

**GUIDELINES FOR
SUBMISSION OF APPLICATIONS
FOR ASSIGNMENT OF SPECTRUM
IN THE 26 GHZ AND 28 GHZ BANDS
FOR PROVISION OF LARGE SCALE
PUBLIC MOBILE SERVICES**

**Office of the Communications Authority
21 December 2018**

Disclaimer

These Guidelines indicate the manner in which the Communications Authority (“CA”) proposes to perform its function of determining applications for assignment of spectrum in the 26 GHz and 28 GHz bands for provision of large scale public mobile services under a unified carrier licence. These Guidelines are designed to assist interested parties in formulating their proposals, and should be read in conjunction with the relevant CA Statements, and other policy and regulatory documents hereafter referred to.

The Guidelines are not intended to form any part of the basis of any investment decision or other evaluation and should not be considered as a recommendation by the CA, the Office of the Communications Authority (“OFCA”) or any of their advisers to any reader of these Guidelines. Each reader must make his own independent assessment of the potential value of an assignment of the relevant spectrum in the 26 GHz and 28 GHz bands for the provision of large scale public mobile services in order to determine whether to apply for the spectrum. All information contained in these Guidelines may be updated, modified or amended at any time by the CA.

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These Guidelines do not constitute an offer of spectrum assignment, nor do they constitute the basis of any contract which may be concluded in relation to this invitation for application for spectrum assignment or in respect of any assignment of the relevant spectrum.

Readers should not construe the content of these Guidelines, or any other communications by or on behalf of the CA, OFCA or any of their advisers as financial, legal, tax or other advice. Accordingly, each reader of these Guidelines should consult his/her own professional advisers as to financial, legal, tax and other matters concerning any potential application for spectrum assignment or any assignment of the relevant spectrum for the provision of large scale public mobile services.

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Section I – Introduction

- 1.1 The Communications Authority (“CA”) and the Secretary for Commerce and Economic Development (“SCED”) jointly published a statement on 13 December 2018 to promulgate the decisions of the CA on allocation of the 4 100 MHz of spectrum in the 26 GHz band (24.25 – 27.5 GHz) and the 28 GHz (27.5 – 28.35 GHz) band (collectively referred to as the “26/28 GHz bands”) to mobile service and the associated arrangements for spectrum assignment; and the decision of SCED on arrangements for the related spectrum utilisation fee (“SUF”) (“Statement”)¹.
- 1.2 The CA has decided to adopt an administrative approach to assign the 4 100 MHz of spectrum in the 26/28 GHz bands, among which 3 700 MHz of spectrum (“Non-shared Spectrum”) is set aside for the provision of conventional large scale public mobile services in any location of the territory (“large scale public mobile services”), and the remaining 400 MHz of spectrum (“Shared Spectrum”) for the provision of small scale localised wireless services (including fixed services) in specified locations of the territory (“localised wireless services”). The present Guidelines provide the guidance for submitting applications for assignment of the Non-shared Spectrum.
- 1.3 These Guidelines are issued under section 6D(2)(a) of the Telecommunications Ordinance (Cap. 106) (“TO”). They indicate the manner in which the CA proposes to perform its function of determining applications for assignment of spectrum in the 26/28 GHz bands for provision of large scale public mobile services under a unified carrier licence (“UCL”). Parties interested in the assignment of the Non-shared Spectrum in the 26/28 GHz bands are invited to submit applications to the CA in accordance with these Guidelines, which should be read in conjunction with the Statement as well as other policy and regulatory documents hereafter referred to. The CA will announce the spectrum assignment results within the first quarter of 2019. Each of the successful applicants will be granted a UCL to effect the spectrum assignment for use from 1 April 2019 onwards (“Licensee”).
- 1.4 All applications received will be subject to a pre-qualification exercise

¹ The Statement is available at:
http://www.coms-auth.hk/filemanager/statement/en/upload/480/joint_statement_st_052018.pdf.

for participation in the administrative spectrum assignment process, followed by an assessment having regard to the information provided as required in Section V and the broad licensing criteria outlined in Section VI of these Guidelines.

- 1.5 Applicants should ensure that all information contained in their applications and any other subsequent submissions and representations are correct and accurate in all respects, in reliance upon which the CA will consider the applications. The CA may cancel, withdraw or suspend the UCL granted and/or the frequency assignment if any information (including, without limitation, in an application) submitted by the applicant is false or misleading.
- 1.6 Applications for assignment of the Non-shared Spectrum should be **submitted in English in triplicate**, sealed in a non-transparent envelop with confidential stamp, and marked “**Application for Assignment of Non-shared Spectrum in the 26/28 GHz Bands**” on the envelope. An electronic copy should also be provided. All applications must be delivered by hand to the Office of the Communications Authority (“OFCA”) at the following address not later than **5:30 pm on 25 January 2019**. **Late submissions will not be accepted.**

Office of the Communications Authority
29th Floor, Wu Chung House
213 Queen’s Road East
Wan Chai
Hong Kong
(Attention: Head, Regulatory 3)

Email: apply-26-28GHz-non-shared@ofca.gov.hk

- 1.7 If a tropical cyclone warning signal no. 8 or above, or a “black” rainstorm warning signal is in force in Hong Kong on 25 January 2019, the applications must reach OFCA at the address as stated in paragraph 1.6 not later than 5:30 pm on the next business day² on which none of the signals remains in force.

² For the purpose of the current spectrum assignment exercise, “Business Day” means a full day other than a Saturday or a Sunday on which banks in Hong Kong are open for general business.

- 1.8 Applicants will receive acknowledgement of receipt of applications. The CA may request the applicants to provide additional information to clarify or supplement the applications submitted. Response to such request must be made on or before the deadline specified by the CA or otherwise it will not be considered.
- 1.9 The CA reserves the right to disclose the names and composition of the parties who have submitted applications. All other information received will be treated in confidence. Where the CA proposes to disclose any information in the applications which may be considered as commercially sensitive information, the CA will give the applicant an opportunity to make representations on the proposed disclosure before the CA makes a final decision on whether or not to disclose the information.
- 1.10 Any enquiries relating to these Guidelines should be addressed in writing and sent to the CA by post or email to the addresses as stated in paragraph 1.6 on or before 4 January 2019. All questions should be marked “**Question(s) on Application for Assignment of Non-shared Spectrum in 26/28 GHz Bands**”. The person asking the question must be identified and the organisation that the person represents must be stated. Contact details in the forms of email address, postal address and telephone number must be provided.
- 1.11 The CA has the discretion to publish further information and/or questions raised and answers provided. It may also exercise the discretion not to publish a particular question and the related answer, in whole or in part; and will also reserve the right not to respond to any question. The identity of the person asking the questions will not be published without his/her permission.
- 1.12 Nothing in these Guidelines should be taken to bind the CA on the granting of any spectrum assignment and licence, the terms of any licence to be granted, or any particular course of action in relation to the handling of applications received. The CA reserves the right not to accept any application submitted.

Section II – Regulatory Framework for Provision of Public Mobile Services

Unified Carrier Licensing Regime

- 2.1 The unified carrier licensing regime has been implemented starting from 1 August 2008 as the single licensing vehicle for regulating the establishment and maintenance of means of telecommunications, including telecommunications networks in Hong Kong for provision of public telecommunications services. The statement entitled “*Licensing Framework for Unified Carrier Licence*” (“UCL Statement”) issued in May 2008 sets out the detailed UCL licensing framework³. At present, the UCL is the only type of carrier licence to be issued for the provision of fixed, mobile and/or converged services.
- 2.2 The Non-Shared Spectrum in the 26/28 GHz bands will be licensed under a UCL. Applicants applying for assignment of the Non-shared Spectrum are at the same time applying for the grant of a UCL to effect the spectrum assignment if it is approved by the CA. Therefore, applicants are advised to also refer to the “*Guidelines for the Submission of Proposals for Applying Unified Carrier Licence*” (“UCL Guidelines”) ⁴ for information on the UCL and the regulatory environment for provision of telecommunications services in general. These Guidelines focus on matters which are directly related to the application for assignment of the Non-Shared Spectrum for provision of large scale public mobile services. Applicants intending to also provide fixed and/or converged fixed/mobile services under the UCL must read the UCL Guidelines.
- 2.3 For the avoidance of doubt, UCLs will only be granted to parties for the provision of public telecommunications services, i.e. to make the services provided under the UCL available to the public at the wholesale and/or retail level. UCLs will not be granted for offering services only to the licensee itself or to its affiliated companies or entities, which are not qualified as offering services to the public.

³ The UCL Statement is available at: http://tel_archives.ofca.gov.hk/en/tas/others/ta20080509.pdf.

⁴ The UCL Guidelines are available at:
<http://www.coms-auth.hk/filemanager/statement/en/upload/452/gn72018e.pdf>.

- 2.4 Applicants may also apply to the CA to include the provision of mobile virtual network operator (“MVNO”) service under its UCL. MVNO service refers to telecommunications services utilising the radio stations operated by another licensee providing mobile services at frequencies specified in the licensee’s licence, to enable two-way communications between moving locations or between a moving location and a fixed point.

Interconnection Regime

- 2.5 Interconnections between telecommunications networks and services are governed by sections 36A and 36B of the TO and the licence conditions of the carrier licences. The former Telecommunications Authority (“TA”) issued a series of statements (No. 1 to No. 10) during the period from March 1995 to June 1995 on “*Interconnection and Related Competition Issues*”, setting out the principles for seeking and effecting interconnection⁵.
- 2.6 A carrier is required under its licence to ensure “any-to-any connectivity” by interconnecting its network and service with networks and services of other carriers, subject to the requirements of the TO and the relevant licence conditions. Irrespective of the types of networks and services which they provide and operate and irrespective of the underlying technologies used, carriers are obliged to interconnect with one another so that any customer in any one network can enjoy seamless and transparent access to any other customer in any interconnecting network and, where directed by the CA, to any telecommunications service offered in any interconnecting network.
- 2.7 Regarding carrier-to-carrier interconnection, the CA has not intervened to regulate the mobile-mobile interconnection charge (“MMIC”)⁶ and broadband interconnection charge between fixed carriers. While in the past the former TA had given regulatory guidance to the industry on the

⁵ The TA’s Statements No. 1 to 10 are available at:
<http://tel.archives.ofca.gov.hk/en/tas/tas-bs-interconnection.html>.

⁶ MMIC refers to the interconnection charge for telephony traffic exchanged between two mobile carriers.

payment of fixed-mobile interconnection charge (“FMIC”)⁷ based on the Mobile Party’s Network Pays arrangement, that regulatory guidance was withdrawn on 27 April 2009 in accordance with the former TA’s decision in its statement entitled “*Deregulation for Fixed-Mobile Convergence*” published in April 2007⁸.

- 2.8 Whilst the narrowband interconnection charge between fixed carriers was subject to regulatory guidance⁹, the CA decided on 16 April 2013 by its statement “*Review of Regulatory Guidance on the Charging Principles of Interconnection between Fixed Carriers*” to withdraw the regulatory guidance on the charging principles of narrowband interconnection between fixed carriers and Statement No. 7 on “*Interconnection and Related Competition Issues*” after a transitional period which ended on 16 October 2014¹⁰. In other words, there is at present no regulatory guidance in force concerning either the charging principles of MMIC, FMIC, or narrowband and broadband interconnection charges between fixed carriers. All such charges are solely determined through commercial negotiations among the carriers.
- 2.9 Regarding carrier to service provider interconnection, the former TA has reviewed and updated the regulatory arrangements for international call forwarding service (“ICFS”) charge¹¹ and local access charges (“LAC”)¹². For the ICFS charge, the former TA updated the terms and conditions of interconnection in its “*Determination under Section 36A of the Telecommunications Ordinance in respect of a Variation of the Terms and Conditions of Interconnection for International Call Forwarding*

⁷ FMIC is an interconnection charge for telephony traffic exchanged between fixed carrier and mobile carrier.

⁸ The TA’s Statement is available at: http://tel_archives.ofca.gov.hk/en/tas/others/ta20070427.pdf.

⁹ The updated TA’s Statement No. 7 is available at: http://tel_archives.ofca.gov.hk/en/tas/interconnect/ta20090403stat.pdf.

¹⁰ The CA’s Statement is available at: http://www.coms-auth.hk/filemanager/statement/en/upload/170/ca_statements20130416.pdf.

¹¹ ICFS charge refers to the access charge or originating charge for interconnection necessary for the provision of international call forwarding service.

¹² LAC refers to an interconnection charge payable by external telecommunications service (“ETS”) operators to the local network operators, including local fixed and mobile carriers, for the conveyance of ETS traffic to and from end users of the local network operators.

Services” issued in May 2009¹³. For the LAC, the former TA decided to adopt an updated LAC regime as stated in its statement “*New Regulatory Regime for Local Access Charge*” in December 2011¹⁴ which came into effect from 1 July 2013.

Use of Numbers

- 2.10 Pursuant to section 32F of the TO, the CA has issued a “*Numbering Plan for Telecommunications Services in Hong Kong*” (“Hong Kong Numbering Plan”)¹⁵. A unified carrier licensee is entitled to apply for allocation of telecommunications numbers and codes in the Hong Kong Numbering Plan for provision of telecommunications service in accordance with the relevant guidelines and codes of practices issued by the CA¹⁶.

Number Portability

- 2.11 Number portability for fixed and mobile telecommunications services (i.e. operator number portability (“ONP”) and mobile number portability (“MNP”)) has been implemented in Hong Kong since 1995 and 1999 respectively. Fixed numbers are portable among all the fixed carriers and services-based operator (“SBO”) licensees providing fixed voice telephony services¹⁷, and mobile numbers are portable among all the mobile carriers and SBO licensees providing mobile voice telephony services and MVNO services¹⁸.

¹³ The TA’s Determination is available at:
http://tel_archives.ofca.gov.hk/en/ta-determine/de20090519.pdf.

¹⁴ The TA’s Statement is available at:
http://tel_archives.ofca.gov.hk/en/tas/interconnect/ta20111223.pdf.

¹⁵ The Hong Kong Numbering Plan is available at:
http://www.ofca.gov.hk/filemanager/ofca/tc/content_311/no_plan.pdf.

¹⁶ The Code of Practice relating to the use of numbers and codes in the Hong Kong Numbering Plan is available at: http://www.coms-auth.hk/filemanager/statement/en/upload/385/cop-numbering_e.pdf.

¹⁷ SBO licensees are required to support number portability for fixed numbers if they provide “Class 1” type fixed services (i.e. fixed services that have all the attributes of the conventional fixed telephone services) under their licences.

¹⁸ SBO licensees are required to support number portability for mobile numbers if they provide “Class 1” type mobile services (i.e. mobile services that have all the attributes of the conventional mobile telephone services) and MVNO services under their licences.

- 2.12 ONP and MNP are implemented in Hong Kong using the distributed database approach, which requires the originating network to perform number translation. Each originating network has the responsibility of routing the calls correctly to the final recipient's network. With the implementation of the unified carrier licensing regime in August 2008, all unified carrier licensees (including fixed and mobile carriers), MVNOs and SBOs providing class 1 services should facilitate ONP and MNP at their own expense, as stated in the former TA's statement on *"Facilitating Number Portability under the Unified Carrier Licensing Regime"*¹⁹. In line with that requirement, the former TA issued the *"Determination under Section 36A of the Telecommunications Ordinance in respect of a Variation of the Terms and Conditions concerning Interconnection relating to Operator Number Portability and Mobile Number Portability"* in October 2010 to sunset all previous determinations relating to ONP and MNP²⁰. The obligation on number portability will be accompanied by the right to have access to the number porting database. To fulfil the licence obligations concerning the provision of ONP and MNP, the Licensees may choose to set up their own systems or negotiate with other licensees to make arrangements at commercially agreed terms. If the Licensees opt to set up their own number portability databases, they shall, where and as directed by the CA, provide administration database hosting service²¹ to other licensees at commercially agreed terms to facilitate the portability of numbers as required under their licences.
- 2.13 The former TA issued a statement *"Fixed Mobile Number Portability"* in July 2009²² announcing that operators may implement fixed-mobile number portability ("FMNP") on a voluntary basis at their own cost. Interested Licensees should observe the relevant guiding principles

¹⁹ The TA's Statement is available at:
http://tel_archives.ofca.gov.hk/en/tas/others/tas20101022.pdf.

²⁰ The TA's Determination is available at:
http://tel_archives.ofca.gov.hk/en/ta-determine/de20101022.pdf.

²¹ Administration database hosting service means a service offered by the Licensee which makes available its administration database for access by another licensee, so that the latter will be able to fulfil the licence obligation under its own licence to facilitate the portability of numbers without the need of setting up its own administration database.

²² The TA's Statement is available at:
http://tel_archives.ofca.gov.hk/en/tas/numbering/tas20090710.pdf.

governing the provision of FMNP and submit proposals to the CA for its prior approval before commencing.

Use of Radio Spectrum

- 2.14 Pursuant to section 32G of the TO, the CA has the statutory duty to promote the efficient allocation and use of spectrum as a public resource of Hong Kong. According to section 32H of the TO, the CA is empowered to allocate and manage frequencies and bands of frequencies in all parts of the radio spectrum used in Hong Kong. In April 2007, the Government having taken into account views and comments from public consultation promulgated the Radio Spectrum Policy Framework (“Spectrum Policy Framework”)²³ for the management of radio spectrum in Hong Kong. As set out in the Spectrum Policy Framework, there is no legitimate expectation that there will be any right of renewal or right of first refusal of any licence or spectrum assignment upon the expiry of a licence or spectrum assignment. The minimum notice periods for variation or withdrawal of spectrum assignments are set out in the statement of the former TA issued in January 2008²⁴.
- 2.15 The rights of the Licensees in relation to the use of radio spectrum for provision of telecommunications services are set out in the UCL Statement²⁵. The use of radio spectrum may be subject to the payment of SUF as mentioned in Section IV and spectrum management fee (which is one of the components of the annual licence fee as mentioned in Section IV).

Future Spectrum Supply

- 2.16 In accordance with the Spectrum Policy Framework, the CA publishes the “Spectrum Release Plan” (“SRP”)²⁶ to inform the industry and

²³ The Spectrum Policy Framework is available at:
<http://www.cedb.gov.hk/ccib/eng/legco/pdf/spectrum.pdf>.

²⁴ The TA’s Statement is available at: http://tel_archives.ofca.gov.hk/en/tas/spectrum/ta20080131.pdf.

²⁵ See sub-paragraph 7(a) of the UCL Statement.

²⁶ The latest version of the SRP is available at:
http://ofca.gov.hk/filemanager/ofca/common/Industry/broadcasting/spectrum_plan2018_en.pdf.

interested parties of the potential supply of radio spectrum which may be made available through open bidding, tendering process or other appropriate means in the following three years. The SRP is updated every year on a rolling basis or as required taking into account the latest developments. Parties who are interested in providing mobile service should make reference to the SRP from time to time and the announcements made by the CA to invite applications to bid or apply for the radio spectrum.

Trading of Spectrum

- 2.17 Trading of spectrum is a mechanism whereby a spectrum assignee may, through bilateral negotiations, transfer all or part of the spectrum it holds to another party for the remaining duration of spectrum assignment. A consultancy study on the matter was commissioned by the Government in 2017 and was completed in 2018. Taking into account the findings of the consultancy study, the Government advised the Legislative Council Panel on Information Technology and Broadcasting in June 2018 that it did not see a justifiable case for introducing spectrum trading in Hong Kong both in the short term (i.e. within the next five years) and in the medium term (i.e. the next six to ten years)²⁷.

Spectrum Utilisation Fees for Spectrum Assigned Administratively (for Fixed and Other Links)

- 2.18 To encourage more efficient use of the scarce radio spectrum resources, SCED and the former TA jointly issued a statement “*Spectrum Utilization Fee for Spectrum Assigned Administratively*” in September 2011 setting out their decisions to impose SUF²⁸ on spectrum that is assigned to non-Government users administratively, the spectrum and the services that will attract SUF, the levels of SUF payable, and the

²⁷ The paper to the Legislative Council Panel on Information Technology and Broadcasting is available at:
<http://www.legco.gov.hk/yr17-18/english/panels/itb/papers/itb20180611cb4-1200-5-e.pdf>.

²⁸ SUF for spectrum assigned administratively is the price set by the regulator, charged to spectrum licensees and is intended to reflect the opportunity cost of spectrum use (and thereby provide effective incentives for efficient use of spectrum).

implementation details²⁹.

2.19 The Government has completed the legislative process for implementation of the SUF charging scheme. The following legislation effecting the SUF charging scheme came into operation on 1 January 2018 -

- (a) Telecommunications (Designation of Frequency Bands subject to Payment of Spectrum Utilization Fee) (Amendment) Order 2017; and
- (b) Telecommunications (Level of Spectrum Utilization Fee) (Fixed and Other Links) Regulation.

2.20 Under the SUF charging scheme, the full fee payable is set out in Table 1 below, subject to a transitional period of five years before the charging scheme is fully in force. The SUF would be levied two years after the implementation of the SUF charging scheme. After the two-year grace period (for the 24 months beginning on 1 January 2018), SUF would be imposed using a three-year phase-in approach, with 30% of the SUF payable for the 12 months beginning on 1 January 2020, 70% payable for the 12 months beginning on 1 January 2021, and the full amount payable for the subsequent (fifth) year and beyond.

