTech advancement. Prof. Chao also stated that many teaching and learning resources at universities were not taken from textbooks but from industry. He stressed that the university would maintain its close ties with industry partners in developing and delivering more practical solutions for the industrial sectors and our society.

#### Partner with HKUST To Foster University-Industry Collaboration

In the presence of Dr. Chung, Prof. Joseph Hun Wei Lee, Chair Professor of Department of Civil and Environmental Engineering at The Hong Kong University of Science and Technology (HKUST); Mr. Ma Siu-leung, BBS, MH, SCC's Honorary Advisor; Dr. Winnie Tang, JP, SCC's Founder and Honorary President; SCC's President Mr. Eric Yeung signed a memorandum of understanding with Prof. King L. Chow, Director of HKUST Interdisciplinary Programs Office. SCC and HKUST will step up efforts to enhance university-industry collaboration and facilitate the development of the Global Smart City Consortium.

Hong Kong's I&T ecosystem will soon become more sophisticated along with technological integration and implementation of government policies. Financial institutions will need to speed up FinTech deployment to keep clients satisfied and serve investors better towards fulfilling the Smart City vision.

大學將保持與業界的緊密合作,致力研究之餘,也會為業 界及社會作出更多貢獻。

#### 與科大合作 促進業界與學界交流

午宴期間,在創新及科技局鍾偉强博士、香港科技大學 (科大)土木及環境工程講座教授李行偉教授、聯盟榮譽顧 問馬紹良先生,BBS,MH,以及聯盟創辦人及榮譽會長鄧淑 明博士,JP的見證下,聯盟會長楊全盛先生與科大跨學科課 程事務處處長周敬流教授簽訂了合作備忘錄。雙方未來會攜 手促進業界和學術研究之間的交流,並共同推動「全球智慧 城市聯盟」的發展。

不久將來,香港將透過科技融合、政制措施等完善創新科技 的生態圈,金融行業亦需盡快提升科技應用以滿足客戶及投 資者的需要,從而進一步把智慧城市的願景實現出來。



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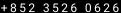


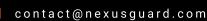


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#### 專題故事 Feature Story





**CMHK Steps Up In** 

# **5G Technology To Match Smart City Blueprint**

中國移動香港 積極開拓5G領域 配合港府《智慧城市藍圖》

Sean Lee 李帆風

#### First Local Mobile Operator Completed End-To-End 5G Network Testing

China Mobile Hong Kong (CMHK) succeeded in building a 5G network that enables end-to-end connectivity via the Internet by using Customer Premises Equipment (CPE). As the first network provider in Hong Kong to conduct end-to-end 5G network testing, CMHK aims to deliver a high-speed browsing experience to its users. Computers or non-5G mobile terminals can connect to this 5G network via Wi-Fi emitted by CPE for a smooth Internet connection.

CMHK managed to produce a remarkable test result this time by using multiple-input multiple-output technology. From the lab test conducted within a static or indoor environment, the highest data transmission speed recorded by CMHK using 5G was higher than the speed test results announced by other mobile operators.

Last March, CMHK became the first Hong Kong network operator to obtain the Trial Permit for 5G Test. In the same month, the 8<sup>th</sup> China Mobile 5G Innovation Center Hong Kong Open Lab was launched.

"5G development is crucial to CMHK's sustainable growth. We will keep on carrying out 5G network and services trials in the second half of this year. We will also continue to expand the 5G Joint Innovation Centre and explore the possibility of multisectoral integration and application to boost 5G commercialization," said Mr. Sean Lee, Director & Chief Executive Officer of CMHK.

