

GN-4/2019

**Guidelines for Application for
Public Radiocommunications Service Licence**

31 January 2019

Section I - The Licensing and Regulatory Framework In Hong Kong

Introduction

1.1 Starting from 1 April 2012, the Office of the Communications Authority (“OFCA”) serves as the executive arm of the Communications Authority (“CA”). Amongst other responsibilities, the CA regulates all forms of telecommunications, including the enforcement of the Telecommunications Ordinance (Cap. 106) (the “Ordinance”).

1.2 Under the Ordinance, no person shall operate any public telecommunications networks or services unless an appropriate licence from the CA is first obtained. The CA is empowered to issue the licences specified in section 7 to the Ordinance. These guidelines are issued pursuant to section 6D(2)(a) of the Ordinance. They indicate the manner in which the CA proposes to perform its function of determining applications for Public Radiocommunications Service (“PRS”) Licence.

The Broad Framework

1.3 In Hong Kong, public telecommunications services can be provided either by facility-based operators or service-based operators. Facility-based operators refer to operators which establish their own networks, which may cross unleased Government land and public streets, for the provision of public telecommunications services. Service-based operators refer to telecommunications service providers which rely on the fixed or mobile networks established by facility-based operators to provide their own telecommunications services¹.

1.4 Currently, the provision of facility-based public telecommunications services are mainly licensed under Unified Carrier Licence (“UCL”) and PRS Licence. Service-based operators are licensed under Services-Based Operator (“SBO”) Licence. There are also other types of licences which permit a licensee to establish the kind of facilities or services which may overlap with those allowed under the said licences. Brief descriptions of the licensing regimes and examples of services provided under UCL, PRS Licence, SBO Licence and other licences are given as follows.

Unified Carrier Licensing Regime

1.5 The unified carrier licensing regime has been implemented starting from 1 August 2008. The UCL is now the only carrier licence to be issued for the provision

¹ “Service-based operators” may establish and maintain facilities such as switches, routers, servers within buildings and leased land for the provision of public telecommunications services.

of the facility-based fixed, mobile and/or converged services. Please refer to “Guidelines for the Submission of Proposals for Applying Unified Carrier Licence” which is published at <https://www.coms-auth.hk/en/licensing/telecommunications/apply/index.html> for more details of unified carrier licensing regime.

Public Radiocommunications Services Licensing Regime

1.6 Public radiocommunications services outside the scope of the UCL may be operated by service providers on a competitive basis under PRS Licences granted by the CA. As radiocommunications services require the assignment of radiog frequencies, PRS Licence can be granted only when the required radio spectrum is available.

1.7 Services which may be authorized under the PRS Licence include the following five categories of services:

- 1.7.1 Radio paging;
- 1.7.2 Community repeater (trunked radio) services operating in the VHF (Band III) or 800 MHz band,
- 1.7.3 Vehicle location information services;
- 1.7.4 One-way data message services; and
- 1.7.5 Public mobile radio data services.

1.8 With regard to the licensing arrangement, licensing criteria and application procedure for a PRS Licence, please refer to Section II to IV of this guideline.

Service-based Operators Licensing Regime

1.9 Service-based operators are generally licensed under the SBO Licence. For the provision of local voice telephony services, a two-class (Class 1 and Class 2) licensing approach is adopted. In brief, Class 1 services are those services that have all the attributes of the conventional telephone services and are required to fulfil the licence conditions of carrier licences, or the equivalent licence conditions contained in the SBO Licence. Class 2 services are those services that do not have all the attributes of the conventional telephone services and are only subject to minimal licensing conditions with the main purpose to protect consumer interests and safeguard fair competition. Other local voice telephony services which do not fall within the descriptions of Class 1 or Class 2 services (e.g. those services which do not require the use of Hong Kong telephone numbers) may also be provided under the SBO Licence but they will not be subject to the licence conditions governing Class 1 or Class 2 services.