²⁹ The TA's Statement is available at: <http://tel.archives.ofca.gov.hk/en/tas/spectrum/ta20110923.pdf>.

Table 1: List of frequency bands subject to payment of SUF and the levels of SUF for spectrum assigned administratively

Designated frequency bands (MHz)	Use	SUF payable (per link, in HK\$/MHz/annum)	
		Exclusive use	Non-exclusive use
2055 – 2095	ENG/ OB links	21,600	10,800
5875 – 6425	Fixed links/ Satellite uplink	No exclusive use	432
6425 – 7100	Fixed links/ Satellite uplink	21,600 (for frequencies assigned under carrier and Self-Provided External Telecommunications System licences) or 36,000 (for frequencies assigned under Wide Band Link and Relay Station licences)	3,600 (for frequencies assigned under carrier and Self-Provided External Telecommunications System licences) or 6,000 (for frequencies assigned under Wide Band Link and Relay Station licences)
7421 – 7900	Fixed links		
8275 – 8500	Fixed links		
10700 – 11700	Fixed links		

ENG/OB stands for Electronic News Gathering/Outside Broadcast.

Road Opening

- 2.21 A unified carrier licensee may, on a case-by-case basis, be granted with right of road opening³⁰ under section 14(1) of the TO if it is authorised to provide fixed services under its licence and if it demonstrates that it is rolling out a wireline-based infrastructure. For more details on the application for road opening authorisation and procedure for road opening works, please refer to the “*Guidelines for Application of Road Opening Authorization and Procedure for Road Opening Works*” issued

³⁰ In the case of unleased Government land, consent in writing of the Director of Lands is required.

by the CA in November 2012³¹.

- 2.22 A unified carrier licensee authorised to provide mobile service only does not have the right to lay cables along or across public streets or unleased Government land. The Licensee will be required to lease circuits from licensed local fixed network operators for the connections between base stations and mobile switching equipment. Applications for the operation of radio links in place of circuits leased from fixed network operators will be considered by the CA on a case-by-case basis due to the limitations in the availability of suitable radio spectrum for such links. However, the Licensees may freely deploy the Non-shared Spectrum assigned to provide the backhaul for its 5G network.

Sharing of Use of Facilities

- 2.23 The sharing of “bottleneck” facilities is governed by section 36AA of the TO. The CA encourages commercial agreements for the sharing of “bottleneck” facilities. If commercial agreements could not be reached within a reasonable period and subject to passing the “public interest” test specified in the section, the CA may direct sharing of “bottleneck” facilities and determine the terms for such sharing.

Access to Hilltop Radio Sites

- 2.24 Some remote areas are under-served by fixed broadband services as the provision of wireline solution thereto is either uneconomical or technically infeasible at this juncture. Public telecommunications services based on wireless broadband solutions would be able to provide a viable and cost-effective alternative for broadband access to these areas. To facilitate the deployment of such wireless broadband services to remote areas, sharing of existing hilltop radio sites for provision of such services to these areas may be allowed, subject to the availability of facilities at the sites. OFCA has issued the “*Guidelines for Use of Hilltop Radio Site Resources*”³² in July 2018 to ensure that such sites

³¹ The guidelines about road opening are available at:
<http://www.coms-auth.hk/filemanager/statement/en/upload/151/gn442012e.pdf>.

³² The guidelines about hilltop radio sites are available at:
<http://www.coms-auth.hk/filemanager/statement/en/upload/457/gn082018e.pdf>.

and facilities thereon are used efficiently and effectively to meet the needs for telecommunications, utilities and other public services. Application for shared use of hilltop radio sites by a unified carrier licensee providing public telecommunications services will be considered on a case-by-case basis.

Construction of Radio Base Stations

- 2.25 Sites for the installation of radio base stations are usually acquired by Licensees on a commercial basis through negotiations with landowners. The CA will not intervene in this process except in circumstances set out in sections 14(1B) and 36AA of the TO. It should be noted that section 14(1B) is seldom applicable to sites on roof-tops because alternative sites to serve a particular area using radio transmission are usually available.
- 2.26 In addition to compliance with the requirements of the CA in respect of frequency emission and non-ionizing radiation safety, the Licensee must ensure that their installations of radio base stations comply with the requirements of the relevant Government departments including Buildings Department, Lands Department and the relevant statutory town plans of Planning Department / Town Planning Board. The CA has adopted a one-stop application procedure under which the Licensee is required to declare the compliance status of its proposed radio base stations with the requirements of the Government departments / authorities concerned.
- 2.27 To shorten the overall processing time of base station application, the CA and Lands Department have adopted parallel processing of applications in cases where a temporary waiver is required. The Licensee must submit applications to the CA and Lands Department (if a temporary waiver is required) in parallel. The CA will start processing the application upon receiving the Licensee's declaration that the related waiver application has been submitted to Lands Department. The CA may, after having been satisfied that all requirements concerning electromagnetic compatibility and radiation safety are met, grant an approval for the installation and operation of the radio base station prior to Lands Department's decision on the related waiver application. In order to ensure the radiation safety requirements are met, OFCA will

conduct random checking of radiation level of base stations which have been put into operation following the prior approval of the CA.

- 2.28 The Licensee should refer to the “*Guidance Note for Submission of Applications by Public Telecommunications Operators for the Installation of Radio Base Stations for Public Telecommunications Services in Buildings and on Rooftops*” published on the CA’s website in December 2010³³ for details of the requirements and procedures for obtaining approval from the departments / authorities concerned. The decision as to whether or not to grant such approval and the actual time taken to grant such approval remains at the discretion of the individual departments / authorities concerned.
- 2.29 To facilitate the rollout of 5G network by mobile network operators (“MNOs”), the Chief Executive announced in the 2018 Policy Address³⁴ that the Government will proactively open up suitable Government premises and roof-tops for the installation of radio base stations. Successful applicants assigned with the Non-shared Spectrum may apply to use such Government sites for installation of their radio base stations.

Deployment of Femtocell

- 2.30 The CA adopts a light-handed regulatory framework in respect of the installation of relevant femtocell equipment. Under the said regulatory framework, the Licensees are allowed to deploy femtocell for the provision of mobile services without having to seek the prior approval of the CA for individual femtocell installation and provision of detailed information of femtocells under their UCLs. For holders of existing mobile carrier licence or UCL for provision of mobile services, they may apply to the CA for the necessary amendments to their licences. A femtocell is not considered as a base station for the purpose of licence fee calculation³⁵.

³³ The Guidance Note is available at:
http://www.coms-auth.hk/filemanager/statement/en/upload/138/gn_201024.pdf.

³⁴ Please see paragraph 137 of the 2018 Policy Address, which is available at:
<http://www.policyaddress.gov.hk/2018/eng/pdf/PA2018.pdf>.

³⁵ The details of the regulatory framework of femtocell deployment are available at:
http://tel_archives.ofca.gov.hk/en/consultations/circulardoc/femtocell_deployment.html.

Phasing out of a Generation of Public Mobile Telecommunications Services

- 2.31 Pursuant to the relevant licence condition, the Licensees are required to seek the prior consent of the CA and to make satisfactory arrangements for the affected customers before the phasing out of a generation of mobile services.

Standards and Type Approval of Radiocommunications Apparatus

- 2.32 All radiocommunications apparatus, including both infrastructure equipment and customer equipment used in Hong Kong, must comply with the relevant standards or specifications as may be prescribed by the CA and meet the necessary type approval requirements under the Hong Kong Telecommunications Equipment Evaluation and Certification (“HKTEC”) Scheme³⁶.
- 2.33 The Licensee must provide services to customers, who use equipment meeting the relevant technical specifications as prescribed by the CA, on a non-discriminatory basis irrespective of whether the equipment is acquired from the Licensee.

Universal Service Arrangement

- 2.34 Under section 35B of the TO, the CA may require one or more fixed carrier licensees³⁷ to have a universal service obligation (“USO”) for provision of basic telephone services, including mainly fixed telephone lines and public payphones. At present, PCCW-HKT Telephone Limited and Hong Kong Telecommunications (HKT) Limited (as joint holders of the UCL no. 025) are designated as the universal service provider. A system of universal service contribution (“USC”) is implemented which requires USC contributing parties to share the costs

³⁶ Information about HKTEC Scheme is available at:
<http://www.ofca.gov.hk/filemanager/ofca/common/Industry/telecom/standard/i421e.pdf>.

³⁷ Including unified carrier licensees authorised to provide fixed telecommunications services.

of meeting the USO.

- 2.35 The providers of local fixed and mobile telecommunications services including both facility-based and service-based operators using local telephone numbers³⁸ are required to share the USC on the basis of the quantity of telephone numbers held by them for the provision of fixed and mobile telephone services.

Competition Ordinance

- 2.36 On 14 June 2012, the Competition Ordinance (Cap. 619) (“CO”) was enacted by the Legislative Council³⁹. The CO provides for general prohibitions of three types of anti-competitive conduct (described as the first conduct rule, the second conduct rule and the merger rule, collectively referred to as the ‘competition rules’ in the CO). The first conduct rule prohibits anti-competitive agreements, decisions and concerted practices. The second conduct rule prohibits an undertaking that has a substantial degree of market power from abusing that power. The merger rule prohibits anti-competitive mergers. The first and second conduct rules apply to all sectors, including the telecommunications sector, in Hong Kong. At present, the merger rule applies only to a merger involving one or more undertakings that hold a carrier licence under the TO or, directly or indirectly, control an undertaking that holds such a licence.

- 2.37 The CO has been fully in force since 14 December 2015. Under the CO, the CA is conferred concurrent jurisdiction with the Competition Commission to investigate and bring enforcement proceedings to the Competition Tribunal in relation to the conduct of telecommunications and broadcasting operators. The CA and the Competition Commission have signed a Memorandum of Understanding (“MoU”) to coordinate the performance of their functions over which they have concurrent jurisdiction. According to the MoU, the CA will ordinarily take the role of lead authority on matters which fall within the concurrent

³⁸ Specifically, the USC contributing parties include fixed carrier licensees, mobile carrier licensees, unified carrier licensees authorised to provide local fixed or mobile telephone services, and SBO licensees authorised to provide class 1 service, class 2 service or class 3 service (MVNO services only).

³⁹ The full text of the CO is available at: <http://www.elegislation.gov.hk>.

jurisdiction. Where a matter involves issues that are partly within the concurrent jurisdiction and issues that are partly outside the concurrent jurisdiction, the CA and the Competition Commission will discuss and agree how best to progress the matter case by case.

- 2.38 The CA and the Competition Commission have jointly issued under the CO six sets of guidelines describing how they expect to interpret and give effect to the three competition rules, and explaining the procedures for handling complaints, conducting investigations and considering applications for exclusions and exemptions⁴⁰.
- 2.39 Apart from the CO, section 7Q of the TO prohibits exploitative conduct of a dominant licensee. The CA has investigative as well as adjudicative power in enforcing section 7Q. Decisions made by the CA under section 7Q will be subject to appeal to the Appeal Board.

Prohibition on Unfair Trade Practices

- 2.40 Pursuant to the Trade Descriptions (Unfair Trade Practices) (Amendment) Ordinance 2012 (“TDO(A)”) enacted by the Legislative Council on 17 July 2012, the Trade Descriptions Ordinance (Cap. 362) (“TDO”) was amended from 19 July 2013 to extend its coverage to prohibit traders of goods and services in all sectors, including the telecommunications sector, from engaging in specified unfair trade practices, namely -
- (a) false trade descriptions of services (section 7A);
 - (b) misleading omissions (section 13E);
 - (c) aggressive commercial practices (section 13F);
 - (d) bait advertising (section 13G);
 - (e) bait and switch (section 13H); and
 - (f) wrongly accepting payment (section 13I).
- 2.41 The Customs and Excise Department (“C&ED”) is the principal agency for enforcing the TDO, with concurrent jurisdiction conferred on the CA to enforce the relevant provisions of the TDO(A) in relation to the commercial practices of Licensees under the TO and the Broadcasting

⁴⁰ The full sets of Competition Guidelines are available at:
http://www.coms-auth.hk/en/policies_regulations/competition/co/legislation_and_guidelines_issued_under_the_co/index.html.

Ordinance (Cap. 562) that are directly connected with the provision of a telecommunications or broadcasting service under the respective ordinances. C&ED and the CA have jointly issued the relevant enforcement guidelines which state the manner in which the C&ED and the CA would exercise their enforcement powers and provide guidance on the operation of the TDO(A)⁴¹.

Consumer Protection

Fair Usage Policy (“FUP”)

- 2.42 To provide guidance to broadband service providers on how they may implement FUP and to enhance the transparency of service information to facilitate better informed consumer choices, the former TA promulgated the “*Guidelines for the Implementation of Fair Usage Policy for the Provision of Mobile and Fixed Broadband Services*” in November 2011⁴² setting out the relevant guiding principles for compliance by service providers. The Licensees are required to comply with the guidelines on a mandatory basis for all new or renewed service contracts signed on or after 13 February 2012.

Measures to Prevent Mobile Bill Shock

- 2.43 The CA has urged all MNOs to adopt various measures to address the problem of mobile bill shock⁴³. To increase the transparency of the relevant service information, OFCA publishes the measures implemented by individual MNOs on its website⁴⁴ and provides regular updates. The Licensees are expected to implement measures to prevent mobile bill shock.

⁴¹ The Enforcement Guidelines are available at:
http://www.coms-auth.hk/filemanager/en/content_800/Enforcement_Guidelines_en.pdf.

⁴² The guidelines about FUP are available at:
http://www.coms-auth.hk/filemanager/statement/en/upload/38/gn_201124e.pdf.

⁴³ Mobile bill shock refers to the shock consumers experience upon receiving unexpectedly high mobile bill charges.

⁴⁴ Measures in preventing mobile bill shock are available at:
<http://www.ofca.gov.hk/filemanager/ofca/common/webform/mobilebillshock.aspx>.

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

2.44 With a view to enhancing the transparency of pricing of chargeable items in the provision of telecommunications services by local fixed and mobile operators, the former TA issued a “*Code of Practice in Relation to Billing Information and Payment Collection for Telecommunications Services*” in October 2011⁴⁵. This code requires telecommunications service providers to provide customers with itemised billing information for verification of charges, take reasonable steps to ensure accuracy of billing and collection of payment, and report to OFCA in a timely manner in the event of any incident involving systematic errors in these aspects. The Licensees are expected to comply with this code and follow the practices prescribed therein.

Customer Complaint Settlement Scheme (“CCSS”)

2.45 The CCSS is a mediation scheme set up by the telecommunications industry to help resolve billing disputes in deadlock between telecommunications service providers and their customers. The mediation service is managed and operated by an independent CCSS service centre set up under the Communications Association of Hong Kong (“CAHK”)⁴⁶. OFCA supports the CCSS by contributing the necessary funding, screening the CCSS applications against the acceptance criteria, and monitoring the performance and the governance of the scheme. The Licensees are expected to join the CCSS.

Industry Code of Practice for Telecommunications Service Contracts

2.46 In order to protect consumer interests and enhance transparency in the process of contract conclusion for telecommunications services, CAHK promulgated a self-regulatory “*Industry Code of Practice for Telecommunications Service Contracts*” in December 2010 and updated

⁴⁵ The Code is available at:
<http://www.coms-auth.hk/filemanager/statement/en/upload/33/cop20111011e.pdf>.

⁴⁶ CAHK is the association for Hong Kong’s communications industries with responsibilities across broadcasting, wireline and wireless communications, and other relevant business sectors in the domain of information communications technology.

it in October 2014⁴⁷. All major fixed and mobile network operators have implemented the industry code from July 2011. The Licensees are expected to comply with this code and follow the practices prescribed therein.

Code of Practice on the Provision of Telecommunications Services for the Elderly and People with a Disability

2.47 To facilitate convenient use of telecommunications services by the elderly and people with a disability, the former TA issued a “*Code of Practice on the Provision of Telecommunications Services for the Elderly and People with a Disability*” in October 2010 and the CA updated it in June 2013⁴⁸. The Licensees are expected to comply with this code and follow the practices prescribed therein.

Code of Practice on Protection of Customer Information for Fixed and Mobile Service Operators

2.48 A “*Code of Practice on Protection of Customer Information for Fixed and Mobile Service Operators*” was jointly issued by the Consumer Council, Independent Commission Against Corruption, Office of the Privacy Commissioner for Personal Data and former Office of the Telecommunications Authority in June 2002⁴⁹ which sets out the good practices that should be adopted by fixed and mobile service operators to prevent unauthorised disclosure of customer information. The Licensees are expected to comply with this code and follow the practices prescribed therein as well as to adopt other standards and measures which can provide reasonably sufficient protection of customer information. The Licensees must observe the requirements of the relevant legislation relating to protection of personal data and prevention of bribery.

⁴⁷ The latest version of the Industry Code is available at: http://www.cahk.hk/images/Industry_CoP_for_Telecom_Service_Contract_Clean_20150430_Eng_Revisions_incorporated_v2.pdf.

⁴⁸ The latest version of the Code is available at: <http://www.coms-auth.hk/filemanager/statement/en/upload/186/cop201302e.pdf>.

⁴⁹ The Code is available at: http://tel_archives.ofca.gov.hk/en/code/practice/cap14062002.pdf.

Code of Practice on the Handling of Customers' Deposits and Prepayments of Charges

2.49 In order to protect consumer interest and to enhance consumer confidence in deposit and prepayment schemes offered by telecommunications operators, the former TA issued a “*Code of Practice on the Handling of Customers' Deposits and Prepayments of Charges*” in April 2001⁵⁰. The Licensees are expected to adopt this code and observe the guiding principles governing the handling of deposits and prepayments of charges for telecommunications services.

Code of Practice on Verification of the Addresses of Potential Customers for Mobile Telecommunications Services

2.50 A “*Code of Practice on Verification of the Addresses of Potential Customers for Mobile Telecommunications Services*” was issued by the former TA in January 2000. This code sets out the basic guiding principles for the verification of the addresses of potential customers when the customers apply for mobile telecommunications services as well as the documents that are considered to be acceptable proof of address from customers. A revised version of the code has been issued by the CA in November 2018⁵¹ in the light of developments in the telecommunications market. The Licensees are expected to comply with the latest version of this code and follow the practices prescribed therein.

Performance Pledges of Mobile Broadband Services

2.51 To help consumers make informed choices for mobile broadband services, mobile broadband service operators have published on a quarterly basis the performance pledges for their mobile broadband services, covering aspects related to network reliability, service restoration time, customer hotline performance, customer complaint handling and technical performance since July 2010. The performance pledges and performance statistics of individual MNOs are available on

⁵⁰ The Code is available at: http://tel_archives.ofca.gov.hk/en/code/cop20010426.pdf.

⁵¹ The latest version of the Code is available at: <http://www.coms-auth.hk/filemanager/statement/en/upload/479/cop201805e.pdf>.

their respective websites and via hyperlinks at the CA's website⁵². The Licensees are expected to follow similar practices.

Industry Code of Practice for Chargeable Mobile Content Services

2.52 To safeguard consumer interests and increase the transparency of pricing information related to chargeable mobile content services ("MCS") provided by third-party content service providers ("CSPs"), CAHK issued a "*Code for the Provision of Chargeable Mobile Content Services*" in January 2010 and updated it in March 2017⁵³. This code requires all third-party CSPs, before initiating delivery of MCS to customers, to provide them with clear information on all charges, obtain clear consent from them for the provision of MCS, and set out clearly the unsubscribing mechanisms. MNOs have undertaken to comply with this code and will enter into contracts to provide a delivering and billing service with only those CSPs which comply with this code. The Licensees are expected to comply with this code and follow the practices prescribed therein.

Benchmark Code of Practice on Person-to-Person ("P2P") Marketing Calls

2.53 To tackle the inconvenience caused by P2P marketing calls to the public, the Government has worked with specific sectors to establish sector-specific regulatory regimes for P2P marketing calls. In relation to the telecommunications industry, CAHK issued a "*Benchmark Code of Practice on Person-to-Person Marketing Calls*" in March 2011⁵⁴. All major fixed and mobile network operators have adopted the benchmark code published by the CAHK and published their codes of practices on P2P marketing calls for self regulation. The Licensees are expected to adopt the benchmark code and follow the practices prescribed therein.

⁵² The performance pledges are available at:
http://www.ofca.gov.hk/en/consumer_focus/mobile_telecom/performance_pledges/index.html.

⁵³ The latest version of the Code is available at:
http://www.cahk.hk/images/Code_for_MCS/Code_for_the_Provision_of_Chargeable_MCS_2017.08.14_Final.pdf.

⁵⁴ The Benchmark Code is available at:
http://www.cahk.hk/News/352/Benchmark_Industry_CoP_P2P_final.pdf.

Code of Practice for the Provision of Mobile Television Services

- 2.54 CAHK issued a “*Code of Practice for the Provision of Mobile Television Services*” in August 2011⁵⁵ for the purpose of setting out the principles of good practice for the provision of mobile television services (which refers to television services delivered over wireless platform and intended for reception on the move by mobile or portable devices). The Licensees are expected to comply with this code and follow the practices prescribed therein for the provision of mobile television services.