Since 5G smartphones are expected to hit the market in the second half of 2019 at the earliest, initial 5G network

#### 全港首家網絡商完成5G端到端測試

中國移動香港利用用戶終端設備成功實現5G網絡端到端連接至互聯網,為用戶帶來高速互聯網瀏覽體驗。該公司是全港首家網絡商成功完成此項測試。電腦或非5G手機可透過Wi-Fi與用戶終端設備連接,再通過5G網絡流暢地瀏覽互聯網站。在是次測試中,中國移動香港使用多輸入多輸出技術,在靜止或室內環境中的數據傳輸最高速度,均較其他電訊商高,結果非常突出。

本年3月,中國移動香港成為本地首間獲發5G技術測試許可證的流動通訊營運商。同月,「中國移動5G聯合創新中心」的第8間開放實驗室也在香港正式啟用。

中國移動香港董事兼行政總裁李帆風先生稱:「5G對中國移動香港未來的持續發展具有重要意義,我們下半年將



China Mobile 5G Innovation Center Hong Kong Open Lab in MITA Centre 設於葵涌美達中心的「中國移動5G聯合創新中心」香港開放實驗室





is expected to offer Wi-Fi connection for 5G applications via CPE and deliver network coverage through hotspots. Upon the official allocation of 5G spectrum, CMHK's 5G equipment will be put into service at once to coordinate with the Communications Authority's assignment of spectrums for 5G services, giving local mobile services a strong push to forge ahead into the new 5G era.

#### Deploy NB-IoT Technologies To Move Towards Smart City

The enhanced surfing speed and low latency connectivity of 5G network are the key network capabilities for the development of Internet of Things (IoT). Last September, CMHK took the lead in deploying commercial Narrowband Internet of Things (NB-IoT) technology to raise the efficiency of machine-to-machine communication and to build the ideal Internet of Everything (IoE).

"Hong Kong has rolled out the *Smart City Blueprint*. Hence, we took the lead in the local mobile telecom market to launch a commercial NB-IoT network, which stands out for low power consumption, wide coverage, low cost and massive connectivity. That would help IoT initiatives to get off the ground," said Mr. Lee.

At the same time, CMHK also signed a strategic memorandum of understanding with Sino Group to facilitate NB-IoT development. Series of NB-IoT solutions will be implemented across Sino Group's residential and commercial properties, including Smart Property Management, Smart Home and Smart Shopping Mall application solutions.

Firstly, the efficiency of property management can be enhanced by an array of Smart Property Management solutions, including the Property Monitoring application that monitors building operations and issues such as water leakage, indoor temperature and air quality around the clock.

Secondly, Smart Home solutions (e.g. Smart Door Lock) can be installed in hotel rooms and apartments. With the Smart Living Room application, residents can turn on/off home appliances at the time and place they wish. Also, the Security Monitoring Facility can detect unusual activities, or abnormality inside a house. Simply through their cell phones, residents can easily monitor their home anytime and anywhere.

Thirdly, Smart Shopping Mall solutions, such as the Smart Car Park System and GPS tracking for personal belongings, not only can provide an upgraded shopping experience, customers in the malls can also receive information about the surrounding environment and traffic conditions.

The super-fast 5G mobile networks are crucial to IoT development. CMHK is set to build 5G pilot networks in selected areas this year. CMHK and its partners will also carry out trials for smart-city-related solutions to gear up for the coming of 5G networks and future 5G applications.



5G Equipment installed at the Hong Kong Open Lab 安裝在香港開放實驗室的5G設備

繼續積極開展5G網絡規模及業務應用的試驗。我們會持續壯大5G聯合創新中心,致力探索跨行業融合應用,推動5G商業模式盡快成熟。」

業界普遍預期5G手機最快要到2019年下半年才會面世,所以早期5G網絡將通過用戶終端設備提供Wi-Fi連接5G應用服務,以熱點形式為用戶提供5G網絡。當5G頻譜正式開放使用,中國移動香港的5G設備將可快速投入服務,並配合通訊事務管理局就5G頻譜供應的部署,支持香港5G流動通訊服務,帶領市場邁向5G新時代。

#### 應用窄頻物聯網技術 促進智慧城市發展

5G技術除了顯著提升網絡速度外,同時有著低延時的特點,為物聯網發展打下基礎。為提高機器對機器的通訊效率,中國移動香港在去年9月已率先應用商用窄頻物聯網(NB-IoT)技術,進一步實現萬物互聯。

