

# 3 迎接電訊市場的新挑戰

## Meeting the New Challenges of the Telecommunications Market

### 重新指配在1.9至2.2吉赫頻帶內的頻譜

在香港1 700萬名流動服務用戶中，88%或1 470萬人使用3G及4G網絡提供的流動數據服務。3G網絡主要由在1.9至2.2吉赫頻帶內的2 x 59.2兆赫頻譜（「3G頻譜」）支援，而該頻譜於2001年10月透過拍賣指配予四家流動網絡營辦商。

3G頻譜的現有指配期將於2016年10月屆滿。通訊局於2013年11月15日公布，決定採用行政指配兼市場主導的混合方案重新指配3G頻譜，新指配期由2016年10月22日開始，為期15年。2013年11月15日，商務及經濟發展局局長亦公布根據《電訊條例》釐定重新指配頻譜的頻譜使用費的相關安排。

考慮到兩家固有3G營辦商已於2014年合併，以及通訊局收回相關頻譜的指示，餘下三家固有3G營辦商獲賦予優先權，以獲重新指配合共2 x 34.6兆赫的3G頻譜。有關頻譜使用費水平已根據2014年7月制定的附屬法例訂明。全部三家固有3G營辦商均於2014年8月接受有關要約。在有關營辦商行使優先權後，餘下2 x 24.6兆赫的3G頻譜已透過2014年12月舉行的拍賣指配予兩家固有3G營辦商及一家流動網絡營辦商。該次拍賣獲得的頻譜使用費總額為24.2億元或每兆赫4,920萬元。根據附屬

法例訂明釐定頻譜使用費的方法，透過優先權以行政方式重新指配的3G頻譜的頻譜使用費為45.7億元或每兆赫6,600萬元。因此，頻譜受配人會在2016年8月或之前，就由2016年10月22日開始為期15年的新指配期向政府繳付合共69.9億元的頻譜使用費。

在118.4兆赫的3G頻譜中，29.6兆赫經2014年12月舉行的拍賣而重新指配的3G頻譜會由2016年10月22日起易手。固有及新頻譜受配人需分別準備所需的網絡重新配置及網絡鋪設工作。為協助頻譜受配人順利交接頻譜，通訊辦於2015年3月成立技術工作小組，以討論和協調有關重新指配頻譜將採用的技術安排。所有相關流動網絡營辦商均加入該工作小組。在工作小組成員積極參與下，協調工作進展順利。通訊辦會繼續與各營辦商協調，以避免頻譜在2016年10月22日交接時影響客戶服務。

### 重新指配在900兆赫及1 800兆赫頻帶內的頻譜

在900兆赫及1 800兆赫頻帶內的頻譜現用於提供2G、3G及4G流動服務。在900兆赫頻帶內49.8兆赫的頻譜及在1 800兆赫頻帶內148.8兆赫的頻譜的現有指配期將於2020年11月至2021年9月期間屆滿。

通訊局聯同商務及經濟發展局局長於2016年2月3日展開公眾諮詢，就重新指配頻譜的建議安排及相關頻譜使用費，徵詢業界及其他受影響各方的觀點和意見。諮詢文件提出三個重新指配頻譜的方案，即(1)完全行政指配模式；(2)完全市場主導模式；以及(3)行政指配兼市場主導的混合模式。通訊局將會採用一個最能達至重新指配頻譜四個目標的方案，即確保客戶服務得以延續、善用頻譜、促進有效競爭，以及鼓勵投資和推廣創新服務。



## Re-assignment of Frequency Spectrum in the 1.9 – 2.2 GHz Bands

Among the 17 million mobile service subscribers in Hong Kong, 88% or 14.7 million subscribe to mobile data services provided on 3G and 4G networks. The 3G network is supported primarily by 2 x 59.2 MHz of spectrum in the 1.9 to 2.2 GHz band (“3G Spectrum”), which was assigned through auction to four mobile network operators in October 2001.

The existing assignments of the 3G Spectrum will expire in October 2016. The CA announced on 15 November 2013 its decision to adopt a hybrid administratively-assigned cum market-based approach to re-assign the 3G Spectrum for a new 15-year term, starting from 22 October 2016. On 15 November 2013, the Secretary for Commerce and Economic Development (“SCED”) also promulgated the related arrangements for determining the spectrum utilization fee (“SUF”) of the re-assigned spectrum under the TO.

Taking into account the merger of two incumbent 3G operators in 2014 and the associated spectrum divestment direction of the CA, the remaining three incumbent 3G operators were offered the right of first refusal for re-assignment of a total of 2 x 34.6 MHz of the 3G Spectrum, the level of SUF for which was prescribed by subsidiary legislation enacted in July 2014. All three incumbent 3G operators accepted the offers in August 2014. Following the right of first refusal exercise, the remaining 2 x 24.6 MHz of the 3G Spectrum was assigned to two incumbent 3G operators and a mobile network operator through an auction conducted in December 2014. The auction fetched a total SUF of \$2.42 billion, or \$49.2 million per MHz. Based on the method for setting the SUF as prescribed by the subsidiary legislation, the SUF of the 3G Spectrum re-assigned administratively through right of first refusal stood at \$4.57 billion, or \$66 million per MHz. Therefore, SUF totalling \$6.99 billion, covering the new 15-year term of assignment commencing on 22 October 2016, would be paid by the spectrum assignees to the Government by August 2016.