Code of Practice on the Cessation Arrangements for MVNO Services

- 2.55 A “*Code of Practice on the Cessation Arrangements for Mobile Virtual Network Operator Services*” was issued by the CA in September 2017⁵⁶. This code provides practical guidance to relevant licensees in the event of cessation of MVNO services in order to better protect and promote the interests of consumer of telecommunications goods and services. The Licensees providing wholesale network capacity services to any MVNO are required to observe and comply with this code as part of their licence obligations.

⁵⁵ The Code is available at: <http://www.cahk.hk/News/396/Mobile%20TV%20CoP.pdf>.

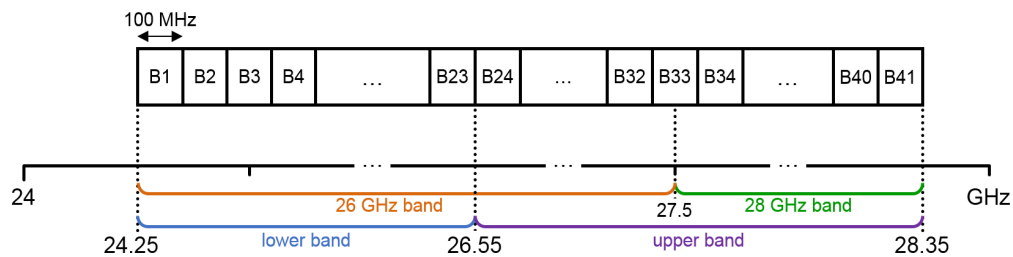
⁵⁶ The Code is available at:
http://www.coms-auth.hk/filemanager/statement/en/upload/421/cop-mvno_e.pdf.

Section III – Assignment of Non-shared Spectrum in the 26/28 GHz Bands

Spectrum Available for Application and Spectrum Cap

- 3.1 The CA has made available 3 700 MHz of Non-shared Spectrum in the 26/28 GHz bands for successful applicants to provide large scale public mobile services. The Non-shared Spectrum falls within the 41 frequency slots of 100 MHz each in the band plan depicted in Figure 1 below, where the lower band (i.e. slots B1 – B23, 24.25 – 26.55 GHz) and the upper band (i.e. slots B24 – B41, 26.55 – 28.35 GHz) are drawn up based on the latest development of chipsets for network and customer equipment. In this invitation, a total of 3 700 MHz of spectrum, or 37 frequency slots, are available for application.

Figure 1: Band Plan for the 26/28 GHz Bands



- 3.2 Subject to a spectrum cap of 800 MHz for the amount of Non-shared Spectrum that may be held by each assignee (“Spectrum Cap”), interested parties may submit applications for assignment of the spectrum required for provision of large scale public mobile services to the general public. The Spectrum Cap will be applied on an aggregate basis to the holding of spectrum by all connected companies of each assignee in both the 26 GHz and 28 GHz bands. Applicants may refer to paragraphs 3.15 – 3.20 below for information relating to “connected companies”.

Submission of Application

- 3.3 Applications must be received by the CA by the deadline of submission on **25 January 2019**. Applications must be delivered by hand to

OFCA on or before 5:30 pm of the date. Late applications will **not** be considered. Upon the close of the application, the CA will publish a notice to announce the identities of the parties who have submitted applications.

Pre-qualification of Applicants

- 3.4 For each application received, a pre-qualification exercise will be conducted having regard to the criteria set out in Section VI to determine whether the applicant is qualified for participation in the administrative spectrum assignment process. In the pre-qualification, the CA will take into account the following information provided in the application form: (a) the types of services the applicant plans to provide; (b) the amount of Non-shared Spectrum applied for and the related justifications; and (c) technical, organisational and financial capabilities of the applicant to timely provide the services in fulfilment of the licensing obligations to the satisfaction of the CA, and other relevant supporting information. Among other things, the CA will examine the implementation plan proposed by the applicant, including the proposal to comply with the network and service rollout obligations and to implement a network capable of providing large scale public mobile services to the general public. Furthermore, the CA will examine the corporate and shareholding structure of the applicants to identify any connected companies among applicants. In addition, the applicant is required to put in a deposit in the form of cash⁵⁷ or a letter of credit in the same format as set out in **Annex C** issued by a qualifying bank⁵⁸ based on the amount of spectrum it applies for and at the rate of HK\$1 million per MHz of spectrum under application, before it can be determined as qualified (“Qualified Applicant”).

⁵⁷ Payment of the deposit in cash shall be made by telegraphic transfer to the CA’s bank account with the funds cleared by 4:00 pm on the application deadline of 25 January 2019, with accompanying information which identifies the relevant applicant. Details of the CA’s bank accounts for receiving the deposit are provided at **Annex B**.

⁵⁸ “Qualifying Bank” means an institution holding a full banking licence under the Banking Ordinance (Cap. 155) whose long term issuer rating is no less than:

- (a) one or more of the following:
 - (i) Moody’s A2;
 - (ii) Standard & Poor’s A;
 - (iii) Fitch Rating’s A; or
- (b) a rating of a body other than a body listed in (a) above which the CA confirms in writing that it considers to be no less than one or more of the ratings in (a).

- 3.5 The CA will inform applicants whether they are determined to be Qualified Applicants by 13 February 2019; and publish on its website a list of Qualified Applicants.

Spectrum Demand

- 3.6 Apart from specifying the amount of Non-shared Spectrum applied for, each applicant is also required to indicate in the application form, as in Table 2 below, whether it has any preference for spectrum (in multiple of 100 MHz and subject to the Spectrum Cap) in the lower or upper band, and if this cannot be fully satisfied whether it would be willing to accept assignments in the alternative frequency band.

Table 2: Examples for Applicant's Indication of Preference
for Frequency Band of Assignment

Applicant A:

Lower band	If cannot be fully satisfied, whether willing to accept assignment in the upper band	Upper band	If cannot be fully satisfied, whether willing to accept assignment in the lower band	No preference for which frequency band	Total amount of spectrum applied for
200 MHz	Yes	400 MHz	No		600 MHz

Applicant B:

Lower band	If cannot be fully satisfied, whether willing to accept assignment in the upper band	Upper band	If cannot be fully satisfied, whether willing to accept assignment in the lower band	No preference for which frequency band	Total amount of spectrum applied for
				800 MHz	800 MHz

- 3.7 The CA will take into account the preferences indicated by the applicants in considering assignment of the Non-shared Spectrum, with the aim of meeting the demand of each applicant in a fair and equitable manner as well as promoting efficient use of the spectrum by the Licensees as far as possible. For the avoidance of doubt, the CA has full discretion in applying an appropriate mechanism and determining the specific frequency slot(s) to be assigned to a successful applicant.

Mechanism which may be used by the CA in Determining Offer of Assignment of Spectrum to Qualified Applicants

- 3.8 Based on the total demand for Non-shared Spectrum in both the lower and upper frequency bands by all Qualified Applicants taken together, the CA will determine the number of frequency slots to be set aside in the lower and upper bands respectively for provision of large scale public mobile services. If the total demand for spectrum in each of the lower and upper bands is equal to or less than the amount of spectrum available in the respective frequency bands, each Qualified Applicant will likely be assigned the full amount of spectrum it applies for. In the situation where the total spectrum demand in either or both of the bands exceeds the available supply, the CA may apply a two-stage spectrum distribution mechanism as described in paragraph 3.9 to determine the amount of spectrum which could be offered for assignment to the Qualified Applicants. For the avoidance of doubt, the CA reserves the right to deviate from the distribution mechanism indicated in these Guidelines.

Two-Stage Spectrum Distribution Mechanism

- 3.9 A two-stage spectrum distribution mechanism can be applied to the lower and upper bands either separately or jointly, depending on the frequency band(s) in which excess demand occurs. It is depicted as follows –

First stage

- For spectrum in the frequency band(s) with excess demand, each Qualified Applicant will be provided with one frequency slot by turn for each round of distribution (i.e. x frequency slots will be distributed for x number of Qualified Applicants in a single round);
- The above process will repeat and the Qualified Applicant whose demand is fully satisfied in a round of distribution will be excluded from the next round of distribution; and
- The distribution process will stop when the number of frequency slots available for distribution in the next round is less than the

number of remaining Qualified Applicants. There will then be a second stage distribution.

Second Stage

- The remaining frequency slots in the frequency band(s) being considered will be distributed to the remaining Qualified Applicants by drawing lots which will be administered by OFCA.

3.10 Some basic principles which the CA will follow as far as practicable in applying the two-stage spectrum distribution mechanism are provided at **Annex E**.

Notification of Provisional Offer of Spectrum Assignment

3.11 Having decided on the amount of Non-shared Spectrum in the lower and upper bands to be assigned to each of the Qualified Applicants, they will be notified about the amount of spectrum in the 26/28 GHz bands offered for assignment to them on a provisional basis (“Provisional Successful Applicants”), together with the terms and conditions for use of the spectrum concerned. The working target is to notify the Provisional Successful Applicants by 27 February 2019. The CA will also publish on its website the list of Provisional Successful Applicants and the amount of Non-shared Spectrum proposed to be offered for assignment to each of them.

Location of Frequency Assignments

3.12 The CA will determine the location of frequency assignments for offer to the Provisional Successful Applicants based on the principle of fairness and efficient spectrum utilisation. This will take place after the problem of connection between the Provisional Successful Applicants in relation to the requirement of the Spectrum Cap, if any, has been resolved; or the connected Provisional Successful Applicants have arranged among themselves to meet the Spectrum Cap requirement for the aggregate amount of spectrum they apply for, if applicable, in the manner described in paragraph 3.19 below. The target is to form contiguous frequency blocks as far as possible in order to enhance the

efficiency in spectrum utilisation and to provide fair opportunity for individual Provisional Successful Applicants to acquire the spectrum they apply for and use it efficiently.

Notification of Offer of Spectrum Assignment

- 3.13 Once the exact frequency slots to be assigned to each of the Provisional Successful Applicants is determined, the applicants will be notified accordingly with the terms and conditions for use of the Non-shared Spectrum offered for assignment to each of them in the 26/28 GHz bands (“Successful Applicants”). Since the spectrum assignments are made in accordance with the amount applied and preference for assignment in the lower and upper bands as indicated by the applicant in its application, failure by the applicant to take up all or part of the assigned frequency slots will be subject to a penalty based on the amount of spectrum not taken up and the relevant deposit lodged. Please see paragraph 3.24 below on forfeiture of deposit.
- 3.14 The working target is to notify the Successful Applicants by the week of 4 March 2019, after the connection among the Provisional Successful Applicants, if any, has been resolved. The CA will also publish on its website the list of Successful Applicants and the amounts and frequency ranges of the Non-shared Spectrum offered for assignment to each of them.

Connected Companies

- 3.15 For the purpose of the current spectrum assignment exercise, a company (Company A) is a connected company of another company (Company B) if, amongst other things, Company A holds a material interest in Company B (which includes Company A holding or possessing, directly or indirectly, 25% or more of the issued share capital or voting power in respect of 25% or more of the issued share capital of Company B). More information on connected companies may be found in **Annex D**.
- 3.16 The Spectrum Cap of 800 MHz for the holding of the Non-shared Spectrum by an assignee will be applied on an aggregate basis to the holdings by all connected companies of that assignee in both the 26 GHz

and 28 GHz bands. Applicants must declare whether they are aware of submission or potential submission of applications for assignment of the Non-shared Spectrum by their connected companies. They are also required to provide information on their corporate and shareholding structure (as at the date of the application) in the application form and to give consent to the disclosure of such information in order to assist the CA and other applicants to assess whether an applicant is a connected company in relation to another applicant.

- 3.17 The CA will provide applicants with information by 29 January 2019 on the corporate and shareholding structure of the other applicants as collated from the applications received, to facilitate their identification of any connected company involved. Each applicant must, based on the information provided by the CA and/or any other information known to them, notify the CA whether or not it is a connected company in relation to another applicant by submitting a statutory declaration on connected company in the form as provided in **Annex D** by 31 January 2019.
- 3.18 If the CA is of the view that two or more applicants are connected companies and the amount of spectrum they apply for taken together exceeds the Spectrum Cap, it will request the applicants concerned to resolve the problem of connection among themselves. The applicants concerned must, on or before a date specified by the CA: (a) make all arrangements as may be necessary to satisfy the CA that they either cease to be connected in relation to each other, or the aggregate amount of spectrum they intend to hold does not exceed the Spectrum Cap; and (b) jointly submit to the CA a notification with documentary proof of the arrangements they have made. Applicant failing to satisfy the CA that it has fulfilled this requirement will not be eligible as a Qualified Applicant.
- 3.19 The arrangements which may be taken by the connected applicants under paragraph 3.18 above may include one of the following: (a) reorganise themselves so that they cease to be connected; (b) agree among themselves on the amount of spectrum each of them intend to hold so that the aggregate amount of spectrum will not exceed the Spectrum Cap; or (c) indicate not to proceed further with the relevant application(s) such that holding by the remaining connected applicant(s) will not exceed the Spectrum Cap. Once the CA is satisfied that any

connection among the applicants concerned has been resolved or the requirement of Spectrum Cap has been met, it will conduct a detailed assessment of the applications submitted by the Qualified Applicants.

- 3.20 After determination of the amount of spectrum which will be offered for assignment to the Provisional Successful Applicants, each Provisional Successful Applicant will be required to submit a second statutory declaration on connected company based on the list of Provisional Successful Applicants by 1 March 2019, as there may be changes in ownership after submission of the first statutory declaration or due to other reasons. If the CA determines that two or more Provisional Successful Applicants are connected and the total amount of spectrum for which they are offered to be assigned exceeds the Spectrum Cap, the CA will request the Provisional Successful Applicants concerned to resolve the problem of connection among them or meet the Spectrum Cap requirement for the aggregate amount of spectrum they are offered to be assigned in accordance with the procedures as described in paragraphs 3.18 and 3.19 above. Any Provisional Successful Applicant failing to satisfy the CA of that requirement by 5 March 2019 will not be accepted as a Successful Applicant.

Period of Assignment

- 3.21 The CA will make available the Non-shared Spectrum for assignment for a period of 15 years from 1 April 2019 to 31 March 2034. However, it should be noted that the end of the assignment period will remain at 31 March 2034 even if the UCL containing the assignment of the spectrum is issued on a date later than 1 April 2019. This assignment of frequency spectrum shall not prejudice the generality of the power exercisable by the CA under the TO including section 32H. For the avoidance of doubt, there is no legitimate expectation of any right of renewal or right of first refusal upon expiry of the spectrum assignments.

Return of Deposit

- 3.22 The deposit paid by an applicant will be returned to the applicant if one of the following events occurs –

- (a) when the applicant fails to be qualified;
 - (b) when the applicant is disqualified;
 - (c) if the applicant is qualified but has not become the Provisional Successful Applicant after the CA's detailed assessment; or
 - (d) when the applicant has become the Successful Applicant and provided to the CA a performance bond to guarantee fulfilment of the network and service rollout obligations.
- 3.23 Where the deposit is in cash, it will earn interest at the rate available to the CA from the bank in which the cash is deposited. Interest earned on a cash deposit will be returned to applicants with the deposit.
- 3.24 For the avoidance of doubt, the CA may at its discretion forfeit an amount up to the full amount of the applicant's deposit by way of penalty or make a claim under the letter of credit in but not limited to the following circumstances: (a) if a Qualified Applicant withdraws from the application process at any time without valid justification; (b) if the Provisional Successful Applicant fails to meet the requirements for resolving the issue of connected companies in relation to the Spectrum Cap, where applicable; or (c) if the Successful Applicant having been offered for assignment an amount of the Non-Shared Spectrum in the 26/28 GHz bands but it fails to take up all or part of the assigned frequency slots or to fulfill the other requirements listed in paragraph 4.4 below for the grant of licence.

Unassigned Non-shared Spectrum

- 3.25 As foreshadowed in the Statement, the CA is prepared to launch a new round of invitation for spectrum application in around end-2020 if any amount of Non-shared Spectrum is left unassigned. The Spectrum Cap of 800 MHz for the holding of spectrum for providing large scale public mobile services is expected to apply to the overall holding of the relevant spectrum in the 26/28 GHz bands by an existing assignee if it seeks to acquire additional spectrum in this second round of application. The assignments of spectrum in the second round application will terminate on the same date as those assigned in the first round.

- 3.26 Notwithstanding the above, depending on the amount of spectrum leftover and having regard to the latest market situation (including but not limited to the degree of concentration of the spectrum assigned for the provision of public mobile services), the CA may review the level of the Spectrum Cap in the second round of invitation for spectrum assignment, and any change will apply to the aggregate spectrum holdings of assignees across the two rounds of spectrum assignment.

Indicative Timetable

- 3.27 Table 3 below sets out the indicative dates of major events of the application process for this spectrum assignment exercise. Please note that the timetable is not intended to set any deadlines to which the CA must adhere but serves for reference by applicants only.

Table 3: Indicative timetable

Activity	Date
Publication of Application Guidelines	21 December 2018
Deadline for submission of questions	4 January 2019
Deadline for application	25 January 2019
Publication of Notice to announce the identities of applicants	25 January 2019
Deadline for submission of statutory declaration on connected company by applicants	31 January 2019
Deadline for resolution of the problem of connection among applicants or meeting the Spectrum Cap requirement	4 February 2019
Publication of Notice to announce the identities of Qualified Applicants	13 February 2019
Publication of Notice to announce the identities of Provisional Successful Applicants and provisional offer of assignment of spectrum to each of them	27 February 2019
Deadline for submission of the second statutory declaration on connected company by Provisional Successful Applicants	1 March 2019
Deadline for resolution of the problem of connection among Provisional Successful Applicants or meeting the Spectrum Cap requirement	5 March 2019
Publication of Notice to announce the identities of Successful Applicants and offer of assignment of spectrum to each of them	Week of 4 March 2019

Activity	Date
Submission of acceptance of offer and terms and conditions of assignment of spectrum, performance bond and licence fee by the Successful Applicants	28 March 2019
Issue of licence with assignment of spectrum to the Successful Applicants	1 April 2019

Section IV – Licensing Arrangements

Licence for Assignment of the Non-shared Spectrum

- 4.1 Each Successful Applicant will be issued a UCL (“Licence”) to effect the spectrum assignment. If the Successful Applicant is an existing licensee, it may request to merge its existing UCL with the new UCL issued for the assignment of the Non-shared Spectrum in the 26/28 GHz bands.

Terms and Conditions of the Licence

- 4.2 The Licence to be issued to each Successful Applicant will be valid for 15 years, with the term of assignment of the Non-shared Spectrum in the 26/28 GHz bands up to 31 March 2034.
- 4.3 The Licence will contain the General and Special Conditions substantially in the form set out in the sample licence at **Annex A**. The General Conditions are prescribed in the Telecommunications (Carrier Licences) Regulation (Cap. 106V) whereas the Special Conditions are specified by the CA for the imposition of those licence conditions specific to the Licensee in the provision of public telecommunications services. For the avoidance of doubt, the CA reserves the right to amend the Conditions as appropriate or necessary prior to formal licence grant.

Grant of Licence

- 4.4 Successful Applicants are required to: (a) confirm their acceptance of the CA’s offer to assign the relevant part of the Non-shared Spectrum to them; (b) confirm their acceptance of the terms and conditions of spectrum assignment; (c) provide to the CA a performance bond guaranteeing compliance with the network and service rollout obligations as specified below; and (d) pay the required provisional licence fee as elaborated below, before a Licence could be issued to them to effect the relevant spectrum assignment.

Permitted Service and Technical Standard to be Adopted

- 4.5 The Non-shared Spectrum assigned shall be used for the provision of large scale public mobile and/or wireless fixed services. For the avoidance of doubt, the Licence authorises the Licensee to only provide services licensable under the TO. Nothing in the Licence authorises the Licensee to provide any service subject to licensing, permission, approval or other kinds of authorisation under any other ordinance.
- 4.6 The Licensees will be free to adopt any widely recognised standards for the provision of public mobile telecommunications services using the assigned frequency bands. Nevertheless, as mentioned in paragraph 2.31 above, the Licensee shall seek the prior written consent of the CA and make proper and appropriate arrangements for the affected customers to the satisfaction of the CA before ceasing to provide any generation of mobile services.
- 4.7 Notwithstanding the technology neutrality principle, the Licensee shall comply with all the relevant technical specifications, if any, which may be prescribed from time to time by the CA under section 32D of the TO.

Network and Service Rollout Obligations

- 4.8 Each assignee of the Non-shared Spectrum is required to install and put into use a minimum number of radio units within the first five years following spectrum assignment and such requirement is proportional to the amount of spectrum assigned. Specifically, if a Licensee is assigned with 800 MHz of Non-shared Spectrum, a minimum of 5 000 radio units will be required to be installed and put into use within the first five years following spectrum assignment. The rollout obligations will be reduced proportionately for Licensees assigned with a smaller amount of spectrum. For example, the minimum network and service rollout obligations of an assignee of 400 MHz of Non-shared Spectrum will be 2 500 radio units within the first five years following spectrum assignment. The commitment of the applicant to implement a network capable of providing large scale public mobile services to the general public will be an essential criterion in the pre-qualification exercise to determine whether an applicant should be a Qualified

Applicant.