李先生表示:「香港已推出《智慧城市藍圖》,我們也早著先機,成為本地首間流動網絡供應商推出商用NB-IoT網絡,運用低功耗、廣覆蓋、低成本、大容量等網絡技術四大優勢,推動香港物聯網的發展。」

同時,為了推動NB-IoT應用,中國移動香港早前與信和集團簽署策略合作備忘錄,在該集團旗下住宅及商場物業推出一系列採用窄頻物聯網的解決方案,包括智能物業、智能家居以及智能商場管理應用等。

智能物業管理有效改善管理效益,可持續監測物業情況,如漏水、溫度、空氣質素等。智能家居則可應用於住宅及酒店,例如智能門鎖和智能客廳應用,可讓住客隨時隨地控制開關;此外,又設有安全監護系統,客戶可通過智能手機,偵察家中動態或異常情況。至於智能商場則為顧客提供智慧購物體驗,例如智能停車場系統、財物定位功能,能為客戶提供周邊交通及環境訊息。

5G除了提供極速流動網絡外,同時是物聯網發展的關鍵。中國移動香港計劃今年內在個別地點建設5G網絡進行測試,並與合作夥伴開展智慧城市相關應用試驗,為5G網絡建設和應用作全面準備。





Originally posted on Harbour Times on 23<sup>rd</sup> July, 2018

# 拓數據共享平台



Founder & Honorary President, Smart City Consortium

智慧城市聯盟創辦人及榮譽會長

In June this year, Singapore and the United Kingdom took a strategic step in the same direction of innovation and development. These jurisdictions share history and close ties with Hong Kong, but are leading Hong Kong in promoting innovation. Spatial and geolocation data provide key data for the development of a smart city.

#### Our eternal rival, Singapore

In early June, Singapore's Smart Nation and Digital Government Office (SNDGO) announced a blueprint for digital government with a five-year plan. The blueprint targets the citizens, businesses and public officers, and lists the goals to be achieved by 2023.

First of all, in terms of daily activities, the citizens will be able to pay bills, sign documents, apply for public housing, as well as buy and sell real estate or car through the government online platform.

Civil servants must fully upgrade their digital competency, 14% or 20,000 of them have to go through training in data science and analytics. Departments have been instructed to adopt artificial intelligence in decision making.

Concurrently, the government will establish an open and easy-to-use information platform or common spatial data infrastructure (CSDI) to provide data in machine readable format or application programming interface (API) for the convenience of application 近月,和香港甚有淵源的兩個國家——新加坡和英國不約 而同邁出策略性的一步,而且方向竟然異常一致,為國家 的創新發展埋下伏綫。

6月初,新加坡的「智慧國家及數碼政府辦公室」 GO) 宣布最新發展藍圖,具體展示如何在5年內實踐「智 慧國家」。藍圖以市民、商界、公務員為對象,羅列多項 2023年要達到的目標。

首先在日常生活上,市民以後由繳費、簽署文件、申請公 屋,到買賣房產汽車也可在政府網上平台無縫地完成;另 -方面,公務員要全面提升數碼素質,其中14%即2萬公 僕更要接受數據科學和分析的培訓;各部門也需嘗試採用 人工智能決策。

#### 公開數據 推動創新「新石油」

此外,為了促進創意產業,政府會建立一個公開易用的資 訊平台,即空間數據共享平台(CSDI),提供的數據全以 程式開發者必須的「應用編程介面」(API)格式列出,方 便商界存取和充分運用數據這種「新石油」,推動創新。





developers, and to facilitate the business sector with better accessibility and utilization of data.

Singapore's ambition is shown on the measurable success indicators listed in the blueprint. By 2023, at least 75-80% of the citizens and the business community shall be "very satisfied" with the government's digital services. At the same time, 90-100% of the core data fields have to be available in API format.

#### While back at home...

Readers familiar with Hong Kong's progress towards smart city development may envy Singapore. The Smart City Blueprint for Hong Kong, published at the end of 2017, actually recommends a similar public data platform. But it will only be available by 2023, much slower than our neighbour.