29.6 MHz out of 118.4 MHz of the 3G spectrum re-assigned through the auction conducted in December 2014 would change hands with effect from 22 October 2016. The incumbents and the new spectrum assignee

need to prepare for the necessary network reconfiguration and roll-out of their networks respectively. In order to facilitate a smooth spectrum handover among the spectrum assignees, OFCA set up a Technical Working Group in March 2015 with the participation of all relevant mobile network operators to discuss and coordinate the technical arrangements to be adopted in relation to the spectrum re-assignment. With active contributions from the members of the Working Group, the coordination work is progressing smoothly. OFCA will continue to work with the operators to avoid any service impact on customers during the handover of the spectrum on 22 October 2016.

## Re-assignment of Frequency Spectrum in the 900 MHz and 1800 MHz Bands

Frequency spectrum in the 900 MHz and 1800 MHz frequency bands is currently deployed for the provision of 2G, 3G and 4G mobile services. The existing assignments for 49.8 MHz of spectrum in the 900 MHz band and 148.8 MHz of spectrum in the 1800 MHz band will expire within the period between November 2020 and September 2021.

The CA and the SCED jointly launched a public consultation on 3 February 2016 in order to solicit the views and comments of the industry and other affected parties on the proposed arrangements for spectrum re-assignment and the related SUF. Three options were proposed for spectrum re-assignment, namely (1) a full-fledged administratively-assigned approach; (2) a full-fledged market-based approach; and (3) a hybrid administratively-assigned cum market-based approach. The CA will adopt the option that would best meet the four objectives in spectrum re-assignment, namely ensuring customer service continuity, efficient spectrum utilisation, promotion of effective competition, and encouragement of investment in and promotion of innovative services.

Upon the close of the three-and-a-half-month consultation on 18 May 2016, 325 submissions were received from the industry, business organisations and members of the public. There was support from different industry players for all three of the proposed re-assignment options. An external consultant has been engaged to carry out a technical study on any impact on service quality arising from different spectrum re-assignment scenarios. After considering the views and comments received from the first consultation as

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為期三個半月的諮詢期於2016年5月18日結束，通訊辦共收到325份來自業界、商業機構及公眾人士的意見書。三個重新指配頻譜的建議方案各有不同的業界人士支持。通訊辦亦委託了外聘顧問就重新指配頻譜的不同情況下對服務質素的影響展開技術研究。經考慮第一輪諮詢所收到的觀點及意見和顧問研究的結果後，通訊局計劃於2017年年初進行第二輪公眾諮詢時，就重新指配頻譜提出更詳盡的建議，以期於2017年年底公布有關重新指配頻譜安排的決定，讓業界有三年時間可就頻譜指配的任何變動作出準備。

## 電訊牌照費下調

2012年11月，通訊局與商務及經濟發展局局長發表聯合聲明，公布決定分別把綜合傳送者牌照下每組100個的顧客接駁點的費用由800元調低至700元，以及把公共無線電通訊服務牌照（傳呼服務）和服務營辦商牌照（第三類服務）客戶使用每組100個的移動電台須繳付的費用由800元減至700元。新牌照費在完成立法程序後，已於2013年3月1日起生效。2013年2月，香港電話有限公司及Hong Kong Telecommunications (HKT) Limited（「香港電話有限公司」）就通訊局與商務及經濟發展局局長調低牌照費的決定申請提出司法覆核的許可。法庭於2013年7月向香港電話有限公司批出司法覆核申請的許可。實質聆訊於2015年6月17日至19日進行。原訟法庭於2015年8月11日作出裁決，裁定通訊局與商務及經濟發展局局長勝訴，並駁回該宗司法覆核申請。香港電話有限公司於2015年9月4日向上訴法庭提出上訴，聆訊已於2016年4月19日至20日舉行<sup>6</sup>。

## 廣播類流動電視服務的規管

廣播類流動電視服務（「流動電視服務」）自2012年2月推出以來，一直採用中國移動多媒體廣播（「CMMB」）制式作為傳送制式。2014年1月，獲授權提供流動電視服務的綜合傳送者牌照（「流動電視牌照」）持有人香港流動電視網絡有限公司（「香港流動



電視網絡」）向通訊辦表示，擬將原本採用的CMMB制式轉換為數碼地面多媒體廣播（「DTMB」）制式。

作為通訊局的執行部門，通訊辦向港視和香港流動電視網絡指出，採用DTMB制式提供流動電視服務而沒有實施有效的技術措施以防止流動電視服務於指明處所被固定接收，會令本港超過5 000個指明處所組成的觀眾接收到其流動電視服務，因而須受《廣播條例》規管。2014年4月11日，港視和香港流動電視網絡就通訊辦的立場向法庭提出司法覆核許可申請。在2014年11月26日及27日舉行實質聆訊後，原訟法庭於2015年9月29日裁定通訊辦勝訴，並駁回所有由港視和香港流動電視網絡提出的司法覆核理據。其後，港視要求通訊辦處理香港流動電視網絡提出有關採用其他傳送制式以提供流動電視服務的建議。通訊辦一直積極與港視跟進該項替代建議。通訊局及通訊辦會致力協助香港流動電視網絡提供符合相關法例和其流動電視牌照規定的流動電視服務。