- 4.9 For the purpose of these Guidelines, “radio units” refer to active antenna unit, antenna integrated radio, or remote radio head/unit installed at the registered address of a radio base station. For example, if three radio units are connected to the baseband unit of a radio base station, this will be counted as three radio units for the purpose of meeting the minimum requirement. Applicants are required to specify in their applications their planned distribution of radio units (both outdoor and indoor radio units) in different locations of the territory in order to meet the network and service rollout obligations. To facilitate the CA in monitoring whether the rollout obligations have been met, Licensees assigned with the relevant spectrum in the 26/28 GHz bands should state clearly the exact number of radio units which will be installed at the registered address of each radio base station when they apply to the CA for approval of installation of radio base stations.
- 4.10 The radio units specified under the network and service rollout obligations are required to be installed in four phases within the first five years following spectrum assignment according to the following schedule: 20% within the first one and a half years following spectrum assignment; an addition of 20% within the next one and a half years; an addition of 30% by the end of the fourth year; and an addition of the remaining 30% by the end of the fifth year.

Performance Bond

- 4.11 Assignees of the Non-shared Spectrum are required to provide performance bonds proportionate to the amount of spectrum assigned. The size of the performance bond is set at HK\$1 million per MHz of spectrum assigned. For example, an assignee is required to submit a bond of HK\$400 million if it is assigned with 400 MHz of spectrum. The performance bond lodged with the CA must be issued by a qualifying bank⁵⁹ in the form as provided in Schedule 9 of the sample UCL at **Annex A**, and reached the CA on or before 28 March 2019.

⁵⁹ Please see Footnote 58 for definition of “qualifying bank”.

- 4.12 The bond will be released to the Licensees in four phases on equal portions and in accordance with their fulfilment of the four milestones specified in paragraph 4.10 above. The liability under the performance bond will cease when the CA is satisfied that the Licensee has fully complied with its network and service rollout obligations. If the Licensee fails to fulfil any of the milestones as required, the relevant part of the bond will be forfeited.

Open Network Access requirement

- 4.13 The Licensee will not be subject to any open network access requirement.

Domestic Roaming requirement

- 4.14 The Licensee will not be subject to any domestic roaming requirement.

Frequency Swap

- 4.15 Should developments in technology and/or equipment in future warrant re-organisation of frequency assignments among Licensees so as to enhance the efficiency in spectrum utilisation, the CA will consider applications for frequency swap from individual assignees of the Non-shared Spectrum on a case-by-case basis. For the avoidance of doubt, any spectrum swap or equivalent request submitted will be considered by the CA based on the merits of each case and its approval or otherwise, and the imposition of conditions, if any, will be at the CA's sole discretion.

Payment of Spectrum Utilisation Fee

- 4.16 SCED has decided to adopt the SUF charging scheme for spectrum assigned administratively ("SUF Charging Scheme")⁶⁰ for charging

⁶⁰ The SUF Charging Scheme was introduced in 2011 and it took effect from 1 January 2018 with a transitional period of five years before the charging scheme is fully in force, i.e. no SUF is levied in the first two years from 1 January 2018 to 31 December 2019, 30% of the SUF payable for the third

SUF in the 26/28 GHz bands. SUF will be charged on the two frequency bands if they become congested (i.e. 75% or more occupied) and are anticipated to become more congested in future. The congestion level for the 26/28 GHz bands will be assessed in April 2019 after the CA has made the decision on assignment of the Non-shared Spectrum in the first quarter of 2019, and re-assessed thereafter on a half-yearly basis after the CA has received and processed any applications for assignments of the Shared Spectrum for provision of localised wireless services from the second quarter of 2019.

- 4.17 When the 75% occupation threshold is reached and payment of SUF is required, the CA will make an order under section 32I(1) of the TO to designate the 26/28 GHz bands under the Telecommunications (Designation of Frequency Bands subject to Payment of Spectrum Utilization Fee) Order (Cap. 106Y) as frequency bands in which the use of spectrum is subject to the payment of SUF. As stated in the Statement, SCED will propose a regulation under section 32I(2) of the TO to prescribe the level of SUF as specified for the Non-shared Spectrum, i.e. HK\$21,600 per MHz of spectrum assigned per annum.
- 4.18 With the assignment of the 26/28 GHz bands to take effect from April 2019 onwards, it falls within the five-year transitional period of the SUF Charging Scheme. Therefore, even if the 75% threshold is reached, no SUF will be charged for the 26/28 GHz bands in 2019, 30% will be charged and payable for 2020 and 70% for 2021, with the full amount payable for 2022 and beyond.
- 4.19 The level of SUF payable for the 26/28 GHz bands (irrespective of whether the two frequency bands are regarded as congested at the initial stage) will be reviewed together with the review of the levels of SUF payable for other administratively-assigned spectrum under the SUF Charging Scheme, which is conducted every five years. The next review will be conducted in 2022, with any revision to the levels of SUF payable to be implemented from January 2023.

year in 2020, 70% payable for the fourth year in 2021, and the full amount payable for the fifth year in 2022 and beyond.

Payment of Licence Fee

- 4.20 Unified carrier licensees are required to pay annual licence fees which are stipulated in Schedule 3 to the Telecommunications (Carrier Licences) Regulation (Cap. 106V). The licence fees are set to cover the administrative cost of OFCA in administering the licences. The amount of licence fees may be reviewed from time to time and adjusted to reflect more closely the prevailing administrative costs of OFCA.
- 4.21 The current annual licence fee payable on the issue and on each anniversary of the issue of a UCL in each year while the licence remains in force shall be the sum of the items given in Table 4 below, where applicable:

Table 4: Annual Licence Fee Schedule

	Particulars	Annual licence fee
1.	Fixed fee	HK\$1,000,000
2.	For each 100 customer connections to the network established and maintained under the Licence	HK\$700 (see also paragraph 4.23 below)
3.	For each subscriber number (a) allocated to the Licensee that is not (i) ported out from the Licensee's network or (ii) assigned to another licensee (who has made payment of the licence fee for such number); and (b) allocated to another licensee that is ported in to the Licensee's network	HK\$3 per subscriber number
4.	For the 1st to the 50th base station ⁶¹ installed for the mobile services offered by the Licensee	HK\$1,000 per base station
	For the 51st to the 100th base station installed for the mobile services offered by the Licensee	HK\$500 per base station
	For the 101st base station and any additional base stations installed for the mobile services offered by the Licensee	HK\$100 per base station
5.	For every 1 kHz or part thereof of frequency then assigned to the Licensee • below 1 GHz • 1 GHz to 10.999 GHz • 11 GHz to 18.999 GHz • at or above 19 GHz	HK\$50 HK\$(50-4F) HK\$(20-F) HK\$1 where F is the frequency rounded down to the nearest GHz

⁶¹ “Base station” for the purpose of licence fee calculation is not necessarily the same as the “radio unit” referred to in paragraph 4.9 above in setting the network and service rollout obligations. A base station installed at a registered address can be connected with one or more than one radio units. In assessing the amount of licence fee to be paid, one base station is counted for each registered address.

For details, please refer to schedule 3 to the Telecommunications (Carrier Licences) Regulation (Cap. 106V).

- 4.22 For the purpose of determining the licence fees payable, the quantity of customer connections, subscriber numbers, base stations and frequencies assigned shall be those authorised or in service at the time when the Licence concerned is issued or on each anniversary of the issue date.
- 4.23 In respect of the customer connection fee, SCED and the CA jointly issued a statement “*Licence Fees Reduction for Five Types of Licences Issued under the Telecommunications Ordinance (Cap. 106) and Introduction of a New Fee Component under Unified Carrier Licences*” in October 2018 to promulgate, among others, the decision to reduce the customer connection fee under UCLs from HK\$700 to HK\$500 for each 100 customer connections (i.e. item 2 in Table 4)⁶². Subject to the necessary legislative amendments, the proposed licence fees reduction will take effect earliest from January 2019.

Control of Interference

- 4.24 The Licensee is required to take all reasonable measures to install, maintain and operate the network and the service in such a manner as not to cause any harmful interference to any lawful telecommunications services within or outside Hong Kong. If necessary, the CA may issue relevant directions requiring the Licensee to take such measures as may be necessary to prevent interference. The Licensee shall also coordinate and agree with other licensees on the technical measures to be taken to minimise any mutual interference between them.
- 4.25 The Licensee shall at all times ensure that no harmful interference should be caused to users of the spectrum in the Mainland. The CA will have ongoing discussions with the relevant Mainland authorities to coordinate the use of frequencies in the boundary areas between Hong Kong and the Mainland. The Licensee shall be required to comply with such requirements as may be imposed by the CA as a result of the frequency coordination from time to time.

⁶² The Statement is available at:
https://www.coms-auth.hk/filemanager/statement/en/upload/474/Joint_Statement_Licence_Fee_Reduction.pdf.

Revocation of Licence

- 4.26 Under section 34(4) of the TO, the CA may cancel or withdraw a licence, or suspend a licence for a period not exceeding 12 months, in the event of any contravention of the licence, the TO, or any condition to which the Licensee is subject. In exercising such a power, the CA will give the Licensee a reasonable opportunity to make representations. The exercise of this power must be proportionate and reasonable in relation to the contravention concerned.
- 4.27 The Chief Executive in Council may, under section 34(4) of the TO, cancel or suspend a licence at any time if she considers that the public interest so requires.

Transfer and Assignment of the Licence

- 4.28 The Licensee may, only with the prior written consent of the CA, and subject to such conditions as the CA thinks fit, transfer the Licence or any permission, right or benefit under the Licence. In giving its consent, the CA will have regard to such matters as it thinks fit including but not limited to the effect which the transfer will have on market structure and the financial and technical competence and viability of the transferee.

Change of Ownership

- 4.29 The merger rule under the CO⁶³ provides that an undertaking must not, directly or indirectly, carry out a merger that has, or is likely to have, the effect of substantially lessening competition in Hong Kong. At present, the merger rule applies only to a merger involving one or more undertakings that owns a carrier licensee under the TO, or directly or indirectly control an undertaking that holds such a licence.

⁶³ The full text of the CO is available at:
<https://www.gld.gov.hk/egazette/pdf/20121625/es12012162514.pdf>.

- 4.30 There is no requirement to notify the CA of a merger falling within the merger rule. However, in order to assist merging parties and their advisers when planning mergers, the CA is willing to provide informal advice on a proposed merger on a confidential basis. For details of the merger rule and how the CA intends to interpret and give effect to the merger rule, please refer to schedule 7 of the CO and the Guideline on the Merger Rule jointly issued by the CA and the Competition Commission⁶⁴.

Service Contracts and Dispute Resolution

- 4.31 The Licensees shall comply with all codes of practice issued by the CA from time to time in respect of the requirements to apply in the contracting of telecommunications services to end users.
- 4.32 The contracting requirements referred to in paragraph 4.31 above may include the following:
- (a) the style, format and structure of service contract documentation;
 - (b) the manner of entering into and terminating service contracts;
 - (c) the information to be included in or in connection with service contracts and the performance of the services;
 - (d) the submission of disputes between end users and the providers of telecommunications services to independent dispute resolution, pursuant to a scheme approved by the CA; and
 - (e) other terms and conditions or provisions for the protection of the interests of end users.
- 4.33 Before issuing any such codes of practice, the CA will carry out such consultation as is reasonable in the circumstances.

⁶⁴ The Guideline is available at:
https://www.coms-auth.hk/filemanager/en/content_923/comp_guide3_en.pdf.

Section V – Information to be Provided in Submitting the Application

Scope of Proposed Services

- 5.1 Applicants should specify the scope of services proposed to be provided using the Non-shared Spectrum under application, and indicate their assessment of the potential demand for such services. The CA will only consider applications whose scope of services includes the provision of large scale public mobile services available to the general public in Hong Kong.
- 5.2 The application should include a detailed description of all services to be provided, target customers, intended coverage areas upon the commissioning of the facilities, expected service launch date, the implementation schedule if the proposed services are to be introduced in phases and plans for the introduction of new services. The application should also include detailed description of the arrangements for offering wholesale and/or retail services to the public, and an explanation on how the applicant is not primarily relying on the interconnection and wholesale services of other operators' infrastructure to roll out their network or to provide their services.
- 5.3 Successful Applicants should be committed to the provision of the proposed services in Hong Kong as detailed in their applications, submissions and representations.

Application for Spectrum Assignment

- 5.4 Applicants should specify the amount of Non-shared Spectrum applied for and indicate whether they have any preference for spectrum in the lower or upper band, and if this cannot be fully satisfied, whether they would be willing to accept assignments in the alternative frequency band, in the format as detailed in paragraph 3.6.

Company Structure

- 5.5 Holders of a UCL must be registered in Hong Kong under the

Companies Ordinance (Cap. 622). The application proposal should contain details of the company intended to be the assignee of the Non-shared Spectrum, including -

- (a) photocopies of the Certificate of Incorporation and the Business Registration Certificate of the company;
- (b) detailed information on the corporate and shareholding structure, including relationships with holding or related companies, and consent to the disclosure of such information so as to assist the CA and other applicants to assess whether an applicant is a connected company in relation to another applicant;
- (c) certified copies of Articles of Association of the company;
- (d) details on the composition of the company's Board of Directors and key officers; and
- (e) the organisational/management structure and staffing levels of the company and any principal contractors to be employed in constructing and maintaining the network.

Financial Capability

5.6 If the applicant is an established company, the proposal should include copies of audited annual financial statements, including the auditor reports, for each of the last three full financial years, together with the most recent interim results (if applicable).

5.7 If the applicant is a newly-formed company, the proposal should include -

- (a) the directors' certificate of the amount of issued and paid-up share capital;
- (b) bankers' confirmation of the amount of its deposits and/or available credit facilities; and
- (c) copies of audited financial statements, including the auditor reports,

for each of the last three full financial years, together with the most recent interim results, of each of the company's shareholders that is an established company (if applicable).

5.8 The application should include a detailed financial plan (with inflation assumptions) for the proposed services and network for the first ten years of operation including -

- (a) a breakdown of the planned capital expenditure ("CAPEX") and of working capital requirements for the first ten years of operation;
- (b) projected profit and loss account including details of revenue, fixed and variable costs, balance sheet and budgeted cash flow statements, showing the amount of capital to be invested on an annual basis for ten years;
- (c) method of depreciation of assets;
- (d) projected volume of business and market share for the first ten years of operation;
- (e) the forecast internal rate of return and payback period of the project;
- (f) details of proposed financing structure, debt equity ratio of the project, credit facilities, repayment terms and schedule for loans and bonds, timing or injection of funding, and the level of shareholders' support to satisfy the CA that the applicant has sound financial backing to carry out the project; and
- (g) sensitivity tests on the business plan showing the worst case scenario (the worst case being one beyond which the company would not wish to invest) and a scenario in which the projected revenue level falls to 80% of the basic assumptions, details of contingency financial arrangements, balance sheet, profit and loss account, cash flow statements, capital investment plan, internal rate of return and payback period of the project.

5.9 For existing carrier licensees authorised to provide public mobile services which have already submitted the above information for granting of the existing carrier licences, they should provide

supplementary financial information by making reference to the above items as appropriate to demonstrate their financial capability of providing large scale public mobile services using the Non-shared Spectrum assigned to them.

Technical Details of the Facilities

5.10 Applicants should give a detailed description of the proposed facilities. This description should cover -

- (a) technical configuration including network infrastructure and components, the technology to be employed, the likely choice of equipment, system design, capacity, how the network and its ancillary equipment and facilities are planned to meet the proposed capacity, connectivity to destinations outside Hong Kong, if applicable, and other technological characteristics;
- (b) the facilities upon launch of service and the facilities expansion plan for the first ten years of operation;
- (c) the planned location of equipment to be installed;
- (d) the planned facilities and traffic management, signalling, metering and billing arrangements (where applicable) to be adopted;
- (e) specification(s) to which the equipment comply with. The specification(s) should be widely recognised standard(s) covering functional specification(s), modulation, transmitting power, out-of-band and spurious emissions, antenna characteristics, etc., where applicable; and
- (f) proposed interface for interconnection with other networks.

Applicants should illustrate how the proposed facilities are designed and implemented to ensure delivery of good, efficient and continuous services.

5.11 Applicants should provide technical proposals for interconnection with other fixed telecommunications networks (local and external) and

mobile telecommunications networks in Hong Kong.

- 5.12 For existing carrier licensees authorised to provide public mobile services which have already submitted the above information for granting of the existing carrier licences, they should provide supplementary technical information by making reference to the above items as appropriate to demonstrate their technical capability of providing large scale public mobile services using the Non-shared Spectrum assigned to them, including in particular information about technical specification(s) requested under paragraph 5.10 (e) above.

Technical Support

- 5.13 The application should include details of technical support facilities and maintenance centres which the applicants have or intend to set up in Hong Kong, including a description of the technical personnel responsible for the design, construction, day-to-day operation, maintenance of the facilities and the routine maintenance schedule/procedure.

Contingency Plan

- 5.14 To ensure sustainability of service delivery, the applicant should provide the contingency plan for its proposed services in response to major breakdown or network/service outage. It should include -

- (a) a brief description of the contingency plan and arrangement;
- (b) the designed level of resilience in terms of percentage of affected services recovered and the time within which the recovery will be completed;
- (c) the amount of backup capacity (relative to the capacity level required for normal operation) and the spare resources such as backhaul equipment for contingency connection;
- (d) prior and post arrangements for re-allocating resources, re-routing the affected traffic and acquisition of additional bandwidth to recover the affected services;

- (e) internal procedures for monitoring and reporting critical network outage, composition of the team responsible for handling the major incidents and the responsibility of the respective major team members; and
- (f) brief description of the action and procedures to (i) assess the impact of major incident; and (ii) disseminate the information to the management, OFCA and the customers.

Previous Relevant Experience

- 5.15 Details on the previous experience of the applicant, its shareholders and key personnel in establishing and running the proposed telecommunications networks, as well as information on the current status of these networks and services, should be given.
- 5.16 Information should also be provided on the applicant and its shareholders' experience in running other relevant businesses in Hong Kong or overseas.

Implementation Plan

- 5.17 The CA would like to see early availability of mobile services supported by spectrum in the 26/28 GHz bands. As such, applications should include an implementation plan for deployment of the Non-shared Spectrum assigned, stating the key milestones of implementation for the first five years starting from the date of spectrum assignment which should include (a) the plan for installation of radio units in different locations of the territory; (b) placing of order for equipment; (c) delivery of equipment; (d) acquisition of sites; (e) securing access to buildings; and where applicable (f) construction of equipment buildings/rooms, earth stations or cable landing stations; (g) conclusion of cable construction and maintenance of agreements; (h) laying of cables; (i) negotiations on interconnection arrangements; (j) installation of equipment; and (k) testing. The applicant will be required to adhere to this plan if the Non-shared Spectrum is subsequently assigned.

Other Information

- 5.18 Applicants may submit any other information not specified above which they consider helpful to their applications.

Executive Summary

- 5.19 The application should contain an Executive Summary summarising in a concise manner the significant and salient points of the proposals.

Section VI – Pre-qualification and Broad Licensing Criteria

- 6.1 The basis for pre-qualification and assessment of applications will be the information supplied by the applicants according to the requirements set out in Section V of these Guidelines. The CA reserves all rights not to accept applications which are substantially incomplete in this respect.

Pre-qualification Criteria

- 6.2 The CA will consider the following in determining whether a party submitting an application can become a Qualified Applicant -

- (a) Types of services which the applicant plans to provide

The applicant should commit to provide large scale public mobile services capable of meeting the minimum rollout obligations and intend to provide a network coverage which is comparable to existing mobile services;

- (b) Amount of Non-shared Spectrum applied for and the related justifications

The applicant should provide sufficient justifications (including quantitative information and calculations) for the amount of Non-shared Spectrum applied for, which should not exceed the Spectrum Cap;

- (c) Technical, organisational and financial capabilities of the applicant

The applicant should provide sufficient information to demonstrate its technical, financial and operational competence capable of providing a good, efficient and continuous public mobile service generally available in the territory;

- (d) Payment of deposits in the form of cash or a letter of credit based on the amount of spectrum applied for; and

- (e) Provision of information to satisfy the CA that it is not connected with other applicant(s).

Broad Licensing Criteria

6.3 In considering the granting of a Licence to a Qualified Applicant for assignment of the Non-shared Spectrum, the CA will consider the benefit of the proposed network to the community. Specifically, the type of services to be offered and the intended coverage areas, the reasonableness of the business plan and the Qualified Applicant's financial capability to fulfil the CAPEX requirement. Other licensing criteria include -

(a) Business Plan

The CA will examine the reasonableness of the business plan including in particular whether the proposed CAPEX would be sufficient to support the networks and services proposed.

(b) Financial Capability

The Qualified Applicant must possess sufficient financial capability to invest to the level proposed and demonstrate that each consortium partner, as appropriate, is financially sound. The Qualified Applicant must satisfy the CA that it has sufficient financial backing, either by its own capital, the capital of its shareholders or loan capital to carry out the project. The Qualified Applicant must have sound and detailed business plans with contingency measures to face unexpected down-turn in the business and the worst case scenario.