The role of a CSDI has yet to be defined, bringing into question the government's commitment to providing this important element of open data to support a broader smart city development. Digitalization of some of the government department data has already been carried out. However, opening data in API format is yet to be realised. In this regard, Hong Kong is once again surpassed by others!

Some may argue that Singapore is a small country with uniform governance that lends to agility in policy making and execution. But the United Kingdom, with its bigger population, federated government and competing interests, has boldly embraced innovation promoting policies.



#### Innovative Britannica

For example, in mid-June, the Ordnance Survey, the government map agency with a history of more than 200 years, announced that the location data will be freely available to the public and the business sector. It is expected that the SMEs and startups will benefit the most, and this new policy could boost the UK economy by at least 130 million (approximately HK\$1.30 billion) a year.

The new policy is important because almost 80% of the data is related to location – from planning travel routes, finding lost



不過,新加坡的雄心壯志顯示在藍圖列出的成功指標上——到2023年,至少75%至80%市民和商界要「非常滿意」政府的數碼服務,這樣的數字差不多是代表全民的了。同時,90%至100%主要數據更需以API格式公開。

讀到這裏,「心水清」的讀者也許已感到牙癢癢——我們去年底公布的《智慧城市藍圖》,竟然把相似的公共數據平台放在2023年才推展,步伐比這個近鄰緩慢了一大截。究竟有關當局是否有一個時間表去推行和實踐我們的CSDI?其實香港政府部門數碼化早已開展,但對外以API這種便民的格式開放數據,則遲遲未有落實。就這樣,香港再一次被人超前!

#### 英開放空間數據 初創最受惠

不要以為新加坡小國寡民,政府行動才會這樣敏捷,英國雖然國力大不如前,但依然勇於創新,並以此作為再闖高峰的武器。譬如已有200多年歷史的地形測量局(Ordnance Survey),6月中旬也宣布把數據免費開放給公眾和商界使用,預期中小企和初創最受惠,而這項新政相信為英國經濟帶來每年1.3億英鎊(約13億港元)收益。

這些新政策之所以重要,因為高達8成數據都和地理位置相關——由規劃出行的路綫、尋找走失的長者,到偵測貨物運送的進度,以至未來的無人駕駛和5G服務,地理空間數據都扮演關鍵的角色;此外,日常的衣食住行數據也需連結地理資訊才能顯出意義。



#### 智城觀點 SCC Corner



elderly, tracking cargo under delivery, to future autonomous vehicles and 5G service, geospatial data plays a pivotal role. Besides, data on everyday life and businesses, e.g. dining and shopping, will only be meaningful when linked to location information.

SMEs can use these spatial data directly, or they can combine the data with other public data to derive new information and benefit the wider economy. This would help grow the country's overall digital economy by an estimated £11 billion (approximately HK\$110 billion) a year.

The information available includes topography layer, building heights, land use, green areas, highway networks, waterways, path network and more. Furthermore, the data is open to the public through APIs. The Ordnance Survey pointed out that "the housing market will be boosted" because people can identify which potential sites have not been developed.

Geospatial information is valuable. Navigant Research estimated that the value of global market for core geographic information in 2016 was about US\$1.6 billion (approximately HK\$12.5 billion), and it will be doubled to over US\$3.2 billion (HK\$25 billion) by 2025. Apart from the U.K., many countries also see the potential of geospatial data, including the United States, Canada, Japan, India, and Australia. They set up comprehensive legislation, standards, and specialized department to collect and manage these intangible assets, and share it with the public to optimize the potential of the data.

In Hong Kong, we have many world leading infrastructure projects. In addition to advanced technology, there are dedicated departments: the Hong Kong Observatory for collecting weather data; the Environmental Protection Department for collecting and analysing air pollution data; the Electrical and Mechanical Services Department for electrical installation; the Highways Department for road works. But for geospatial data and location information, we lack a dedicated department to formulate relevant laws and policies for implementation by the relevant bureaux and departments. And if the data can be shared with the public in an API format, Hong Kong's spatial information usage will be enhanced, it could also inject more momentum to the development of our innovation industries!