## 繼續加強保障電訊服務消費者

### 持續實施防止流動通訊「帳單震撼」的措施

近年，智能電話和先進流動裝置日趨普及，刺激了流動數據服務的增長和需求，與此同時，有關流動寬頻服務帳單爭議的消費者投訴數字亦隨之而上升，情況備受消費者關注。這些投訴大多涉及流動通訊「帳單震撼」，

<sup>6</sup> 上訴法庭於2016年5月17日駁回上訴申請。香港電話有限公司於2016年6月13日向終審法院提出上訴許可申請。

well as the results of the consultancy study, the CA plans to put forward a detailed proposal for spectrum re-assignment in the second round of public consultation to be conducted at early 2017, with a view to announcing its decision on the arrangements for spectrum re-assignment by end 2017. This will allow a lead time of three years for the industry to prepare for any change in spectrum assignments.

## Reduction of Telecommunications Licence Fees

In November 2012, the CA and the SCED issued a joint statement that promulgated their decision to reduce the customer connection fee level of Unified Carrier Licences (“UCLs”) from \$800 to \$700 for each set of 100 customer connections, and to reduce the mobile station fee level of Public Radiocommunications Service Licences (Paging) and Services-Based Operator Licences (Class 3) from \$800 to \$700 for each set of 100 mobile stations. Following the completion of the legislative procedure, the new licence fees took effect on 1 March 2013. In February 2013, PCCW-HKT Telephone Limited and Hong Kong Telecommunications (HKT) Limited (“PCCW and HKT”) applied for leave to lodge a judicial review (“JR”) against the CA and the SCED on their decisions on licence fees reduction. The Court granted leave to PCCW and HKT’s application for the JR in July 2013. The substantive hearing was held from 17 to 19 June 2015 with the judgment handed down on 11 August 2015. The Court of First Instance ruled in favour of the CA and the SCED and dismissed the JR application. PCCW and HKT lodged an appeal to the Court of Appeal on 4 September 2015 and the hearing was held from 19 to 20 April 2016<sup>6</sup>.

## Regulation of Broadcast-type Mobile TV Services

Since the launch of broadcast-type mobile television services (“Mobile TV Services”) in February 2012, the China Mobile Multimedia Broadcasting (“CMMB”) standard has been used as the transmission standard. In January 2014, Hong Kong Mobile Television Network Limited (“HKMTV”), the licensee holding the UCL which authorised it to provide Mobile TV Services (“Mobile TV Licence”), indicated to

OFCA its proposal to switch from the original CMMB standard to the Digital Terrestrial Multimedia Broadcast (“DTMB”) standard.

As the executive arm of the CA, OFCA expressed its views to HKTV and HKMTV that Mobile TV Services using the DTMB standard without effective technical measures to prevent fixed reception by specified premises will render the Mobile TV Services available for reception by an audience of more than 5 000 specified premises in Hong Kong and hence should be subject to regulation by the BO. On 11 April 2014, HKTV and HKMTV applied to the court for leave to apply for a JR of OFCA’s positions. After the substantive hearing conducted on 26 and 27 November 2014, the Court of First Instance handed down its judgment on 29 September 2015 in favour of OFCA and dismissed all the grounds of JR brought by HKTV and HKMTV. Subsequently, HKTV requested OFCA to process HKMTV’s proposal of using an alternative transmission standard for the provision of its Mobile TV Services. Since then, OFCA has been diligently following up with HKTV in respect of its alternative proposal. The CA and OFCA will continue to facilitate HKMTV to provide its Mobile TV Services in compliance with the requirements of the relevant legislation and its Mobile TV Licence.

## Continued Efforts to Strengthen Consumer Protection in the Use of Telecommunications Services

### *Ongoing Implementation of “Mobile Bill Shock” Preventive Measures*

The growing popularity of smartphones and advanced mobile devices has driven the growth of and demand for mobile data services in recent years. At the same time, the increase in the number of consumer complaints relating to mobile broadband billing disputes has become a common concern among consumers. Many of these complaints involve “mobile bill shock”, which refers to the shock consumers experience upon receiving unexpectedly high mobile bill charges. “Mobile bill shock” is mainly caused by unintentional or inadvertent usage of mobile data services, locally or while roaming overseas.

<sup>6</sup> The Court of Appeal dismissed the appeal application on 17 May 2016. PCCW and HKT lodged an application for leave to appeal to the Court of Final Appeal on 13 June 2016.

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即指消費者因收到的流動通訊服務帳單款額遠高於預期而感受到的震撼。出現流動通訊「帳單震撼」的主因，是消費者在本地或海外使用漫遊服務時，不經意或不自覺地使用了流動數據服務。

為解決這個問題，通訊辦自2010年5月起向業界公布一系列供其採用的預防措施，包括容許用戶選擇取消個別服務、設立收費上限、為各類根據用量收費的流動服務設立用量上限，以及向用量達到預定水平或正啟動漫遊數據服務的用戶發出提示短訊。

為增加相關服務資訊的透明度，通訊辦已在網站公布個別營辦商所採取的措施，並定期更新資料。在推行這些措施的同時，通訊辦亦舉辦一系列消費者教育活動，以加深消費者對流動數據服務的認識和了解。通訊辦亦在網站提供數據用量計算機，消費者可使用此工具估算自己的數據用量。隨着流動網絡營辦商和流動虛擬網絡營辦商實施上述預防措施，加上我們持續推行消費者教育，有關流動通訊「帳單震撼」的投訴數字，已由2014年的615宗減至2015年的289宗，減幅為53%。



數據用量計算機有助用家估算自己每月所需的數據用量。The data usage calculator helps users estimate the amount of data needed in a month.