(c) Technical Soundness and a Satisfactory Quality of Service

The proposed network must be technically sound, compatible with the local environment and be capable of delivering the services proposed to give a satisfactory quality of service. In particular, the quality of service should be satisfactory in the expected climatic conditions in Hong Kong, and the proposed system must use spectrum efficiently.

(d) Proven Managerial and Technical Expertise

The Qualified Applicant must possess proven managerial and technical expertise to operate a satisfactory service, market the service in Hong Kong and provide satisfactory customer support. The CA will consider the knowledge of the Qualified Applicant or the consortium partners, as appropriate, about the local environment and/or their experience in the operation of external telecommunications facilities.

(e) Service Quality and Charges

The CA will consider more favourably those applications which offer a wider range of innovative 5G services at competitive prices and with a better quality of service.

(f) Implementation Schedule

The Qualified Applicant must provide the CA with its rollout plan for deployment of the Non-shared Spectrum, including the target commencement date of service provisioning with the use of the newly assigned spectrum. The Qualified Applicant should demonstrate its ability to manage such plan and the necessary facilities. The Qualified Applicant should also demonstrate capability in negotiating and managing interconnection issues.

(g) Quality of Application Proposal

The CA will consider more favourably application proposals that are concise and clearly presented with each aspect substantiated by well researched facts and comprehensive independent market survey(s).

(h) A Clearly Workable and Defined Corporate Structure with Sensible Dispute Resolution Procedures Minimising “Deadlocks”

Applications would not be favourably considered if there is a lack of (i) clear controlling interest in a consortium (e.g. presence of fragmented shareholdings); (ii) clearly workable and sensible dispute resolution procedure; (iii) efficient mechanisms for deadlock resolution at board or shareholder levels; or (iv) doubts on the

reliability of the Qualified Applicant or its shareholders.

- 6.4 The licensing criteria set out in these Guidelines are not intended to be a definitive list of criteria. While evaluating whether the criteria have been satisfied, the CA is entitled to determine the weight it will give to each individual matter as it considers appropriate in the circumstances, after taking into account relevant factors, and will decide each case on its own merits.

Office of the Communications Authority
21 December 2018

Sample Unified Carrier Licence

Licence No. []

**TELECOMMUNICATIONS ORDINANCE
(Chapter 106)**

UNIFIED CARRIER LICENCE

DATE OF ISSUE: **[Date]**

[Company Name]
.....

of **[Address]**
.....

(the “licensee”) is licensed, subject to the following conditions set out in this licence –

- (a) to provide a public telecommunications network service (the “service”), the scope of which is described in Schedule 1;
- (b) to establish and maintain a telecommunications network (the “network”) described in Schedule 2 to provide the service;
- (c) to possess and use the radiocommunications installations described in Schedule 3 to provide the service; and
- (d) to deal in, import and demonstrate, with a view to sale in the course of trade or business, such apparatus or material for radiocommunications as may be necessary to supply customers of the service.

GENERAL CONDITIONS

1. DEFINITIONS AND INTERPRETATION

- 1.1 In this licence, except as hereinafter provided or unless the context otherwise requires, words or expressions shall have the meanings assigned to them in the Telecommunications Ordinance (Cap. 106) (the “Ordinance”) and, as the case may be, the Interpretation and General Clauses Ordinance (Cap. 1). For the purposes of interpreting this licence, headings and titles shall be disregarded.
- 1.2 This licence shall not be construed as granting an exclusive right to the licensee to provide the service.
- 1.3 This licence replaces any licence or any exemption from licensing, however described, which the Authority may have granted to the licensee for providing the service.
- 1.4 The grant of this licence does not authorize the licensee to do anything which infringes any exclusive licence granted under the Ordinance or any exclusive right to operate and provide telecommunications networks, systems, installations or services granted under any other Ordinance.

2. TRANSFER

- 2.1 The licensee may, only with the prior written consent of the Authority and subject to such reasonable conditions as the Authority thinks fit, transfer this licence or any permission, right or benefit under this licence. In giving its consent the Authority will have regard to such matters as it thinks fit including but not limited to the effect which the transfer will have on market structure and the financial and technical competence and viability of the transferee.

3. INTERNATIONAL CONVENTIONS

- 3.1 The licensee shall at all times perform and observe the requirements of the Constitution and Convention of the International Telecommunication Union and the regulations and recommendations annexed to it, as are stated to be applicable to Hong Kong, and any other international convention, agreement, protocol, understanding or the like to the extent that the instruments described in this General Condition 3.1 impose obligations on Hong Kong of which the Authority gives notice to the licensee, except to the extent that the Authority may in writing exempt the licensee from such compliance.
- 3.2 Where the Government has been consulted about or is involved in the preparation or negotiation of an international convention, agreement, protocol or understanding or the like or amendments thereto which are on the subject-matter of telecommunications or which relate to another subject-matter but which the Government anticipates could have a material impact on the provision of the service under this licence, the Government will, where practicable, provide the licensee with a reasonable opportunity to make a submission stating its views on the matter.

4. COMPLIANCE GENERALLY

- 4.1 The licensee shall comply with the Ordinance, regulations made under the Ordinance, licence conditions or any other instruments which may be issued by the Authority under the Ordinance.

5. PROVISION OF SERVICE

- 5.1 The licensee shall, subject to Schedule 1 to this licence and any special conditions of this licence relating to the provision of the service, at all times during the validity period of this licence operate, maintain and provide a good, efficient and continuous service in a manner satisfactory to the Authority. The Authority may, on application in writing by the licensee, exempt a part or parts of the service from the requirement of continuous provision.

6. CUSTOMER CHARTER

- 6.1 Unless a waiver in writing is granted by the Authority, the licensee shall prepare a customer charter which sets out the minimum standards of service to the licensee's customers and gives guidance to the employees of the licensee in their relations and dealings with customers.

7. CONFIDENTIALITY OF CUSTOMER INFORMATION

- 7.1 The licensee shall not disclose information of a customer except with the consent of the customer, which form of consent shall be approved by the Authority, except for the prevention or detection of crime or the apprehension or prosecution of offenders or except as may be authorized by or under any law.
- 7.2 The licensee shall not use information provided by its customers or obtained in the course of provision of service to its customers other than for and in relation to the provision by the licensee of the service.

8. RECORDS AND PLANS OF NETWORK

- 8.1 The licensee shall keep records and plans (including overall network plans and cable route maps) of the telecommunications installation (including radiocommunications installation) and telecommunications nodes and exchanges, if any, provided under this licence and any other details concerning the network as may be reasonably required by the Authority, including but not limited to information from operational support systems, traffic flow information, and database information relating to the manner in which the network treats any communication ("network information").
- 8.2 As required by the Authority, the licensee shall make the network information available, within reasonable time, to the Authority or to a

person authorized in writing by the Authority for inspection for the Authority's own purposes.

9. CONTROL OF INTERFERENCE AND OBSTRUCTION

9.1 The licensee shall take reasonable measures to install, maintain and operate the service and the network in such a manner as not to cause any harmful interference or physical obstruction to any lawful telecommunications service, or cause any physical obstruction to the installation, maintenance, operation, adjustment, repair, alteration, removal or replacement of the facilities of any lawful telecommunications or utility service provider.

9.2 The licensee shall take reasonable measures to ensure that the customers of the service do not cause harmful interference to lawful telecommunications services or utility services through use of the service.

9.3 The Authority may give such reasonable directions as it thinks fit to avoid harmful interference or physical obstruction referred to in General Condition 9.1. The licensee shall comply with the directions.

10. (Repealed in July 2016, as per the Joint Statement of the Secretary and the Authority dated 10 March 2015, and the Telecommunications (Carrier Licences) (Amendment) Regulation 2016 enacted on 1 July 2016.)

11. COMPLIANCE

11.1 If the licensee employs any person under contract for the purpose of the service, or for the installation, maintenance or operation of the network (a "contractor"), the licensee shall continue to be responsible for compliance with the conditions of this licence, and the performance thereof, by any contractor.

12. REQUIREMENTS OF RADIOCOMMUNICATIONS INSTALLATION

- 12.1 Each radiocommunications installation operated by or on behalf of the licensee shall be used only at the location and with emissions and at the frequencies and of the classes and characteristics specified in Schedule 3 to this licence and with such power and aerial characteristics as are specified in that Schedule in relation to the class and characteristics of the emission in use.
- 12.2 The apparatus comprised in each radiocommunications installation shall at all times comply with such technical standards as may be issued by the Authority.
- 12.3 The apparatus comprised in a radiocommunications installation shall be of a type approved by the Authority and shall be so designed, constructed, maintained and operated that its use shall not cause any interference to any radiocommunications.
- 12.4 A radiocommunications installation shall be operated only by the licensee or a person authorized by the licensee. The licensee shall not allow an unauthorized person to have access to the apparatus comprised in a radiocommunications installation. The licensee shall ensure that persons operating each radiocommunications installation shall at all times observe the conditions of this licence.
- 12.5 The licensee shall not make a change –
- (a) to any radiocommunications installation; or
 - (b) of the location of any radiocommunications installation,
- without the prior written approval of the Authority.
- 12.6 If any telecommunications installation (including radiocommunications installation) crosses above or may fall or be blown onto any overhead power wire (including electric lighting and tramway wires) or power apparatus it shall be guarded to the reasonable satisfaction of the owner of the power wire or power apparatus concerned.

13. USE OF FREQUENCIES

- 13.1 The radiocommunications installation operated by or on behalf of the licensee shall only be operated on such frequencies as the Authority may assign.

14. SAFETY

- 14.1 The licensee shall take proper and adequate safety measures for the safeguarding of life and property in connection with all installations, equipment and apparatus operated or used, including safeguarding against exposure to any electrical or radiation hazard emanating from the installations, equipment or apparatus operated or used under this licence.
- 14.2 The licensee shall comply with the safety standards and specifications as may from time to time be prescribed by the Authority and any directions of the Authority in relation to any safety matter.

15. PROHIBITION OF CLAIMS AGAINST GOVERNMENT

- 15.1 The licensee shall have no claim against the Government in tort or in contract in respect of any disturbance or interruption to any part of the network due to works carried out by or on behalf of the Government which result in disturbance to the network.

16. INDEMNITY

- 16.1 The licensee shall indemnify the Government against any losses, claims, charges, expenses, actions, damages or demands which the Government incurs or which may be made against the Government as a result of or in relation to the activities of the licensee or any employee, agent or contractor of the licensee in relation to the

provision of the service or the installation, maintenance and operation of the network.

17. CONTRAVENTION BEYOND LICENSEE'S CONTROL

- 17.1 The licensee shall not be liable for any breach of this licence where it is able to demonstrate, to the reasonable satisfaction of the Authority, that the breach was caused by circumstances beyond its control and that it has taken all reasonable steps open to it to rectify that breach.
- 17.2 Where the circumstances referred to in General Condition 17.1 are such that there is an outage or interruption in the service affecting a significant number of the licensee's customers for a period of more than 7 days, the licensee shall provide the Authority with a full report in writing detailing the reasons for the breach and indicating when, or if, it will be able to continue to provide the service.
- 17.3 If the Authority is, after considering a report provided under General Condition 17.2, of the reasonable belief that the licensee would be able to provide the service within a reasonable period of time despite the circumstances outlined in that report, the Authority may direct that the licensee recommence the service within such reasonable period as the Authority may in writing direct. The licensee shall comply with such direction.

18. PUBLICATION OF LICENCE

- 18.1 The licensee, or the Authority, may at their discretion make the terms and conditions of this licence, including any specific conditions, publicly available in any manner they think fit.

SPECIAL CONDITIONS

1. COMPLIANCE WITH CODES OF PRACTICE

- 1.1. The licensee shall comply with such guidelines or codes of practices which may be issued by the Authority as in its opinion are suitable for the purpose of providing practical guidance on any particular aspect of any conditions of this licence.
- 1.2 Without limiting or affecting in any way the licensee's obligations under any other Condition, the licensee shall comply with any code of practice or guideline which may be issued by the Authority from time to time for the purpose of providing practical guidance to the licensee in respect of:
- (a) the provision of satisfactory service;
 - (b) the protection of customer information;
 - (c) the protection and promotion of the interests of consumers of telecommunications goods and services; and
 - (d) calling line identification and other calling line identification related services.
- 1.3 Before issuing any code of practice or guideline referred to in Special Condition 1.2, the Authority shall carry out such consultation as is reasonable in all the circumstances of the case.
- 1.4 Without limiting the generality of Special Condition 1.2(d), the code of practice or guideline issued under that Special Condition may require the licensee to validate the calling line identification against the authenticated customer in order to prevent fraud and spam.

2. PURCHASE OF ASSETS

2.1 If a licensee is (1) in a dominant position (within the meaning defined in section 2 of the Ordinance) in the relevant telecommunications market; or (2) subject to a universal service obligation specified under the Ordinance, the Government may elect to take over the licensee's undertaking and purchase all or part of its assets if any of the following circumstances occur –

- (i) this licence expires;
- (ii) this licence is revoked;
- (iii) the licensee goes into liquidation; or
- (iv) the licensee ceases to carry on business,

provided that if the Government elects to do so, it shall give notice in writing not later than 90 days in advance of the expiry of this licence, or immediately upon revocation of this licence or within a reasonable time of the happening of the events at Special Condition 2.1(iii) or 2.1(iv).

2.2 The selling price shall be agreed between the Government and the licensee on the basis of the fair market value of those assets at the time of acquisition determined on the basis that this licence remains in force and that the network is continuing to be used for the provision of the service. If no agreement can be reached between the Government and the licensee, the matter shall be settled by arbitration in accordance with the provisions of the Arbitration Ordinance (Cap. 609).

2.3 For the purpose of Special Condition 2.1,

- (1) where the licensee is in a dominant position in the relevant telecommunications market, the undertaking and assets of the licensee shall be the relevant undertaking and assets of the licensee in relation to its dominant position in that relevant telecommunications market; and
- (2) where the licensee is subject to a universal service obligation, the undertaking and assets of the licensee shall be the relevant

undertaking and assets of the licensee in relation to its operation that is subject to the universal service obligation.

3. REQUIREMENTS FOR INTERCONNECTION

- 3.1 The licensee shall interconnect its service and network with the services and networks of other unified carriers, mobile carriers or fixed carriers licensed under the Ordinance and, where directed by the Authority, interconnect its service and network with telecommunications networks and services of a type mentioned in section 36A(3D) of the Ordinance. The licensee shall interconnect its service and network with the services and networks of other interconnecting parties under this Special Condition to ensure any-to-any connectivity, i.e. any customer in any one network can have access to any other customer in any interconnecting network and, where directed by the Authority, to any service offered in any interconnecting network.
- 3.2 The licensee shall use all reasonable endeavours to ensure that interconnection is effected promptly, efficiently and on terms, conditions and at charges which are based on the licensee's reasonable relevant costs attributable to interconnection.
- 3.3 The licensee shall provide facilities and services reasonably necessary for the prompt and efficient interconnection of the service and the network with the telecommunications networks or services of the other entities referred to in Special Condition 3.1. Such facilities and services include –
- (a) carriage services for the delivery of codes, messages or signals or other communication across and between the interconnected networks;
 - (b) those necessary to establish, operate and maintain points of interconnection between the licensee's network and the networks of the other entities, including, without limitation, the provision of sufficient transmission capacity to connect between the licensee's network and networks of the other entities;

- (c) billing information reasonably required to enable the other entities to bill their customers;
- (d) facilities specified by the Authority pursuant to section 36AA of the Ordinance; and
- (e) ancillary facilities and services required to support the above types of interconnection facilities and services.

4. NUMBERING PLAN AND NUMBER PORTABILITY

- 4.1 The licensee shall comply with the numbering plan made or approved by the Authority and any directions given by the Authority in respect of the numbering plan.
- 4.2 The licensee shall at the request of the Authority or otherwise consult the Authority about the arrangements for the allocation and reallocation of numbers and codes within the numbering plan.
- 4.3 Where requested by the Authority, the licensee shall prepare and furnish to the Authority proposals for developing, adding to or replacing the numbering plan relating to the service.
- 4.4 The licensee shall, in such manner as the Authority may direct, facilitate the portability of numbers assigned to any customer of any unified carrier licensee, fixed carrier licensee, mobile carrier licensee, services-based operator, mobile virtual network operator or any other licensee, as the case may be, so that any number so assigned may be used by that customer should it cease to be a customer of any such entity and become a customer of any other unified carrier licensee, fixed carrier licensee, mobile carrier licensee, services-based operator, mobile virtual network operator or any other licensee, as the case may be.
- 4.5 Directions by the Authority under Special Condition 4.4 include reasonable directions concerning,

- (a) compliance with Special Condition 4.4 by the licensee at the licensee's own expenses, or by equitably sharing all relevant costs associated with providing portability of numbers as between the licensee, any other unified carrier licensee, fixed carrier licensee, mobile carrier licensee, services-based operator, mobile virtual network operator or any other licensee, as the case may be; and
 - (b) facilitation of portability of numbers through such technical arrangement (including but not restricted to a centralized database) as may be specified by the Authority, in co-operation with other parties sharing or maintaining the technical arrangement at such costs as may be directed under Special Condition 4.5(a).
- 4.6 For the purposes of this Special Condition, "portability of numbers" means the function of the network and the service which enables a customer of the service of a unified carrier licensee, fixed carrier licensee, mobile carrier licensee, services-based operator or mobile virtual network operator to become a customer of another unified carrier licensee, fixed carrier licensee, mobile carrier licensee, services-based operator or mobile virtual network operator or any other licensee, as the case may be, without changing the number assigned to that customer.
- 4.7 Notwithstanding the generality of the foregoing, the licensee, where and as directed by the Authority, shall provide Administration Database Hosting Service to other licensees to facilitate the portability of numbers as required under their respective licences. The licensee may impose a reasonable charge to fairly compensate it for providing the Administration Database Hosting Service. The licensee shall endeavour to agree with the other licensee on what amounts to fair compensation for provision of the Administration Database Hosting Service.
- 4.8 Where the licensee is unable to agree with another licensee pursuant to Special Condition 4.7 on what amounts to fair compensation for the provision of, or the reasonable mode of supply of, the Administration Database Hosting Service, the matter at issue may be referred by either

licensee to the Authority for determination. The licensee shall pay to the Authority, as it may reasonably require having regard to the number of parties to the determination, any costs or expenses incurred by the Authority in respect of such a determination or determination process including without limitation staff costs and expenses and the financing of liabilities paid out of the Office of the Communications Authority Trading Fund.

4.9 For the purposes of Special Conditions 4.7 and 4.8,

“administration database” means an off-line database that performs the backup and auditing function for all ported-out and ported-in numbers of unified carrier licensee, fixed carrier licensee, mobile carrier licensee, services-based operator, mobile virtual network operator or any other licensee, as the case may be, to facilitate the portability of numbers. The database is required to keep the current and historical records of all relevant ported-out and ported-in numbers; and

“Administration Database Hosting Service” means a service offered by the licensee which makes available its administration database for access by another licensee, so that the latter will be able to fulfil the licence obligation under its own licence to facilitate the portability of numbers without the need of setting up its own administration database.

5. ACCOUNTING PRACTICES

5.1 Where directed by the Authority in writing, the licensee shall implement such accounting practices as specified by the Authority. Such accounting practices are to be consistent with generally accepted accounting practices, where applicable, and may include (but are not limited to) accounting practices which allow for the identification of the costs and charges for different services or types or kinds of services.

6. REQUIREMENT TO FURNISH INFORMATION TO THE AUTHORITY

- 6.1 The licensee shall furnish to the Authority, in such manner and at such times as the Authority may request in writing, such information relating to the business run by the licensee under this licence, including financial, technical, and statistical information, accounts and other records, as the Authority may reasonably require in order to perform its functions under the Ordinance and this licence. Information referred to in this condition includes but is not limited to such information as is listed in Schedule 4.
- 6.2 Subject to Special Condition 6.3 the Authority may use and disclose information to such persons as the Authority thinks fit.
- 6.3 Where the Authority proposes to disclose information obtained and the Authority considers that the disclosure would result in the release of information concerning the business or commercial or financial affairs of a licensee which disclosure would or could reasonably be expected to adversely affect the licensee's lawful business or commercial or financial affairs, the Authority will give the licensee a reasonable opportunity to make representations on the proposed disclosure before the Authority makes a final decision whether to disclose the information.

7. TARIFFS

- 7.1 The licensee shall publish and charge no more than the tariffs for the service operated under this licence. The tariffs shall include the terms, as defined under section 7F(2) of the Ordinance, for the provision of the service.
- 7.2 Publication of a tariff shall be effected by –
- (a) publication in the website of the licensee on or before the date on which the tariff becomes effective;
 - (b) the Authority receiving a copy of the tariff on or before the date as specified by the Authority;

- (c) placing a copy of the tariff in a publicly accessible part of the principal place of business and other business premises of the licensee as specified by the Authority; and
- (d) supplying a copy of the relevant details to any person who may request it, at a charge no greater than is necessary to recover reasonable costs of making and supplying the copy.

7.3 The Authority may by direction in writing, for such period and on such conditions as the Authority may determine, direct that either one or any combination of Special Conditions 7.2(a), (b), (c), and (d), either completely or as to particular obligations imposed under them, shall not apply to the licensee.