故此,中小企除了可以直接運用這些空間數據,更可和其他公共數據結合,衍生新的資訊,促進創新。連鎖反應下,當局相信能推動英國整體的數碼經濟至每年110億英鎊(約1,100億港元)的水平。

#### 地理資訊價值 10年倍增至251億

這些資訊包括了地形、建築物高度、土地用途、綠化地帶、公路網絡、水道、路徑等,也理所當然地以API開放與公眾。地測局指出,其中房地產是受惠者之一,因為大家可以看到哪些土地未被開發。

研究機構Navigant Research估計,2016年全球重要的地理資訊價值近16億美元(約125億港元),到2025年會增長一倍到32億美元(約251億港元),這些無形資產真的「有價有市」。洞悉地理資訊潛力的又何止英國,其他國家如美國、加拿大、日本、印度、澳洲等早已有完善的法例、標準和專責部門,去收集和統一管理這些無形資產,更將數據與公眾分享,發揮數據的潛力。

#### 用API便民格式 港拓創科良機

其實香港不少基建都佔在世界前列,技術先進外,更有專責部門,例如收集天氣數據由天文台負責、收集空氣污染指數分析有環保署、電能安裝有機電工程署、道路工程有路政署。若全港地理空間數據及位置資訊也有專責部門,制定法規政策,由相關的署局及部門執行,同時以API格式開放和市民共享,不單能提升本港空間資訊的質量,更可為創科注入新「燃料」,令香港創意產業帶來契機!



# With Compliments of Hong Kong Women Professionals & Entrepreneurs Association



香港女工商及專業人員聯會 致意



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## trust ※ 區塊鏈應用



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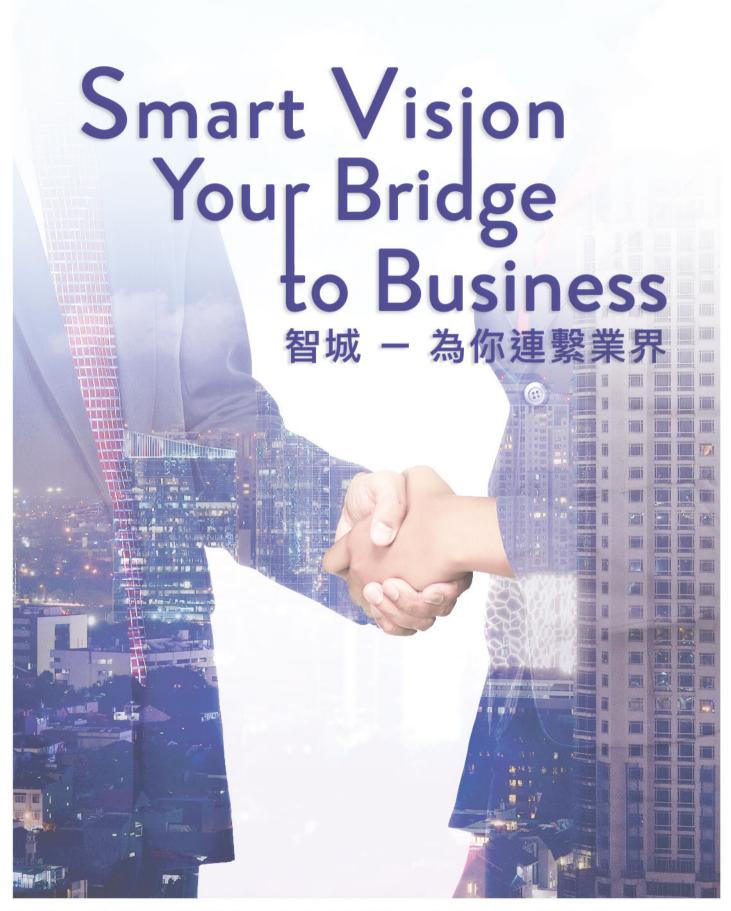




#### 智能合約

智能合約區塊鏈確保資料真確 性,並自動執行合約中的業務 交易





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