## 公平使用政策指引的實施進度

固網及流動寬頻服務供應商為消費者提供種類繁多的服務計劃，包括「無限用量」計劃。然而，某些「無限用量」服務計劃其實受限於服務供應商所實施名為「公平使用政策」的使用限制。公平使用政策旨在防止個別用戶過度使用網絡資源，以免對網絡表現構成不良影響，妨礙其他用戶使用服務。舉例來說，對於數據用量已超出某些上限的用戶，服務供應商可能會實施限制，例如調低其使用網絡服務優先次序或減慢其數據接達速度等。可是，消費者未必會留意到公平使用政策的實施或了解相關的條款及條件。對於使用「無限用量」服務計劃的用戶，當遇到數據用量因公平使用政策而受到限制時，更會感到不滿。

為保障消費者權益和增加服務資訊的透明度，通訊局於2011年11月發出《公平使用政策指引》，以規管服務供應商應如何實施其公平使用政策。這份強制指引自2012年2月起已經生效。

2015年，通訊辦協助通訊局處理了六宗與公平使用政策相關的投訴個案，當中並無發現違反《公平使用政策指引》的個案。

## 提升寬頻表現測試系統

自2010年12月起，通訊辦在網站設立了寬頻表現測試系統，讓寬頻用戶測量其寬頻服務的連接表現，包括下載和上載速度、網絡時延、封包遺失和抖動。除桌面和手提電腦用戶外，採用iPhone作業系統（「iOS」）和Android作業系統的智能手機和平板電腦用戶也可使用該測試系統。

我們不時檢討和提升測試系統，以進一步提升系統的測試能力和表現。現時，測試系統可讓桌面電腦用戶及iOS和Android系統流動裝置用戶分別進行高達每秒1 000 兆比特及400兆比特的速度測試。

該寬頻表現測試系統榮獲「2013香港資訊及通訊科技獎」項下的「最佳公共服務應用（網上／流動應用程

To address this problem, OFCA has promulgated a series of preventive measures for the industry since May 2010. These measures include allowing customers to opt out of individual services; setting a charge ceiling; setting a usage cap for all kinds of usage-based mobile services; and alerting customers through short messages when their pre-determined usage threshold is reached, or when their roaming data usage is triggered.

To increase the transparency of the relevant service information, OFCA has published measures implemented by individual operators on its website and provided regular updates. In parallel with these measures, OFCA has organised a series of consumer-education programmes to enhance consumers' awareness and knowledge of mobile data services. OFCA has also posted a data usage calculator on its website, which serves as a tool for consumers to estimate their data usage consumption. With the implementation of the abovementioned preventive measures by mobile network operators and mobile virtual network operators as well as our on-going consumer education efforts, the number of complaints in relation to "mobile bill shock" decreased from 615 cases in 2014 to 289 cases in 2015, representing a drop of 53%.

### *Progress of the Implementation of Fair Usage Policy Guidelines*

Fixed and mobile broadband service providers offer a variety of service plans to consumers, including plans with "unlimited usage". However, certain "unlimited usage" service plans are in fact subject to usage restrictions imposed by service providers in the name of Fair Usage Policy ("FUP"). The FUP is intended to prevent excessive usage of network resources by individual customers, which may adversely affect the network performance and hamper other customers' use of the service. For example, service providers may impose restrictions by lowering the network service priority or reducing the access speed for customers whose data usage has exceeded certain threshold. Nevertheless, consumers may not be aware of the existence of the FUP or understand the relevant terms and conditions. Customers of "unlimited service" plans in particular feel aggrieved when their data usage is subject to restriction because of the FUP.

In order to protect consumer interests and enhance the transparency of service information, the CA issued a set of FUP guidelines in November 2011, governing how service providers should implement their FUP. The mandatory guidelines have been in effect since February 2012.

In 2015, OFCA assisted the CA in handling six FUP-related complaint cases. None of them was found to be in contravention of the FUP guidelines.

### *Enhancement of the Broadband Performance Test System*

Since December 2010, OFCA has posted on its website a broadband performance test system to enable broadband service users to measure the performance of their broadband connections, including download and upload speeds, network latency, packet loss and jitter. Apart from users of desktop and notebook computers, users of smart phones and tablets running iPhone operating system ("iOS") and Android operating systems may also make use of the test system.

From time to time, we review and upgrade the test system to further enhance its capability and performance. Currently, it offers desktop users and users of iOS- and Android-based mobile devices speed tests of up to 1 000 Mbps and 400 Mbps respectively.

The broadband performance test system was accredited with a Certificate of Merit under the category of "Best Public Service Application (Web/Mobile Application) Award" in the "Hong Kong ICT Awards 2013". From service launch to March 2016, more than 64 million tests were performed under the system.