8. NOTIFICATION OF DISCOUNTS

8.1 The licensee shall notify the Authority of any discount to its published tariffs offered for any of the services operated under this licence, other than those services listed in Schedule 6.

8.2 Notification of a discount shall be effected upon the Authority's receipt of a copy of the discount to a tariff, including such information prescribed in Schedule 5, at least one day before the discount becomes effective.

8.3 The Authority may publish any discount that the licensee notifies under Special Condition 8.1 after the discount becomes effective, if the Authority considers that it is in the public interest to do so.

8.4 For the purposes of this Special Condition, "discount" means the amount of any payment, credit, rebate, waiver, allowance, gift, or other benefit, directed to a customer, other than:

- (a) an amount in repayment of an amount overpaid to the licensee by that customer;
- (b) an amount in settlement of a disputed amount billed to that customer by the licensee;

- (c) an amount payable pursuant to a service level or service quality obligation of the licensee to the customer; or
- (d) the amount payable by a customer upon termination of service to that customer.

9. BILLING AND METERING ACCURACY

- 9.1 The licensee shall take all reasonable steps to ensure that any metering equipment and billing system used in connection with the service is accurate and reliable.
- 9.2 At the written request of the Authority or at regular intervals to be specified by the Authority, the licensee shall conduct tests on its metering equipment and billing system to assess its accuracy, reliability and conformity to the technical standards, if any, specified by the Authority. The licensee shall submit the test result to the Authority within 14 days after the date of the relevant test or such other longer period as the Authority may determine.
- 9.3 The licensee shall keep such records of any metering equipment and billing system in such form as may be specified by the Authority and shall supply such records to the Authority as soon as reasonably practical following a written request from the Authority.

10. PROVISION OF SERVICE

- 10.1 The licensee shall, subject to Schedule 1 and any special conditions of this licence relating to the provision of the service, provide the service on its published terms and conditions and at the tariff published in accordance with Special Condition 7 (as applicable) and at the discount notified to the Authority in accordance with Special Condition 8 (as applicable), on request of a customer whether or not the customer intends the service to be available for its own use or intends to utilize the service to provide a lawful telecommunications service to third parties.

- 10.2 Subject to Schedule 1 and any special conditions relating to the provision of the service, the licensee shall comply with a customer request for the service as tariffed by the licensee in accordance with Special Condition 7 where the service can reasonably be provided by the licensee to the customer utilizing the licensee's network in place at the time of the request.
- 10.3 The licensee shall not unreasonably delay or refuse to provide the service, or impose onerous conditions on the provision of the service, to any customer who owns or operates apparatus of a type which is approved by the Authority and conforms with the technical and performance standards specified in Schedule 3 to this licence. In particular (but without limiting the generality of the foregoing), the licensee shall not discriminate against any customer whose apparatus was acquired other than from the licensee.
- 10.4 The licensee shall seek the prior written consent of the Authority and make proper and appropriate arrangements for the affected customers to the satisfaction of the Authority before ceasing to provide a generation of mobile service.

11. DIRECTORY INFORMATION AND DIRECTORY INFORMATION SERVICE

- 11.1 For the purposes of this Special Condition –
- (a) “directory information” means information obtained by the licensee in the course of the provision of services under this licence concerning or relating to all or any of the name, address, business and telephone numbers of each of its customers; and
 - (b) “raw directory information” means the licensee's directory information held in a basic format for the purpose of Special Conditions 11.6, 11.7 and 11.8 relating to customers other than customers who request that directory information about them not to be disclosed.

- 11.2 This Special Condition applies only in respect of standard printed directories and other directory databases and services which include all of the names of a licensee's customers listed in English language in alphabetical order, or in Chinese language in order of the number of strokes, or in such other language in an appropriate order as is kept by the licensee, and does not apply to classified directories where customers are listed by business or trade category or to other business or specialised directories.
- 11.3 Subject to compliance with the Personal Data (Privacy) Ordinance (Cap. 486), General Condition 7 and any applicable law, the licensee shall –
- (a) where and as directed by the Authority, publish or arrange at least biennially for the publication of directory information in a printed or other form approved by the Authority, relating to customers, other than customers who request not to be included in a directory to be published (“the printed directory”); and
 - (b) where and as directed by the Authority, establish, maintain and operate, or arrange for the establishment, maintenance or operation of a telecommunications service whereby customers may, upon request, be provided with directory information other than that of customers who request the information relating to them not to be disclosed (“the telephonic directory service”).
- 11.4 The printed directory and the telephonic directory service provided under Special Condition 11.3 shall be made available free of charge, unless approved otherwise by the Authority, to all of the licensee's customers and shall be provided in a manner satisfactory to the Authority.
- 11.5 The licensee is permitted to make commercial arrangements with one or more of the other licensees who have the obligation to provide directory information, to co-operate in the provision jointly by them of either or both of the printed directory and the telephonic directory service which the licensee is required to provide under Special Condition 11.3.

- 11.6 The licensee's printed directory shall be a unified printed directory and the licensee's telephonic directory service shall be a unified telephonic directory service and shall utilize a unified directory database, containing directory information as directed by the Authority, except for those customers who request that directory information about them not to be disclosed. Subject to compliance with the Personal Data (Privacy) Ordinance (Cap. 486), General Condition 7 and any applicable law, the licensee shall, as directed by the Authority, provide, and regularly update, raw directory information, for which the licensee will be able to impose a reasonable charge, if applicable, to fairly compensate it for providing the raw directory information. The licensee shall endeavour to agree with each of the other licensees on a reasonable mode of exchange and transmission format for the raw directory information.
- 11.7 Where the licensee is unable to agree with another licensee pursuant to Special Condition 11.6 on what amounts to fair compensation for provision of, or the reasonable mode of exchange and transmission format of, raw directory information, the matter at issue may be referred by either licensee to the Authority for determination. The licensee shall pay to the Authority, as it may require, any costs or expenses incurred by the Authority, including, without limitation, staff costs and expenses, and the financing of liabilities paid out of the Office of the Communications Authority Trading Fund in respect of such a determination or determination process.
- 11.8 Except with the prior written approval of the Authority, the licensee shall not make use of raw directory information provided by another licensee other than for discharging its obligations under this Special Condition.
- 11.9 This Special Condition does not apply to the services described in Schedule 7 provided that -
- (a) the licensee (and where appropriate its agents, contractors and resellers) declares such service, in all promoting, marketing or advertising materials concerning such service, as a "Class 2 service" (where the materials are in English text) (or "第二類服務" where the materials are in Chinese text); or

- (b) the licensee complies with such conditions as may be specified by the Authority in a direction that may be issued by the Authority.

12. EMERGENCY SERVICE

- 12.1 Where the licensee provides the services described in Schedule 7, the licensee shall provide a public emergency service by means of which any member of the public may, at any time and without incurring any charge, by means of compatible apparatus connected to the network of the licensees, communicate as quickly as practicable with the Hong Kong Police Emergency Centre or other entities as directed by the Authority to report an emergency.
- 12.2 The licensee shall not charge for the use of the public emergency services described in Special Condition 12.1.
- 12.3 Unless otherwise directed by the Authority, emergency messages sent by a person using compatible apparatus connected to the network of the licensee shall be treated by the licensee on an equal basis irrespective of whether or not such apparatus has been registered as that of a customer of the licensee.
- 12.4 Where the licensee provides a public emergency service pursuant to Special Condition 12.1 and the location of the customer making the call is potentially nomadic, the licensee shall in such manner as may be specified by the Authority maintain the most up-to-date location information of customers and provide free of charge to the Police Force, the Fire Services Department and other relevant Government agencies handling the emergency service the relevant information relating to the location of a customer calling the emergency service described in Special Condition 12.1 for the sole purpose of responding to that call and (as appropriate) identification that the location of the customer making the call is potentially nomadic. Unless otherwise directed by the Authority, the licensee shall provide a mechanism whereby the customers can update their location information and remind the customers to update their location information whenever they change the location from which the service is used.

- 12.5 Where the licensee provides a Short Message Service, the public emergency service referred to under Special Conditions 12.1, 12.2 and 12.4 shall include the Short Message Service.

13. RECORDS AND PLANS OF THE NETWORK

- 13.1 The Authority may disclose the network information in accordance with section 7I(3) of the Ordinance.
- 13.2 The licensee shall, at the reasonable request of any other licensee under the Ordinance if so authorized by the Authority, give reasonable access to its network information for the facilitation of network planning, maintenance and reconfiguration required for the purposes of Special Condition 3 and section 36AA of the Ordinance. The licensee shall be permitted to charge the requesting party so as to be fairly compensated for the reasonable relevant costs incurred in the provision of such network information.
- 13.3 Where the licensee and any other licensee that has requested access to the network information in accordance with Special Condition 13.2 are unable to agree what amounts to reasonable access (including confidentiality requirements and fair compensation for the reasonable relevant costs incurred) or a reasonable request, the matter at issue may be referred by either the licensee or the other licensee to the Authority for determination. The licensee shall pay to the Authority, as it may require, any costs or expenses incurred by the Authority, including, without limitation, staff costs and expenses, and the financing of liabilities paid out of the Office of the Communications Authority Trading Fund in respect of such a determination or determination process.

14. NETWORK LOCATION

- 14.1 The licensee shall keep accurate records of the location of the network installed under, in, over or upon any land.

- 14.2 The licensee shall mark or otherwise identify every wire laid or telecommunications installation installed by the licensee or any contractor on its behalf throughout the course of the wire, or at the location of the installation, so as to distinguish it from any other wire or telecommunications installation laid or installed in Hong Kong.
- 14.3 The licensee shall provide, at such intervals as the Authority may determine, distinguishable surface markers of the underground position of the network.

15. CHANGES TO THE NETWORK

- 15.1 For the purposes of this licence, a change in the network is a material change where the implementation of the change would result in the network no longer being in compliance with any relevant technical standard which the Authority has power to issue.
- 15.2 The licensee shall notify the Authority of any proposals for material changes to the network and provide it with such information as the Authority reasonably requires.
- 15.3 The licensee shall not, without the prior consent in writing of the Authority, make any material changes which might reasonably be anticipated by the licensee to affect -
- (a) any telecommunications service or installation connected to the network;
 - (b) a person producing or supplying telecommunications apparatus for connection to the network;
 - (c) a licensee under the Ordinance;
 - (d) a licensee under the Broadcasting Ordinance (Cap. 562); or
 - (e) a customer or a consumer of goods and services provided by any person or entity,

if the change is in the opinion of the Authority likely to require modifications or replacements to, or cessation in the production or supply of any of the telecommunications apparatus involved, or if the proposed alteration would require substantial network reconfiguration or rerouting.

- 15.4 The licensee shall prepare and publish, after consultation with the Authority, its procedures for consulting with and giving notice to persons likely to be affected materially by changes to its network which are required to be notified in accordance with Special Condition 15.2 and any other changes required to be notified pursuant to any technical standard which the Authority has power to issue. Subject to approval of the Authority, the notification procedures to each of the classes of persons likely to be affected under Special Condition 15.3 may differ having regard to the practicality and costs of notifying them.

16. REQUIREMENTS FOR ROAD OPENING

- 16.1 The licensee shall co-ordinate and co-operate with any other unified carrier licensee or fixed carrier licensee under the Ordinance and any other authorized person in respect of road openings and shall, after being consulted by the Authority, comply with any guidelines issued by the Authority.

17 – 20. (Removed as per the Joint Statement of the Secretary and the Authority dated 10 March 2015.)

21. WITHDRAWAL AND RETURN OF FREQUENCIES

- 21.1 Without prejudice to the generality of section 32H of the Ordinance, the Authority may by notice in writing withdraw any frequency previously assigned to the licensee if in the opinion of the Authority the licensee is not making efficient use of that frequency or in exceptional circumstances including where the public interest or international obligations of the Government so require, there is a

serious breach of spectrum assignment conditions or serious interference between legitimate spectrum users has to be resolved or minimised.

- 21.2 The licensee may, subject to prior consent of and conditions specified by the Authority, return any frequency previously assigned to it.

22. UNIVERSAL SERVICE CONTRIBUTION

- 22.1 Where directed by the Authority, the licensee shall pay to one or more fixed carrier licensees or unified carrier licensees or other licensees with a universal service obligation, as the case may be, its relevant share of the universal service contribution to assist those licensees to meet their universal service obligations, if any.

- 22.2 Any universal service contribution shall be subject to periodic review by the Authority as to description and quantum and the licensee shall pay its relevant share of such universal service contribution as the Authority may direct following a review. On the completion of a periodic review, the Authority may supply the licensee such information as the Authority is reasonably able to supply, and subject to any duty of confidentiality, as to the basis on which the universal service contribution is calculated.

- 22.3 For the purpose of Special Condition 22, the following definitions shall apply –

(a) Universal service contribution is that sum calculated in accordance with a formula adopted periodically by the Authority, to ensure that any licensee with a universal service obligation (referred to as “universal service provider” in this Special Condition), receives a fair contribution from other licensees as specified by the Authority for serving customers with basic service whom would otherwise not be served because it is not economically viable to do so but who are required to be served under the universal service obligation.

(b) Universal service obligation is the obligation by a licensee to

provide, maintain and operate the relevant network in such manner as to ensure that a good, efficient and continuous basic service is reasonably available, subject to the Ordinance and the conditions of its licence, and to provide that basic service in such manner.

23. CIRCUMSTANCES OUTSIDE LICENSEE'S CONTROL

23.1 For the avoidance of doubt, General Condition 17.1 of this licence shall apply to these special conditions and the Authority may at its discretion, and on such conditions as it thinks fit, extend any time period within which the obligations of the licensee under these special conditions may be met.

23.2 In exercising its discretion under Special Condition 23.1 with respect to any of the special conditions of this licence, the Authority shall take into account including, without limitation, whether circumstances are such that it would be unreasonable to require compliance by the licensee with the relevant special condition.

24. INSURANCE

24.1 Throughout the currency of this licence, the licensee shall have and maintain a valid insurance policy with a reputable insurance company to cover its third party liabilities in respect of personal injury, death and damage to property, arising out of or in connection with the installation, maintenance and operation of the network or provision of the service. The amount of insurance shall be at least HK\$10,000,000 per occurrence or such sum as the Authority may notify in writing in future.

25. USE OF PUBLIC FACILITIES FOR PROVISION OF SERVICES

25.1 Without limiting or affecting in any way the licensee's obligations under any other condition of this licence, the licensee shall comply

with any guidelines or codes of practice which may be issued by the Authority from time to time for the purpose of providing practical guidance to the licensee in respect of the use of Government facilities as well as facilities on Government property and unleased Government land for the provision of services under this licence.

26. LOCATION SERVICES

26.1 Without affecting the generality of General Condition 7, “information of a customer” referred to in General Condition 7.1 and “information provided by its customers or obtained in the course of provision of service to its customers” referred to in General Condition 7.2 shall include any information concerning the locations of customers obtained in the course of provision of the service.

26.2 Where the licensee provides services to customers using the information concerning the locations of the customers obtained in the course of provision of the service, the licensee shall ensure that –

- (a) no such services are provided without the prior consent of the relevant customers; and
- (b) the customers are capable of suspending the use of the information from time to time.

27. PROVISION OF SERVICE TO SUSPECTED STOLEN RADIOCOMMUNICATIONS APPARATUS

27.1 The licensee shall, where directed by the Authority, refuse to provide the service to any person who possesses or uses a radiocommunications apparatus which is stolen or suspected stolen goods.

28. BACKUP POWER SUPPLY

28.1 The licensee shall conform to any guideline or code of practice issued

by the Authority in respect of the provision of backup power supply to the service.

28.2 Unless there is backup power supply available in such manner as may be specified by the Authority to maintain continuity of the service without any deterioration in quality of the service during interruption of mains power supply on the customer's premises, to the network, or to any system or equipment delivering the service to the customer, the licensee shall not provide the service to users whose "lifeline devices" are connected to the service.

28.3 Where no backup power supply is available in such manner as described in Special Condition 28.2, the licensee is deemed to have complied with Special Condition 28.2 if –

(a) the customers have, before or upon subscription of service, confirmed that the service will not be used by lifeline users or connected with lifeline devices; and

(b) the licensee has affixed a label to the wall socket panel or any equipment installed on the customers' premises or taken other reasonable steps to remind the customers that the service is not suitable for connection to lifeline devices.

28.4 In this Special Condition, a "lifeline device" means a medical alarm or any other device for an elderly, infirm or invalid to summon assistance in the event of an emergency without having to dial manually the telephone number of the emergency service.

29. PAYMENT OF SPECTRUM UTILIZATION FEE

29.1 The licensee shall pay spectrum utilization fees for spectrum assigned to the licensee as designated by the Authority by order and at such level or according to the method of determining the spectrum utilization fee as prescribed by the Secretary by regulation. The licensee shall pay the spectrum utilization fee to the Authority during the period while this licence remains in force. If the licensee fails to make the concerned payment when due, the Authority may charge

interest on any overdue amount from the date on which the relevant amount is due until the date of actual payment (both days inclusive) at a rate determined by the Authority to compensate it for the payment being overdue.

30. PROVISION OF INFORMATION TO CUSTOMERS

30.1 Without prejudice to the other terms and conditions of this licence, the licensee shall provide or make available the following information to the customers when the services are offered –

- (a) Name of the licensee;
- (b) Licence number of the licensee under this licence;
- (c) Customer service hotline number(s);
- (d) Where applicable, the access code(s) or number(s) (including any access password) used for obtaining the services;
- (e) Instructions on how to access the services;
- (f) The tariffs under which the services are offered; and
- (g) The duration or validity period of the services offered.

31. ROLLOUT OF NETWORK

31.1 Save with the prior approval of the Authority in writing, the licensee shall comply with the network and service rollout requirement described in Schedule 8.

31.2 The licensee shall provide such information in such manner and at such times as the Authority may require to demonstrate its compliance with Special Condition 31.1.

31A. PERFORMANCE BOND FOR FREQUENCIES ASSIGNED AS SPECIFIED IN PARAGRAPH 1 OF SCHEDULE 3 FOR THE NETWORK AND SERVICE ROLLOUT REQUIREMENT

31A.1 On the date of issue of this licence, the licensee shall have provided to the Authority a duly issued performance bond in favour of the Government in Hong Kong dollars in the amount, on the Milestone and with the Deadline for Compliance stipulated in the Annexe to the performance bond appearing in Schedule 9.

31A.2 The performance bond to be submitted pursuant to Special Condition 31A.1 shall be in the form appearing in Schedule 9 with only such amendments thereto as may previously have been agreed in writing by the Authority.

31A.3 The performance bond to be submitted pursuant to Special Condition 31A.1 shall be issued by a Qualifying Bank or other surety approved in writing by the Authority. If the licensee wishes to change to a different Qualifying Bank or another surety, the licensee shall seek the prior written approval of the Authority. For the purposes of Special Condition 31A.3, “Qualifying Bank” means an institution holding a full banking licence under the Banking Ordinance (Cap. 155) whose long term issuer rating is, or is higher than:

(a) one or more of the following:

(i) Moody’s A2;

(ii) Standard & Poor’s A; or

(iii) Fitch Ratings’ A;

OR

(b) a rating of a body other than a body listed in paragraph (a) which, in the opinion of the Authority, is equivalent to one or more of the ratings listed in that paragraph.

31A.4 Notwithstanding any other conditions of this licence:

- (a) upon failure by the licensee to provide or maintain any performance bond in accordance with the foregoing provisions of this condition, the Authority may cancel or revoke this licence notwithstanding that the licensee may have embarked on its performance;
- (b) any rights of or claim by the Government under any performance bond submitted by the licensee pursuant to this condition, including any replacement thereof, shall be without prejudice to the other rights of the Authority under this licence and of the Authority, the Chief Executive in Council and the Chief Executive under the laws, regulations, guidelines and codes of practice affecting telecommunications in Hong Kong from time to time.

31A.5 The licensee shall upon demand by the Authority in writing submit proof in a form satisfactory to the Authority by a date specified by the Authority that it has complied with the Milestone by the Deadline for Compliance as specified in the Annexe to the performance bond shown in Schedule 9. In the event the licensee fails to comply with the Milestone by the Deadline for Compliance as specified in the Annexe to the performance bond, the Government may in writing demand the Qualifying Bank or other surety to satisfy and discharge the bonded sum and any other sums as specified in the performance bond.

31A.6 All references to “Government” in Special Condition 31A shall be construed as the Government of the Hong Kong Special Administrative Region as represented by the Office of the Communications Authority.

32. DISPOSAL OF ASSETS

32.1 If a licensee is (1) in a dominant position (within the meaning defined in section 2 of the Ordinance) in the relevant telecommunications market; or (2) subject to a universal service obligation specified under the Ordinance; or (3) required to pay spectrum utilization fee as

prescribed under the Ordinance for the provision of mobile or wireless carrier services under this licence, unless with the prior written consent of the Authority (which consent shall not be unreasonably withheld or delayed), the licensee shall not during the validity period of this licence dispose or agree to dispose of any interest (as determined in accordance with Special Condition 32.2) in the assets or undertaking of the licensee which, cumulatively with the value of any and all disposals or agreements to dispose of interests in those assets or undertaking prior to the disposal or agreement in question and after the date of issue of this licence, exceeds 15% as at the date of the disposal or agreement in question of the net asset value of the licensee (as determined in accordance with Special Condition 32.2).