### **Continuing to Facilitate the Implementation of Self-regulatory Measures**

#### *Enhancement of the Industry Code of Practice for Telecommunications Service Contracts*

In order to provide guidelines for the industry on drawing up telecommunications service contracts so as to improve transparency in the contracting process and increase customer satisfaction, CAHK, an industry association,

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式)獎」優異證書。自推出服務至2016年3月為止，系統已進行超過6 400萬次測試。

## 繼續促進業界實施自行規管措施

### 改善電訊服務合約業界實務守則

為向業界提供擬訂電訊服務合約的指引，藉以提升合約制訂過程的透明度和客戶滿意度，香港通訊業聯會（一個業界聯會）於2010年12月公布屬自行規管性質的《業界守則》，所有主要的固定和流動網絡營辦商已由2011年7月起實施該守則。

經考慮實施《業界守則》的經驗及消費者的回應後，通訊辦向香港通訊業聯會提出多項建議，以進一步改善《業界守則》。香港通訊業聯會與各參與營辦商商討後，在2014年10月修訂《業界守則》，主要修訂內容包括：

- 改善終止合約的安排，不得對客戶構成不便或涉及不合理的拖延；
- 改善延長合約期或續約時向客戶發出書面確認的安排；
- 合約須清楚列明如營辦商因未有網絡覆蓋而未能於客戶搬遷地址後繼續提供服務，所涉及的終止服務費用的計算方法或上限；
- 合約須清楚列明合約期內第一期及最後一期月費的計算方法；以及
- 鼓勵營辦商彈性推行最佳的冷靜期安排。

經修訂的《業界守則》由2015年5月1日起生效。

自2011年7月實施《業界守則》以來，有關服務合約爭議的投訴數字持續下降，由2011年的1 277宗減少至2015年的458宗，減幅超過64%。

### 收費流動內容服務守則

為保障消費者權益和增加有關流動內容服務價格資料的透明度，通訊辦與業界緊密合作，訂立了一份屬自願性

質的《收費流動內容服務守則》。該守則由香港通訊業聯會於2010年1月公布和實施，規管第三方內容服務供應商提供流動內容服務的手法，並設立業界自行規管計劃。守則要求所有第三方內容服務供應商為客戶提供流動內容服務前，須向他們清楚表明該服務屬於收費服務，並要得到客戶明確同意才提供服務。此外，有關供應商亦須清楚訂明簡易方便的終止訂用服務機制。

守則亦訂明成立行政機構，負責評估內容服務供應商遵從該守則規定的能力，確保他們履行承諾，並藉着處理投訴和抽查，監察他們有否遵從該守則。內容服務供應商須從行政機構獲取有關提供流動內容服務及計帳服務的合格證明書，而流動網絡營辦商只可與獲取合格證明書的內容服務供應商簽訂商業合約。截至2016年3月底，有七家內容服務供應商持有由行政機構發出的合格證明書。

自2010年1月實施《收費流動內容服務守則》後，通訊辦一直密切監察守則的成效，相關投訴數字持續錄得減幅並維持於低水平。過去一年，平均每月接獲的投訴數目不足一宗，反映內容服務供應商遵從屬自願性質的守則，客戶亦對流動內容服務感到滿意。

### 關於電訊服務帳單資料及收取帳款的實務守則

通訊局於2011年10月發出屬自願性質的《關於電訊服務帳單資料及收取帳款的實務守則》，旨在減少計帳爭議，並提高帳單資料的透明度。該實務守則就電訊服務帳單上所需包括的收費項目和收取帳款安排，為電訊營辦商提供指引。截至2016年3月，七家本地固定網絡營辦商和四家流動網絡營辦商已承諾遵從上述實務守則。我們已在通訊辦網站刊載消費者注意事項和所有營辦商遵從守則的情況摘要，供消費者參考。我們會繼續密切監察該實務守則的實施情況及成效。

### 提供流動電視服務的業界守則

根據政府在2008年12月公布並在2010年2月修訂的《香港廣播類流動電視服務發展框架》，業界須就提供本地

promulgated a self-regulatory Industry Code in December 2010, which was implemented by all major fixed and mobile network operators starting from July 2011.

Having regard to the implementation experience and consumers' feedback, OFCA made a number of suggestions to CAHK for further enhancement to the Industry Code. CAHK revised the Industry Code in October 2014 following discussions with participating operators. Major revisions include:

- improving the arrangement for contract termination so as not to cause inconvenience to customers or involve unreasonable delay;
- improving the arrangement for the provision of written confirmation for extension or renewal of contracts;
- stating clearly in the contract the calculation of the termination charge or the maximum amount involved if it is not feasible for the operators to provide service at the relocated premises due to the absence of network coverage;
- stating clearly in the contract the calculation of the first bill and the last bill within the contract term; and
- encouraging operators to implement better cooling-off period arrangements with greater flexibility.

The revised Industry Code took effect on 1 May 2015.

Since the implementation of the Industry Code in July 2011, the number of complaints related to service contract disputes has been decreasing continuously, from 1 277 cases in 2011 to 458 cases in 2015, representing a drop of more than 64%.

### *Code for the Provision of Chargeable Mobile Content Services*

To safeguard consumer interests and increase the transparency of the pricing information related to Mobile Content Services ("MCS"), OFCA has worked closely with the industry to draw up the voluntary "Code for the Provision of Chargeable Mobile Content Services". Promulgated and put into effect by CAHK in January 2010, the code governs the practices of third-party Content Service Providers ("CSPs") in providing MCS and the establishment of an industry self-regulatory scheme. Under

the code, all third-party CSPs are required to indicate clearly to their customers the chargeable nature of the services and obtain their clear consent before initiating the delivery and provision of MCS. They are also required to set out clearly the unsubscribing mechanisms, which should be simple and convenient.

The code also provides for the establishment of an Administrative Agency ("AA"), which is responsible for assessing the capability of CSPs and securing their pledges in complying with the requirements of the code, as well as monitoring their compliance through complaint handling and random checks. A mobile network operator may only enter into a commercial contract with a CSP that has obtained a Letter of Positive Assessment ("LPA") from the AA regarding MCS delivery and billing. As at the end of March 2016, seven CSPs were holding the LPAs issued by the AA.

Since the adoption of the code in January 2010, OFCA has been closely monitoring its effectiveness, and recorded a continued decrease in the number of related complaints, which has remained at a low level. During the year under review, less than one complaint case was received on a monthly average, reflecting the compliance of CSPs with the voluntary code and satisfaction of customers with the MCS.

### *Code of Practice in Relation to Billing Information and Payment Collection for Telecommunications Services*

In October 2011, the CA issued a voluntary code of practice entitled "Code of Practice in Relation to Billing and Payment Collection for Telecommunications Services", with a view to reducing billing disputes and enhancing the transparency of billing information. This code of practice provides guidance to telecommunications operators on chargeable items to be included in their bills, and arrangements for payment collection. As at March 2016, seven local fixed and four mobile network operators had pledged compliance with the code. We have published on our website a consumer alert as well as a summary of the compliance status of all operators for the information of consumers. We will continue to closely monitor the implementation and effectiveness of this code of practice.

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廣播類和串流類的流動電視服務制訂業界守則，以實施自行規管。香港通訊業聯會於2012年8月發出有關流動電視服務的業界守則。為保護兒童和維護公眾道德，該守則要求流動電視服務供應商就色情及淫褻內容實施限制收看的措施。流動電視服務供應商亦應考慮社會現時普遍接受的道德標準，並格外留意其播出的電視內容可能對兒童造成的影響。

## 長期實施解決顧客投訴計劃

通訊辦促使電訊業界設立屬自願性質的「解決顧客投訴計劃」，以調解方式協助電訊服務供應商與其住宅／個人顧客解決雙方已陷入僵局的計帳爭議。計劃由2012年11月1日開始運作，以兩年為試驗期。有關調解服務由香港通訊業聯會成立的一個獨立調解服務中心（「調解服務中心」）提供，香港所有主要的電訊服務供應商均自願參與。通訊辦對該計劃的支持包括贊助所需經費、按有關受理準則審核申請，以及監察計劃的表現和管治工作。

在試驗計劃於2014年10月31日結束後，通訊辦就計劃的成效和市民使用計劃的情況進行檢討。由於試驗計劃的成績令人鼓舞，加上顧客對計劃有確實的需求，以及業界的正面回應，通訊辦決定支持以試驗計劃採用的機制為基礎，由2015年5月1日起長期實施該計劃。

計劃在2015年5月1日至2016年3月31日實施期間，共接獲145宗合資格申請，當中73宗在轉介予調解服務中心跟進前已獲得解決，64宗經調解服務中心調解後亦獲得圓滿解決，有四宗個案未能解決，而餘下的四宗個案則正由調解服務中心處理。

為提高市民對計劃的認識，我們舉辦了一系列宣傳活動，例如刊載漫畫和推廣專輯，以及舉辦巡迴展覽和公眾講座。通訊辦會繼續支持該計劃，以及監察計劃的成效。

## 協助新的海底電纜系統在香港登陸

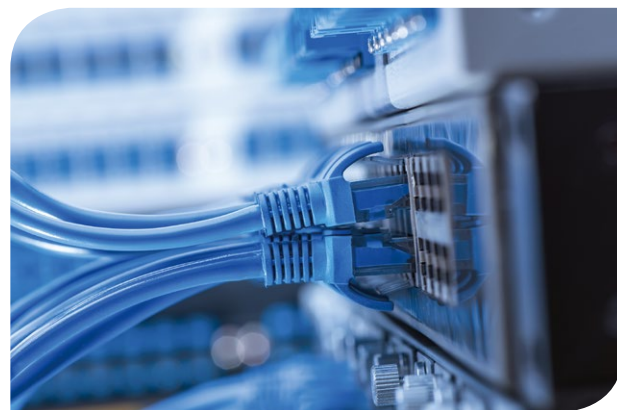
年內，通訊辦繼續向營辦商提供綜合聯絡服務，協助他們為兩個新海底電纜系統（即Asia-Pacific Gateway

及Asia Africa Europe-1）在香港登陸申請所需的法定許可。這兩個新系統預定於2016年年中至2017年年中期間在香港登陸。年內，通訊辦亦主動與其他相關政府部門商討可行的方法，以加快處理營辦商為取得在香港水域進行海底電纜系統安裝工程及緊急維修所需的法定許可而提出的申請，令有關申請程序及要求得以簡化。我們已相應更新《在香港水域進行海纜相關工作時申請所需政府執照／許可／簽證的資料便覽》，闡述簡化的申請程序及要求，並在通訊辦網站登載該便覽，以供業界參考。