32.2 The value of any interest or undertaking, and the net asset value, of the licensee shall be determined by a certified public accountant (practising) (being one who has the qualifications as prescribed under the Professional Accountants Ordinance (Cap. 50)) as may be nominated, or whose appointment by the licensee is agreed in writing, by the Authority.

32.3 In the event of any dispute between the Authority and the licensee as to the value of the interest, undertaking or the net asset value referred to in Special Condition 32.1, the matter shall be settled by arbitration in accordance with the provisions of the Arbitration Ordinance (Cap. 609).

32.4 For the purpose of Special Condition 32.1,

(1) where the licensee is in a dominant position in the relevant telecommunications market, the interest in the assets or undertaking of the licensee shall be the relevant interest in the assets or undertaking of the licensee in relation to its dominant position in that relevant telecommunications market;

(2) where the licensee is subject to a universal service obligation, the interest in the assets or undertaking of the licensee shall be the relevant interest in the assets or undertaking of the licensee in relation to its operation that is subject to the universal service obligation; and

- (3) where the licensee is required to pay spectrum utilization fee as prescribed under the Ordinance for the provision of mobile or wireless carrier services under this licence, the interest in the assets or undertaking of the licensee shall be the relevant interest in the assets or undertaking of the licensee in relation to its operation that is subject to the payment of spectrum utilization fee for the provision of mobile or wireless carrier services under this licence.

33. ACCESS TO BUILDINGS

- 33.1 The licensee shall not enter into any agreement, arrangement or understanding, whether legally enforceable or not, with any person, or receive any unfair advantage from a business carried on by it or any other person (whether associated or affiliated with it or not), which, in the opinion of the Authority, has or is likely to have the purpose or effect of preventing or restricting fair and non-discriminatory access to any buildings for the installation, operation or maintenance of any cables, equipment or network for the provision of service similar to the service by other operators licensed by the Authority.
- 33.2 The licensee shall comply with any guidelines or codes of practice that may from time to time be issued by the Authority for the facilitation and coordination of fair, non-discriminatory and orderly access to buildings for the installation, operation or maintenance of any cables, equipment or network for the provision of the service and other services similar to the service by other operators licensed by the Authority.
- 33.3 Without prejudice and in addition to section 18 of the Ordinance and General Condition 9, the licensee shall not, in providing, establishing, operating, adjusting, altering, replacing, removing or maintaining any telecommunications line or telecommunications installation in, over or upon any land for the purposes of this licence, obstruct, interfere with, or cause or permit damage to, any other telecommunications line or telecommunications installation, or means of telecommunications or telecommunications service or any gas or water pipe or main or any drain or sewer or any tube, casing, duct, wire or cable for the carriage

of electrical current.

34. CHANNELS WITHIN IN-BUILDING COAXIAL CABLE DISTRIBUTION SYSTEMS

- 34.1 Subject to Special Conditions 34.2, 34.3, 34.4, 34.5, 34.6 and 34.7, the service operated over the in-building coaxial cable distribution systems (“IBCCDS”) of the network shall use only such channels as may from time to time be assigned by the Authority and for such purposes and under such conditions as may be specified by the Authority by notice in writing to the licensee.
- 34.2 The licensee shall accept that regulation of the use of channels within the IBCCDS of the network by the Authority is necessary because of the limitation in the number of channels available and the existence of competing demand for the channels.
- 34.3 The Authority may at any time, by giving not less than 12 months’ notice in writing to the licensee, require it upon such date as may be specified in the notice to cease using any channel previously assigned to it to carry the service, if having given the licensee sufficient opportunities to make representations, the Authority forms the opinion that the licensee is not making efficient use of that channel.
- 34.4 The Authority may at any time, by giving not less than 12 months’ notice in writing to the licensee, require it upon such date as may be specified in the notice to vary the purposes for which and the conditions under which the channels are to be used.
- 34.5 The Authority may at any time, by giving not less than 12 months’ notice in writing to the licensee, require it upon such date as may be specified in the notice to cease using any channel previously assigned to it by the Authority to carry the service and to use such new channel at its own expenses as the Authority may assign.
- 34.6 The licensee shall comply with any notice that may from time to time be issued by the Authority under Special Condition 34.

- 34.7 The licensee shall comply with the guidelines and codes of practice issued by the Authority from time to time on the use of the IBCCDS channels.

35. INTERPRETATION

- 35.1 For the avoidance of doubt and for the purposes of these Special Conditions –

“mobile virtual network operator” or “MVNO” means the holder of a licence for provision of mobile virtual network operator services; and

“services-based operator” means the holder of a services-based operator licence.

- 35.2 Any reference to an ordinance or a regulation, whether the word is used by itself or as part of any title to an ordinance or a regulation, shall mean that ordinance or regulation for the time being in force as well as any modification or substitution of that ordinance or regulation, in whole or in part, and all subsidiary legislation, regulations, directions, codes of practice and instruments made under that ordinance or regulation and for the time being in force.

- 35.3 The singular includes the plural and vice versa.

36. SERVICE CONTRACTS AND DISPUTE RESOLUTION

- 36.1 The licensee shall comply with all codes of practice issued by the Authority from time to time in respect of the requirements to apply in the contracting of telecommunications services to end users.

- 36.2 The contracting requirements referred to in Special Condition 36.1 may include the following –

- (a) the style, format and structure of service contract documentation;
- (b) the manner of entering into and terminating service contracts;

- (c) the information to be included in or in connection with service contracts and the performance of the services;
- (d) the submission of disputes between end users and the providers of telecommunications services to independent dispute resolution, pursuant to a scheme approved by the Authority; and
- (e) other terms and conditions or provisions for the protection of the interests of end users.

36.3 Before issuing any code of practice for the purposes of Special Condition 36.1, the Authority shall carry out such consultation as is reasonable in the circumstances.

37-43. *[Repealed or reserved for special conditions specific to the incumbent mobile network operators.]*

44. REGISTRATION FOR PUBLIC WIRELESS LOCAL AREA NETWORK SERVICES

44.1 Where the licensee provides public wireless local area network services, it shall register the following information with the Authority before the commencement of services –

- (a) the location in which the radiocommunications apparatus is established or maintained; and
- (b) the frequency band employed by the radiocommunications apparatus.

44.2 The licensee shall update the registered information provided under Special Condition 37.1 before putting into effect any change to the registered details.

44.3 The licensee shall notify the Authority within one month after ceasing to provide public wireless local area network services.

45. JOINT AND SEVERAL RIGHTS AND OBLIGATIONS

- 45.1 Where this licence is held by more than one company,
- (a) Each of the companies shall hold this licence jointly and shall not be treated as holding a separate licence.
 - (b) Each of the companies holding this licence shall have the rights and duties to carry out activities permitted under this licence and shall be jointly and severally liable for any duties, obligations and liabilities imposed by this licence.
 - (c) Each of the companies holding this licence shall be jointly and severally subject to all regulations and ordinances in force from time to time.

46. GROUP COMPANIES REQUIREMENT

- 46.1 Where the licence is held by more than one company, each of the companies licensed herein shall throughout the currency of this licence remain wholly and beneficially owned within the same group of companies within the meaning of the Companies Ordinance (Cap. 622). Such requirement may upon request of the licensee be waived at the discretion of the Authority.

SCHEDULE 1

SCOPE OF THE SERVICE

1. In this licence, the “service” means public mobile radiocommunications services.
- 1.1 Public mobile radiocommunications services mean telecommunications services operating at frequencies specified in paragraph 1 of Schedule 3 to enable two-way communications between moving locations or between a moving location and a fixed point.
2. Nothing in this licence authorizes the licensee to provide any service subject to licensing under any other ordinance.
3. For the purpose of this Schedule, a “moving location” includes, without limitation, the following:
 - (a) mobile station of a customer of the service;
 - (b) mobile station of a customer of an MVNO interconnected with the network and the service; and

a “mobile station” includes any apparatus using the technology of a mobile station for a mobile customer but being installed at a fixed point.

*** End of Schedule 1 ***

SCHEDULE 2

DESCRIPTION OF NETWORK

All such telecommunications installations established, maintained, possessed or used whether owned by the licensee, leased, or otherwise acquired by the licensee for the purpose of providing the public telecommunications network services specified in Schedule 1.

*** End of Schedule 2 ***

SAMPLE

SCHEDULE 3

**TECHNICAL PARTICULARS OF RADIO STATIONS FOR
THE PROVISION OF THE SERVICE**

1. Frequencies with assignment period till 31 March 2034

- 1.1 Frequency: Transmitting and receiving frequencies assigned by the Authority for each radiocommunications installation within the following frequency bands and contained in the listing incorporated into Schedule 3 in accordance with section 8(3) of the Telecommunications Regulations (Cap. 106A):

Transmitting frequencies:

[] MHz

- 1.2 Technical Standard: For the radio interface using the transmitting frequencies by the radio stations, the licensee shall use only widely recognized standards, unless a waiver is sought from the Authority as a temporary measure. The licensee shall submit proof to the satisfaction of the Authority that the technical standard used complies with the requirement under this Schedule.

- | | |
|---------------------------------------|---------------------------------|
| 1.3 Location: |) Details are contained in the |
| 1.4 Class of emission: |) listing incorporated into |
| 1.5 Type of modulation: |) Schedule 3 in accordance with |
| 1.6 Maximum frequency tolerance: |) section 8(3) of the |
| 1.7 Maximum effective radiated power: |) Telecommunications |
| 1.8 Aerial characteristics: |) Regulations (Cap. 106A) |

Remarks for Schedule 3:

1. For the purpose of Schedule 3, the maximum permissible height of antenna above mean sea level shall be in compliance with the Hong Kong Airport (Control of Obstructions) Ordinance (Cap. 301).
2. The licensee shall comply with the standards and certification requirements as prescribed from time to time by the Authority under the Telecommunications Ordinance. The licensee shall also comply with the “Code of Practice for the Protection of Workers and Members of Public Against Non-Ionizing Radiation Hazards from Radio Transmitting Equipment” issued and as revised from time to time by the Authority.

*** End of Schedule 3 ***

SCHEDULE 4

**REGULATORY ACCOUNTING
AND INFORMATION PROVISION REQUIREMENTS**

1. Accounting information according to the practices as directed by the Authority under Special Condition 5 for each service provided under this licence or as specified by the Authority.

*** End of Schedule 4 ***

SAMPLE

SCHEDULE 5

TERMS OF DISCOUNT TO PUBLISHED TARIFFS

1. Prices of service after discount.
2. Duration of discount.
3. Duration of offer.
4. General description of promotion plan including but not limited to eligible customers and tie-in period.
5. Conditions governing premature termination.
6. Others as specified by the Authority.

*** End of Schedule 5 ***

SCHEDULE 6

**EXEMPTION FROM NOTIFICATION OF DISCOUNTS UNDER
SPECIAL CONDITION 8.1**

1. The service, the scope of which is described in Schedule 1.

*** End of Schedule 6 ***

SAMPLE

SCHEDULE 7

**DESCRIPTION OF SERVICES
REFERRED TO IN SPECIAL CONDITIONS 11 AND 12**

An internal telecommunications service

- (a) for carrying real-time voice communications (which may be integrated with other types of communications) to and from parties assigned with numbers from the numbering plan of Hong Kong as stipulated in Special Condition 4.1; and
- (b) to which customers are assigned numbers from the numbering plan of Hong Kong as stipulated in Special Condition 4.1 by the licensee.

*** End of Schedule 7 ***

SCHEDULE 8

NETWORK AND SERVICE ROLLOUT REQUIREMENT

1. For frequency spectrum specified in paragraph 1 of Schedule 3:

1.1 The licensee shall install, maintain and use equipment for the purposes of the network and the service such that –

where the scope of the service stipulated in Schedule 1 of this licence includes a mobile service, radio units shall be installed and put into use on or before a date specified below and maintained thereafter, to a minimum of –

(i) 20% of the required radio units*;	on or before 30 September 2020
(ii) 40% of the required radio units* (which for the avoidance of doubt may include the same radio units counted towards (i) above);	on or before 31 March 2022
(iii) 70% of the required radio units* (which for the avoidance of doubt may include the same radio units counted towards (ii) above); and	on or before 31 March 2023
(iv) 100% of the required radio units* (which for the avoidance of doubt may include the same radio units counted towards (iii) above).	on or before 31 March 2024

1.2 For the purpose of paragraph 1 of this Schedule, a radio unit refers to active antenna unit, antenna integrated radio, or remote radio head/unit installed at the registered address of a radio base station.

[Note: (*) Minimum number of radio units required to be installed by individual Licensees will be specified in the UCLs to be granted

to the Successful Applicants. Please see paragraph 4.8 of the *Guidelines for Submission of Applications for Assignment of Spectrum in the 26 GHz and 28 GHz Bands for Provision of Large Scale Public Mobile Services* for details.]

*** End of Schedule 8 ***

SAMPLE

SCHEDULE 9

FORM OF PERFORMANCE BOND

THIS PERFORMANCE BOND is made on [DATE]

BY:

- (1) [BANK], a banking corporation incorporated in [] [with limited liability] whose [registered office/principal place of business in Hong Kong] is at [] (the “Bank”).

IN FAVOUR OF:

- (2) **The GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION** as represented by the Office of the Communications Authority whose address is at 29th Floor, Wu Chung House, 213 Queen’s Road East, Wanchai, Hong Kong (the “Government”).

WHEREAS:

Pursuant to the “Guidelines for Submission of Applications for Assignment of Spectrum in the 26 GHz and 28 GHz Bands for Provision of Large Scale Public Mobile Services” (“Guidelines”) issued by the Authority on 21 December 2018 in exercise of the powers conferred by section 7 and section 32H of the Ordinance and all other powers enabling the Authority to issue a unified carrier licence and assign frequencies for provision of public mobile services and Special Condition 31A of the unified carrier licence to be issued to the Licensee on the date of issue (the “Licence”), the Licensee is required to provide to the Authority a performance bond issued by a Qualifying Bank, in order to secure the due performance of the Milestone set out in the Annexe by the Licensee. The Bank is a Qualifying Bank.

1. INTERPRETATION

1.1 Definitions

In this Performance Bond:

“Authority” means the Communications Authority;

“Bonded Sum” means the amount set out in the Annexe;

“Business Day” means a day other than a Saturday or Sunday on which the banks in Hong Kong are open for general business;

“Hong Kong” means the Hong Kong Special Administrative Region of the People’s Republic of China;

“Licensee” means [] at [];

“Ordinance” means the Telecommunications Ordinance (Cap. 106, Laws of Hong Kong);

“Qualifying Bank” has the meaning given to it in Special Condition 31A.3 of the Licence; and

1.2 Construction

In this Performance Bond, unless the contrary intention appears,

- (a) a provision of law is a reference to that provision as amended, extended or re-enacted;
- (b) a reference to any document shall include that document as it may be amended, novated or supplemented from time to time;
- (c) a clause is a reference to a clause of this Performance Bond;
- (d) a reference to any person shall include its successors and assigns; and

- (e) headings are for convenience only and are to be ignored in construing this Performance Bond.

2. PERFORMANCE BOND

- 2.1 In the event of default by the Licensee in respect of Deadline for Compliance with the Milestone set out in the Annexe the Bank shall upon demand made by the Government in writing and without proof or conditions satisfy and discharge without cavil or delay any part of Bonded Sum provided that the aggregate liability of the Bank under this Performance Bond in respect of the Milestone shall not exceed the Bonded Sum in respect of that Milestone set out in the Annexe.
- 2.2 The obligations under this Performance Bond constitute direct primary, irrevocable and unconditional obligations of the Bank.
- 2.3 The liability of the Bank under this Performance Bond shall reduce, on each occasion on which the Bank pays any part of the Bonded Sum to the Government, the amount of such reduction being equal to the amount paid, and the Bank shall be discharged from all further liability under this Performance Bond upon such liability being reduced to zero or the issue of the certificate of completion by the Authority of the ultimate Milestone set out in the Annexe.
- 2.4. The liability of the Bank under this Performance Bond shall cease on whichever of the following events first occurs:
 - (a) payment by the Bank of all the Bonded Sum in full to the Government; or
 - (b) issue of any certificate of completion by the Authority in respect of the Milestone set out in the Annexe.
- 2.5 This Performance Bond shall expire on [the date 120 days after the last deadline for compliance specified in the Annexe]. Any claim hereunder must be received by the Bank in writing before that date.

3. MAXIMUM LIMIT

The maximum amount for which the Bank shall be liable under this Performance Bond shall not exceed the aggregate of:

- (a) the Bonded Sum; and
- (b) the aggregate of all sums payable under clauses 4 and 7.

4. INTEREST AND COSTS

The Bank shall pay interest on the Bonded Sum from the date of demand to the date of payment in full (both dates inclusive) compounded quarterly (both before and after judgment) at 2 per cent per annum over the prime rate quoted by The Hongkong and Shanghai Banking Corporation Limited from time to time. The interest shall be payable on demand and accrue from day to day on the basis of the number of days elapsed and a 365-day year.

5. WAIVER OF DEFENCES

Subject to Clauses 2.3, 2.4 and 2.5, the liability of the Bank under this Performance Bond shall remain in full force and effect and not be prejudiced, affected, discharged, impaired or diminished by any act, omission or circumstance which, but for this clause, might prejudice, affect, discharge, impair or diminish that liability including, without limitation, and whether or not known to the Bank:

- (a) any time or waiver granted to, or release of or composition with, the Licensee or any other person;
- (b) any suspension, cancellation, revocation, withdrawal or amendment of, or variation to, the Licence (including, without limitation, extensions of time for performance) or any concession or waiver by the Authority, the Government, the Chief Executive in Council, the Chief Executive or, without limitation, any other person in respect of the Licensee's

obligations under the Licence;

- (c) any forbearance or waiver of any right, power or remedy the Authority, the Government, the Chief Executive in Council or the Chief Executive or, without limitation any other person, may have against the Licensee;
- (d) any act or omission of the Licensee pursuant to any other arrangement with the persons referred to in (c) above or with the Bank; or
- (e) the liquidation, administration, dissolution, lack of capacity or authority, or any change in the name or constitution of the Licensee or the Bank.

6. ADDITIONAL SECURITY

This Performance Bond is in addition to and not in substitution for or prejudiced by any present and future guarantee, lien or other security held by the Government as security for the obligations of the Licensee. The Government's rights, powers and remedies under this Performance Bond are in addition to and not exclusive of those provided by law.

7. NO DEDUCTIONS AND TAXES

All sums payable under this Performance Bond shall be paid in full without set-off or counter-claim and free and clear of, and without deduction of or withholding for, or on account of, any present or future taxes, duties or other charges. If any payment is subject to any tax, duty or charge, or if the Bank is required by law to make any deduction or withholding, the Bank shall pay the tax, duty or charge and shall pay to the Government any additional amounts as shall result in the Government receiving a net amount equal to the full amount which it would have received had no payment, deduction or withholding been required.

8. PAYMENTS

All payments to be made by the Bank under this Performance Bond shall be made in immediately available funds in the currency and in the manner as the Government may specify.

9. WARRANTY

The Bank warrants that this Performance Bond constitutes its legally binding obligations enforceable in accordance with its terms (subject to insolvency laws and creditors' rights generally and principles of equity) and does not conflict with any law, regulation or instrument binding on or relating to the Bank and that this Performance Bond is within its powers and has been duly authorized by it.

10. INFORMATION AND CONSENTS

The Bank shall:

- (a) supply the Government with publicly available information as to itself and (if applicable) its subsidiaries as the Government may reasonably request;
- (b) promptly obtain all official and other consents, licences and authorizations necessary or desirable for the entry into and performance of its obligations under this Performance Bond, whether or not performance has become due; and
- (c) promptly notify the Government if the Bank ceases to be a Qualifying Bank.

The Bank warrants that all consents, licences and authorizations required or desirable under existing law in accordance with this clause have been obtained.

11. NOTICES

11.1 All documents arising out of or in connection with this Performance Bond shall be served:

(a) on the Government, at 29th Floor, Wu Chung House, 213 Queen's Road East, Wanchai, Hong Kong marked for the attention of the Office of the Communications Authority; and

(b) on the Bank, at its address stated in this Performance Bond.

11.2 The Government and the Bank may change their respective nominated addresses for service of documents to another address in Hong Kong by giving not less than five Business Days' prior written notice to each other. All notices, demands and communications must be in writing.

11.3 Any notice, demand or communication sent to the Government or the Bank as provided in this clause shall be deemed to have been given, if sent by post, two Business Days after posting (and in proving delivery it shall be sufficient to provide that the notice, demand or communication was properly addressed and put in the post), if delivered by hand, at the time of delivery or, if sent by facsimile, at the time of dispatch.

12. ASSIGNMENTS

The Bank shall not assign, transfer, novate or dispose of any of its rights and obligations under this Performance Bond. The Government may assign all or any part of its rights and benefits under this Performance Bond at any time without the consent of the Licensee or the Bank.

13. REMEDIES AND WAIVERS

No delay or omission of the Government in exercising any right, power or remedy under this Performance Bond shall impair that right, power or remedy or constitute a waiver of it nor shall any single or

partial exercise of any right, power or remedy preclude any other or further exercise of it or the exercise of any other right, power or remedy. The rights, powers and remedies provided in this Performance Bond are cumulative and not exclusive of any rights, powers or remedies which the Government would otherwise have.