## 固網寬頻服務的發展

透過寬頻上網使用各項應用程式及瀏覽內容，已成為本港市民日常生活的一部分。隨着固定網絡營辦商採用各種技術持續鋪設網絡，市民大眾得以享用近乎覆蓋全港的寬頻服務。截至2016年3月，本港約有235萬個住宅及商業固網寬頻用戶，住戶普及率為84%。目前寬頻服務的速度可高達每秒10吉比特。大約86%的固網寬頻用戶使用速度達每秒10兆比特或以上的寬頻服務。為透過促進市場競爭以加強在鄉郊及偏遠地區的鄉村提供固網寬頻服務，通訊局已修訂世紀互聯集團有限公司的綜合傳送者牌照，讓牌照持有人可利用2.3吉赫頻帶內的無線電頻譜，提供無線固網寬頻服務。隨着無線固定網絡鋪設至鄉郊及偏遠地區，以及有線固定網絡營辦商持續拓展網絡覆蓋範圍，預計這些地區的固網寬頻服務的選擇及質素將會逐步提升。

根據歐洲光纖到戶議會於2016年2月發出的新聞公報，香港住戶連接光纖到戶／光纖到樓的普及率與全球54



### *Industry Code of Practice for Provision of Mobile TV Services*

According to the Framework for Development of Broadcast-type Mobile TV Services in Hong Kong, which was promulgated by the Government in December 2008 and revised in February 2010, the industry is required to develop a code of practice on the provision of Mobile TV Services, both local broadcast-type and streaming-type, for the purpose of self-regulation. In August 2012, CAHK issued a code of practice for Mobile TV Services. With a view to protecting children and public morals, the code requires Mobile TV Service providers to implement access controls for pornographic and obscene content. Mobile TV Service providers should also have regard to the prevailing standards of morality generally accepted by society, and in particular be vigilant about the likely effects of their television content on children.

### *Long-term Implementation of the Customer Complaint Settlement Scheme*

To help resolve billing disputes in deadlock between telecommunications service providers and their residential/personal customers by means of mediation, OFCA facilitated the setting up of a voluntary Customer Complaint Settlement Scheme (“CCSS”) by the telecommunications industry for a trial period of two years starting from 1 November 2012. The mediation service was provided by an independent mediation service centre (“CCSS Centre”) set up under CAHK with voluntary participation of all major telecommunications service providers in Hong Kong. OFCA supported the CCSS by contributing the necessary funding, vetting the CCSS applications against the acceptance criteria, and monitoring the performance and the governance of the scheme.

Following completion of the trial scheme on 31 October 2014, OFCA conducted a review of the effectiveness of the CCSS and its usage by the public. Having regard to the encouraging outcome of the CCSS trial, the proven demand from customers and the positive feedback from the industry, OFCA decided to support the long-term implementation of the CCSS on the basis of the framework adopted in the trial scheme. The long-term implementation of the CCSS commenced on 1 May 2015.

During the implementation period from 1 May 2015 to 31 March 2016, there were 145 eligible applications, 73 cases of which were resolved before referral to the CCSS Centre, 64 cases were satisfactorily settled through mediation by the CCSS Centre, four cases were not settled, and the remaining four cases were being processed by the CCSS Centre.

To raise public awareness of the CCSS, a series of publicity activities were conducted, such as publication of comic strips and advertorials, as well as the conduct of roving exhibitions and public seminars. OFCA will continue to support the CCSS and monitor its effectiveness.

### **Facilitation of the Landing of New Submarine Cable Systems in Hong Kong**

During the year, OFCA continued to provide a single-point-of-contact service, assisting operators to apply for the necessary statutory approvals to land two new submarine cable systems, namely the Asia-Pacific Gateway and the Asia Africa Europe-1, in Hong Kong. These two new systems are scheduled to land in Hong Kong between mid-2016 and mid-2017. During the year, OFCA also took the initiative to discuss with other relevant Government departments on possible ways to speed up the processing of the applications for the necessary statutory approvals to carry out installation works and emergency repairs of submarine cable systems in Hong Kong waters. As a result, the application procedures and requirements concerned were simplified and streamlined. We have accordingly updated the “Information Note on Applying for Required Government Permits/Approvals/Visas to Carry out Works Related to Submarine Cable Systems within Hong Kong Waters” to set out the streamlined application procedures and requirements, and published it on OFCA’s website for the industry’s information.

### **Development of Fixed Broadband Services**

Broadband access to various applications and content services has become an integral part of people’s lives in Hong Kong. With the continuous network rollout of fixed network operators, the Hong Kong community is able to enjoy nearly ubiquitous coverage of broadband networks

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個經濟體系比較，排名第五。根據互聯網內容傳輸商 Akamai 於 2016 年 6 月發布的《2016 年第一季互聯網發展狀況報告》，香港的連線速度平均峰值為每秒 110.3 兆比特，屬全球第二快。

## 檢討傳送者牌照的牌照條件

隨着傳送者牌照制度多年來的演進，針對特定事項的跨行業法例或規例相繼實施，並適用於所有行業（包括電訊業）。跨行業規管制度的引入和進一步完善，已可取代根據電訊發牌制度所施加的行業特定規管，令後者變得不合適和不必要。