14. GOVERNING LAW AND FORUM

- 14.1 This Performance Bond shall be governed by laws for the time being in force in Hong Kong and the Bank agrees to submit to the non-exclusive jurisdiction of the courts of Hong Kong.
- 14.2 The Bank irrevocably appoints [] of [] as its agent for service of process in connection with proceedings in the Hong Kong Courts and agrees that any process shall be sufficiently and effectively served on it if delivered to that agent at that address, or in any other manner permitted by law. Nothing in this clause is to limit the right of the Government to take proceedings against the Bank in any other court of competent jurisdiction but this provision applies only to the extent that it does not prejudice the above agreement as to the jurisdiction of the Hong Kong Courts.
- 14.3 The Bank irrevocably and generally consents in respect of any legal action or proceedings anywhere (whether for an injunction, specific performance, damages or otherwise) arising out of or in connection with this Performance Bond to the giving of any relief or the issue of any process in connection with it including, without limitation, the making, enforcement or execution against any assets whatsoever (irrespective of their use or intended use) of any order (whether or not pre-judgment) or judgment which may be made or given there, and irrevocably and unconditionally waives, in any such action or proceedings anywhere, any immunity from that action or those proceedings, from attachment of its assets prior to judgment, other attachment of assets and from execution of judgment or other enforcement.

15. COUNTERPARTS

This Performance Bond may be executed in any number of counterparts, and this has the same effect as if the signatures on the counterparts were on a single copy of this Performance Bond.

IN WITNESS whereof this Performance Bond has been executed and delivered as a deed on the date which appears first on page 1.

THE COMMON SEAL of []
was affixed hereto
in the presence of:

Director

Director/Secretary

OR

SIGNED, SEALED AND DELIVERED)

by []
for and on behalf of and as)
lawful attorney of)
[] pursuant to a power of)
attorney dated [] given by)
[])
in the presence of:)

[Name]
[Occupation]

(Note: For verification of the above execution, where the Bank executes under its common seal, please provide a certified true copy of the Bank's Memorandum and Articles of Association containing the relevant sealing provisions; where the Bank executes under a power of attorney, please provide a certified true copy of the relevant power of attorney or the equivalent of the Bank.)

SAMPLE

Annexe

Milestone	Deadline(s) for Compliance	Bonded Sum Payable upon Default in Compliance
Where the scope of the service stipulated in Schedule 1 of the Licence includes a mobile service, the number of radio units to be installed and put into use for assignment of [] MHz of frequency spectrum shall be a minimum of -		
(i) 20% of the required radio units*;	The expiry of the first and a half year from the issue of the Licence.	25% of the total bonded sum
(ii) 40% of the required radio units* (which for the avoidance of doubt may include the same radio units counted towards (i) above);	The expiry of the third year from the issue of the Licence.	25% of the total bonded sum
(iii) 70% of the required radio units* (which for the avoidance of doubt may include the same radio units counted towards (ii) above); and	The expiry of the fourth year from the issue of the Licence.	25% of the total bonded sum
(iv) 100% of the required radio units* (which for the avoidance of doubt may include the same radio units counted towards (iii) above).	The expiry of the fifth year from the issue of the Licence.	25% of the total bonded sum
	Total	HK\$[] million [Note: The total bonded sum is equal to HK\$ 1 million times the amount of the assigned spectrum in MHz.]

[Note: (*) Minimum number of radio units required to be installed by individual Licensees will be specified in the UCLs to be granted to the Successful Applicants. Please see paragraph 4.8 of the

Guidelines for Submission of Applications for Assignment of Spectrum in the 26 GHz and 28 GHz Bands for Provision of Large Scale Public Mobile Services for details.]

*** End of Schedule 9 ***

.....
()
for Communications Authority

Date: [Date]

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Bank Accounts of the Communications Authority

1. **Bank** : Bank of China, Hong Kong Branch
Ground Floor, Wu Chung House
213 Queen's Road East
Wanchai
Hong Kong

Account Name : Office of the Communications Authority

Account Number : 012-899-1-003883-3

2. **Bank** : The Hongkong and Shanghai Banking
Corporation Limited
Hopewell Centre Branch
Shop 2A, 2nd Floor, Hopewell Centre
183 Queen's Road East
Wanchai
Hong Kong

Account Name : Office of the Communications Authority

Account Number : 004-048-203558-292

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Letter of Credit for Payment of Deposit

LETTER OF CREDIT

TO : The Communications Authority (the “**Beneficiary**”)
The Office of the Communications Authority
29th Floor, Wu Chung House
213 Queen’s Road East
Wan Chai
Hong Kong

FROM : [Name and address of issuing bank] (the “**Issuing Bank**”)

DATE : []

The Issuing Bank issues this irrevocable standby letter of credit in favour of the Beneficiary on the following terms on the application and request of [***Name of the Applicant***] pursuant to the “*Guidelines for Submission of Applications for Assignment of Spectrum in the 26 GHz and 28 GHz Bands for Provision of Large Scale Public Mobile Services*” (“**Guidelines**”) issued by the Communications Authority (“CA”) on 21 December 2018 in exercise of the powers conferred by section 7 and section 32H of the Telecommunications Ordinance (Cap. 106) and all other powers enabling the CA to consider applications for issue of Unified Carrier Licence and assignment of frequencies for provision of public mobile services.

IRREVOCABLE STANDBY LETTER OF CREDIT NO. []

DATED []

BENEFICIARY The Communications Authority

EXPIRY DATE 30 April 2019

AMOUNT OF HK\$[] million (Reference: HK\$1 million per
STANDBY LETTER MHz of spectrum apply for)
OF CREDIT

AVAILABLE Subject to the Additional Conditions below, within three (3) Business Days¹ of receipt by the Issuing Bank of the Beneficiary's certificate in the form set out below

BY Payment into the account specified by the Beneficiary

BENEFICIARY'S CERTIFICATE

TO : [] (the "Issuing Bank")

FROM : The Communications Authority (the "Beneficiary")
The Office of the Communications Authority
29th Floor, Wu Chung House
213 Queen's Road East
Wan Chai
Hong Kong

DATE : []

Irrevocable Standby Letter of Credit No. [] dated []
(the "Standby Letter of Credit")

1. We claim HK\$ [] under the Standby Letter of Credit.
2. This amount has become due and payable to us by the operation of the terms and conditions of the Guidelines.
3. We request payment from the Issuing Bank of the amount specified in paragraph 1 within three (3) Business Days after the date of this certificate to [*details of the Beneficiary's account*] in our favour.

¹ For the purposes of this Standby Letter of Credit, "Business Day" means a full day other than a Saturday or a Sunday on which banks in Hong Kong are open for general business.

SIGNED BY

.....

(name and title)

for the Beneficiary

ADDITIONAL CONDITIONS

1. The Beneficiary may make any number of demands for payment up to the Amount of this Standby Letter of Credit as reduced from time to time by the payments made by the Issuing Bank before the Expiry Date.
2. The Issuing Bank shall not be required to investigate the authenticity of any certificate presented by the Beneficiary or the Beneficiary's capacity or entitlement to make any certificate and each certificate issued by the Beneficiary of sums due shall be conclusive, save for manifest error.
3. All payments under this Standby Letter of Credit shall be made in full to the Beneficiary without any deduction or withholding (whether in respect of set off, counterclaim, duties, present or future taxes, charges or otherwise) and shall not be withheld for whatever reason. Nothing in any agreement between the Issuing Bank and any third party shall prejudice the operation of this Standby Letter of Credit.
4. The Issuing Bank may not assign or transfer all or any of its rights and obligations under this Standby Letter of Credit to another person without the prior written consent of the Beneficiary.
5. This Standby Letter of Credit is subject to the International Standby Practices 1998 (to the extent not inconsistent with the terms of this Standby Letter of Credit) and is governed by, and shall be construed in accordance with, Hong Kong Law.

SIGNED BY:

.....
(Insert name and title of first representative of the Issuing Bank)
For *(name of the Issuing Bank)*

SIGNED BY:

.....
(Insert name and title of second representative of the Issuing Bank)
For *(name of the Issuing Bank)*

[COMPANY SEAL / CHOP OF ISSUING BANK AFFIXED:] *[If required]*

(Note: For verification of the above execution, please provide a certified true copy of the relevant board resolutions, power of attorney or the equivalent of the Issuing Bank.)

Connected Company

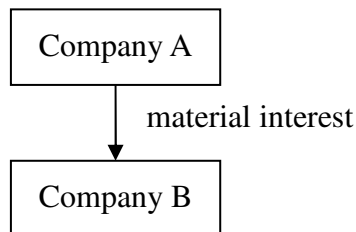
Connected Companies for Application of the Spectrum Cap

1. A connected company refers to an applicant that has a connection to another applicant.

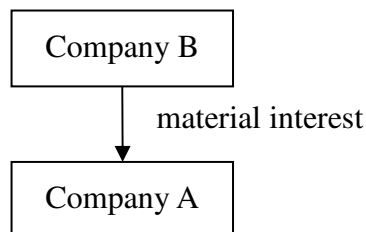
Definition of Connection

2. Connection has, for the current spectrum assignment exercise and these Guidelines, the following meaning. A company (Company A) has a connection to another company (Company B) if:

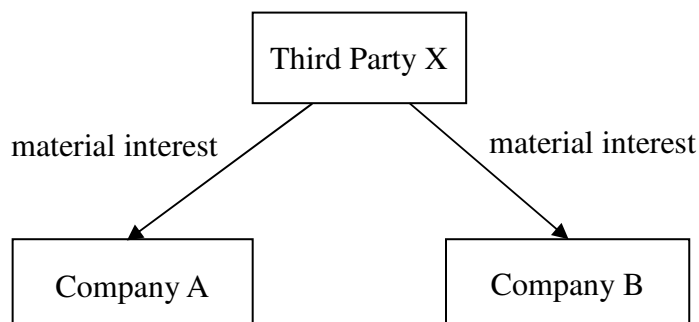
- (a) Company A holds a “material interest” in Company B; or



- (b) Company B holds a “material interest” in Company A; or

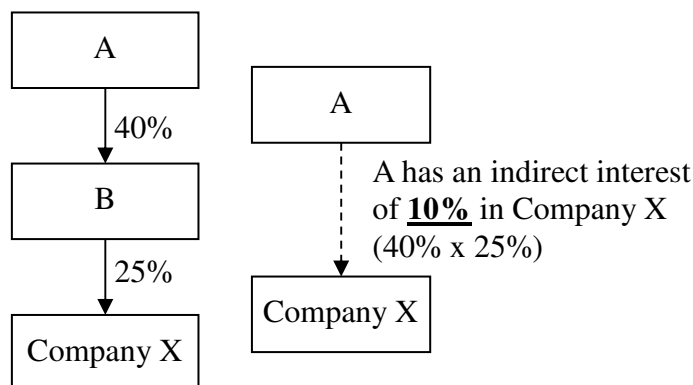


- (c) Company A and Company B are under common ownership of a third party who holds a “material interest” in both Company A and Company B.



3. A “material interest” refers to a direct or indirect interest of one of the following:
- (a) a holding of or a right to acquire or subscribe for 25% or more of the issued share capital of the body corporate;
 - (b) a holding of or a right to acquire voting power in respect of 25% or more of the issued share capital of the body corporate;
 - (c) control of the body corporate through holding of, a right to acquire or having voting power of 50% or more of the issued share capital of the body corporate, or through other means by which the affairs of the body corporate are conducted according to the wishes of the holding party.
4. Applicants should note that, indirect interest (e.g. interest held through nominees or custodians) and conditional entitlement (e.g. interest conditional on terms of a loan agreement) shall be taken into account.
5. In determining whether a person has a material interest indirectly in a body corporate, the extent of the interest of the person in the body corporate will be calculated as follows:
- (a) If there is one interposed person, the percentage is arrived at by multiplying the percentage representing the extent of the interest of the person in the interposed person by the percentage representing the extent of interest of the interposed person in the body corporate.

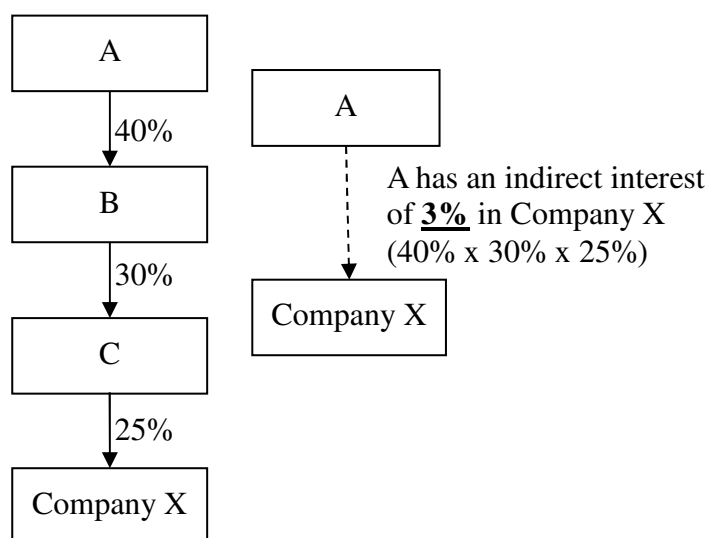
Example:



(b) If there is a series of interposed persons, the percentage is arrived at by multiplying the percentage representing the extent of the interest of the person in the first interposed person in the series by:

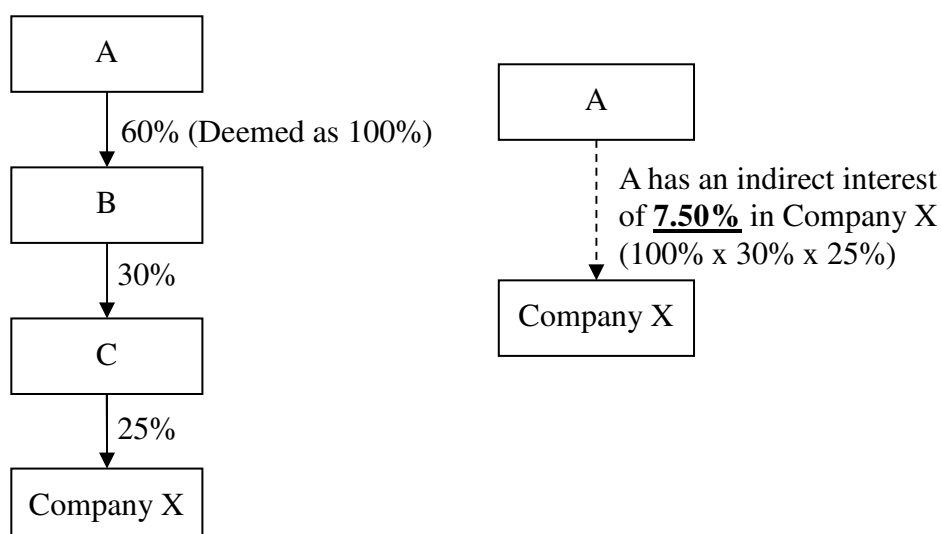
- (i) the percentage representing the extent of interest of each interposed person (other than the last interposed person) in the series in the next interposed person in the series; and
- (ii) the percentage representing the extent of the interest of the last interposed person in the series in the body corporate.

Example:



6. For any interposing interest described in paragraph 5(a)-(b) above, where such interest exceeds 50%, it shall be deemed as 100%.

Example:



STATUTORY DECLARATION ON CONNECTED COMPANY

(Note 1: The first statutory declaration on connected company is to be completed by the applicant after the CA sends a letter to each applicant with information on corporate and shareholding structure provided by other applicants pursuant to section 3.17 of the Guidelines.)

(Note 2: The second statutory declaration on connected company is to be completed by the Provisional Successful Applicant following the notification and announcement of provisional spectrum assignment results, and submitted to the CA on or before the specified deadline pursuant to section 3.20 of the Guidelines.)

I, [] of [] being [] of [] (the “Applicant”) refer to the Guidelines dated 21 December 2018 issued by the CA in exercise of the powers conferred by section 7 and section 32H of the TO and all other powers enabling it to consider applications for issue of Unified Carrier Licence and assignment of frequencies for provision of public mobile services.

I do solemnly and sincerely declare that, to the best of my knowledge, information and belief, having made all due enquiries of any person:

- (a) who holds a material interest in the Applicant,
- (b) in whom the Applicant holds a material interest, and
- (c) in whom another person who has a material interest in the Applicant also holds a material interest;

and having informed them of the relevant provisions of the TO and the Guidelines, **there is no other applicant / Provisional Successful Applicant* which is a connected company in relation to the Applicant other than as set out below nor has the Applicant nor any of the persons specified in (a) to (c) above taken any steps deliberately to arrange for, or assist in arranging, any other applicant / Provisional Successful Applicant* to be a connected company in relation to the Applicant.**

(* Please delete as appropriate.)

Connected Company

Name : []

Address/Registered office : []

Unless otherwise stated or the context otherwise requires, words and expressions used in this statutory declaration have the same meaning as that given to them in the Guidelines.

AND I make this solemn declaration conscientiously believing the same to be true and by virtue of the Oaths and Declarations Ordinance (Cap. 11, Laws of Hong Kong).

DECLARED at

Dated

Before me

(Signature and designation

i.e. Justice of the Peace/Notary Public/

Commissioner of Oaths/Solicitor)

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**Principles for Determination of Provisional Assignment of
Non-shared Spectrum to Qualified Applicants**

1. As stated in paragraphs 3.8 - 3.9 of the Guidelines, the CA may apply a two-stage spectrum distribution mechanism (“two-stage mechanism”) to determine the amount of spectrum to be offered for assignment to Qualified Applicants if the total spectrum demand in either or both of the frequency band(s) exceed(s) the available supply.
2. Set out below are some basic principles which the CA will follow as far as practicable in applying the two-stage mechanism to determine the number and location of frequency slots for assignment under different scenarios. Since there could be different combinations of demands which applicants may submit, the scenarios listed below are not meant to be exhaustive. The CA has sole discretion to deviate from these principles in spectrum assignment as it considers appropriate in order to promote efficient spectrum utilisation and for the sake of fairness.

Determination of the Number of Frequency Slots for Provisional Assignment

Scenario A: All Qualified Applicants do not indicate preference for any frequency band

3. If the total demand exceeds supply and if all Qualified Applicants do not indicate preference for any frequency band, the CA will first pool together all the frequency slots in the lower and upper bands before applying the two-stage mechanism to distribute the spectrum.

Scenario B: All Qualified Applicants indicate preference for a particular frequency band and one of the frequency bands is “packed”

4. If all Qualified Applicants indicate preference for a particular frequency band and the total demand in one band (taking the lower band as an example) exceeds the available supply (i.e. the lower band is “packed”) whereas the total demand in the other band (say the upper band) does not exceed the available supply (i.e. the upper band is “non-packed”), the CA

will first apply the two-stage mechanism to distribute the available frequency slots in the packed band. For those Qualified Applicants which have indicated in the application form their willingness to accept assignment in the alternative band if their preferred band is packed, their unsatisfied demands in the packed band will then be met by the available frequency slots in the non-packed band as far as possible.

5. If the originally non-packed band becomes packed only after the diversion of the unsatisfied demands from the packed band as stated in paragraph 4 above, the frequency slots in the originally non-packed band will first be distributed to the Qualified Applicants which indicate preference for that band, before any distribution to those Qualified Applicants whose demands are diverted from the packed band. In these circumstances, the remaining frequency slots, if any, will be used to meet the unsatisfied demands diverted from the packed band following the two-stage mechanism as necessary.

Scenario C: All Qualified Applicants indicate preference for a particular frequency band and both frequency bands are “packed”

6. If the total demand for spectrum in each of the frequency bands exceeds the available supply in the respective bands (i.e. both bands are “packed”), the CA will apply the two-stage mechanism to the two bands separately.

Scenario D: Some Qualified Applicants indicate no preference

7. If a Qualified Applicant has not indicated preference for any particular band, its demands will likely be considered in the non-packed band(s)², and the same distribution process as described in paragraphs 4 and 5 will be applied.
8. In the unlikely event that both frequency bands are packed, the demand of a Qualified Applicant which has not indicated preference for any particular band will be grouped into the band where it would have a higher chance under the two-stage mechanism to be assigned more spectrum under application. The CA will then apply the two-stage mechanism to the two frequency bands separately as in paragraph 6 above.

² The non-packed band(s) is determined based solely on the demands for which preference is indicated.

Determination of Location of Frequency Slots for Provisional Assignment

9. After determining the amount of spectrum to be offered for assignment to each Qualified Applicant, the CA will determine the frequency slots to be assigned to each of them. The objective is to, as far as possible, arrange contiguous frequency block or facilitate carrier aggregation across the lower and upper bands.
10. Based on the band plan detailed in paragraph 3.1 of the Guidelines and reproduced below, assignments may be (a) in the upper band only (i.e. comprising frequency slots from B24 to B41); (b) in the lower band only (i.e. comprising frequency slots from B1 to B23), or (c) in both the upper and lower bands. The exact frequency slots to be assigned will be determined by the CA based on the objective as stated in paragraph 9 above.

Band plan for the 26/28 GHz bands