為消除電訊牌照持有人就特定事宜須同時受行業特定規管及跨行業法例的約束這種異常情況，通訊局與商務及經濟發展局局長在有關公眾諮詢結束後，於 2015 年 3 月 10 日公布決定，把五項規管道路開掘工程的特別條件及一項限制在公共建築物及樹木附加裝置的一般條件從傳送者牌照中刪除（「該決定」）。依據該決定，通訊辦發出通告函件邀請持牌人交回牌照，以刪除該等特別條件。大部分主要傳送者牌照持有人已交回牌照予通訊辦刪除有關特別條件。至於刪除該一般條件，則必須對《電訊（傳送者牌照）規例》（第 106V 章）作出修訂（「修訂規例」）。通訊辦協助商務及經濟發展局局長引入《修訂規例》，而該規例由 2016 年 7 月 1 日起生效。



## 更有效使用八位號碼計劃的措施

香港自 1995 年起一直採用八位電訊號碼計劃。由於社會對流動服務號碼的需求持續殷切，以及新一代流動服務（例如物聯網、第五代(5G)流動服務）將會陸續面世，流動號碼的消耗率預計在未來數年將持續高企。如不採取紓緩措施，現時可供編配作流動服務之用的八位號碼預計將於 2018 年年底前耗盡。有見及此，通訊辦協助通訊局於 2015 年 10 月至 12 月進行為期兩個月的公眾諮詢，就五項建議措施徵詢公眾意見，務求透過更有效使用現行八位電訊號碼計劃，為流動服務提供額外的號碼資源。諮詢結束後，我們收到 20 份意見書。經審慎考慮業界及有興趣人士的看法和意見，並顧及確保有足夠的號碼資源可供使用的需要，以配合未來 5G 流動技術的發展，通訊辦支援通訊局落實將採用的措施和各項措施的實施計劃，以及於 2016 年 6 月公布其決定。通訊辦將會與業界及其他受影響各方合作，跟進為推行各項措施以釋放新號碼組而需對有關網絡及系統作出的改動。

deploying various technologies. As at March 2016, there were around 2.35 million residential and commercial fixed-broadband subscribers, with a household penetration rate of 84%. Broadband services are now available at speeds of up to 10 Gbps. Around 86% of fixed broadband subscribers use broadband services with a speed of 10 Mbps or above. With a view to enhancing the provision of fixed broadband services in villages in rural and remote areas through increased competition in the market, the CA has amended the unified carrier licence of the 21 ViaNet Group Limited to enable the licensee to provide wireless fixed broadband service using radio spectrum in the 2.3 GHz band. It is expected that the choice and service quality of fixed broadband services in rural and remote areas will improve progressively with the rollout of the wireless fixed network to those areas as well as the on-going expansion of coverage by the wireline fixed network operators.

According to a press release issued by the FTTH Council Europe in February 2016, Hong Kong ranked the fifth worldwide in fibre to home/building household penetration among the 54 economies under comparison. According to the "State of the Internet 1st Quarter, 2016 Report" published by Internet content delivery provider Akamai in June 2016, Hong Kong has an average peak connection speed of 110.3 Mbps, which is the second highest in the world.

### *Review of Licence Conditions in the Carrier Licences*

Alongside the evolution of the carrier licensing regime over the past years, cross-sectoral legislation or regulation on specific matters which apply across the board to all sectors including the telecommunications sector, have come on stream. The introduction of and further enhancements to these cross-sectoral regulatory regimes over time have served to supersede the sector-specific controls imposed under the telecommunications licensing regime and rendered the latter inappropriate and unnecessary.

With a view to removing the anomaly of subjecting telecommunications licensees to both the sectoral and cross-sectoral regulatory controls on specific matters, and following a public consultation, the CA and SCED announced on 10 March 2015 their decisions to remove five special conditions ("SCs") governing road-opening

works and one general condition ("GC") relating to restrictions on attachment to public buildings and trees from carrier licences ("the Decisions"). Pursuant to the Decisions, OFCA issued a circular letter inviting the licence holders to return their licences to effect the corresponding removal of the SCs. Most of the major carrier licensees have already returned their licences for removal of the concerned SCs. It is necessary to introduce legislative amendments to the Telecommunications (Carrier Licences) Regulation (Cap. 106V) ("Amendment Regulation") for the removal of the GC. OFCA provided support to the SCED in introducing the Amendment Regulation, which commenced operation from 1 July 2016.

### *Measures for More Efficient Utilisation of the 8-digit Numbering Plan*

Since 1995, Hong Kong has adopted an 8-digit telecommunications numbering plan. With the persistently high demand for mobile service numbers, as well as the advent of future generation mobile services such as the Internet of Things and fifth generation ("5G") mobile services, it is expected that the consumption rate of mobile numbers will be sustained in the years to come. It is forecast that the 8-digit numbers currently available for allocation to mobile services will be used up by end 2018 if no mitigation measures are taken. Against this background, OFCA assisted the CA in conducting a 2-month public consultation from October to December 2015 to solicit public views on five proposed measures with a view to making available additional number resources for mobile services through more efficient use of the existing 8-digit telecommunications numbering plan. By the close of the consultation, 20 submissions were received. Having carefully considered the views and comments from the industry and interested parties, as well as taking into account the need to ensure that adequate number resources shall be made available to cope with the development of 5G mobile technologies in the coming years, OFCA supported the CA in finalising the measures to be adopted and the implementation plan for the respective measures, and announcing its decision in June 2016. OFCA will follow up with the industry and other affected parties in respect of implementing the necessary changes to their networks and systems in relation to the new numbering blocks to be released under the respective measures.