1.10 On 19 October 2009, a new Class 3 type of service under the SBO Licence was created to replace the Public Non-Exclusive Telecommunications Services (“PNETS”) Licence. Class 3 services which may be authorized under the SBO Licence include the following categories of services:

- 1.10.1 External telecommunications service (“ETS”);
- 1.10.2 International value-added network service (“IVANS”);
- 1.10.3 Mobile virtual network operator (“MVNO”) service;
- 1.10.4 Private payphone service;
- 1.10.5 Public radio communications relay service (“Radio Relay”);
- 1.10.6 Security and fire alarm signals transmission service (“Security & Alarm”);
- 1.10.7 Teleconferencing service; and
- 1.10.8 Mobile communications service on board an aircraft (“MCA service”).

1.11 For more details of service-based operators licensing regime, please refer to “Guidelines for the Application of Services-Based Operator Licence” which is published at <https://www.coms-auth.hk/en/licensing/telecommunications/apply/index.html>.

Other Licences

1.12 It should be noted that other types of licences may permit a licensee to establish the kind of facilities or services which may overlap with those allowed under a UCL, PRS Licence or SBO Licence. The form and licence conditions of these licences are determined by the CA. Some of the other licences are listed below –

- 1.12.1 The Self-Provided External Telecommunications System (“SPETS”) Licence allows the self-provision of external circuits for the transmission and reception of telecommunications messages is permitted;
- 1.12.2 The Satellite Master Antenna Television (“SMATV”) Licence allows the licensees to receive telecommunications signals from satellites;
- 1.12.3 The Class Licence for In-building Telecommunications Systems allows the operation of in-building telecommunications systems to provide intra-building telecommunications and broadcasting (conveyance) services and access to public telecommunications services in Hong

Kong; and
1.12.4 The Wireless Internet of Things Licence

Section II - Licensing Arrangement

Provision of Public Radiocommunications Services

2.1 For the provision of public radiocommunications services, the operator may apply for a PRS Licence. As radiocommunications services require the assignment of radio frequencies, no licence can be granted unless the required radio spectrum is available.

2.2 At present, interested parties may file applications at any time with the CA for licences to operate the following types of public radiocommunications services:

2.2.1 Radio paging;

2.2.2 Community repeater (trunked radio) services operating in the VHF (Band III) or 800 MHz band;

2.2.3 Vehicle location information services;

2.2.4 One-way data message services; and

2.2.5 Public mobile radio data services.

2.3 The licence will be based on a PRS Licence provided for the form of which is published in the Gazette by the CA. The PRS Licence will be valid for 10 years and, subject to the discretion of the CA, may be extended for a further period of up to 3 years.

2.4 The annual licence fee payable on the grant and on anniversary of the grant of a PRS Licence in each year while the licence remains in force shall be the sum of:

2.4.1 For public radio paging services licensed under the PRS Licence –

2.4.1.1	for the 1st to the 50th base station installed for the service	\$1,000 per base station
2.4.1.2	for the 51st to the 100th base station installed for the service	\$500 per base station
2.4.1.3	for the 101st base station installed for the service and any additional base stations	\$100 per base station
2.4.1.4	for each 100 mobile stations or less used by customers of the service	\$500

2.4.1.5	for every 1 kHz of spectrum assigned to the licensee	\$50
2.4.1.6	for every subscriber number in the Hong Kong Numbering Plan allocated to the licensee	\$3
2.4.2 For other services licensed under the PRS Licence –		
2.4.2.1	for the 1st to the 50th base station installed for the service	\$1,000 per base station
2.4.2.2	for the 51st to the 100th base station installed for the service	\$500 per base station
2.4.2.3	for the 101st base station installed for the service and any additional base stations	\$100 per base station
2.4.2.4	for the 1st 200 mobile stations or less used by customers of the service	\$3,600
2.4.2.5	for every additional 100 mobile stations or less used by customers of the service	\$1,800
2.4.2.6	for every 1 kHz of spectrum assigned to the licensee	\$50

2.5 For the purpose of determining the fees payable, the number of stations and the width of the spectrum assigned shall be those authorised or in service at the time when the licence is granted or on the anniversary of the grant.

Section III - Licensing Criteria

3.1 General Criteria

- 3.1.1 For each type of public radiocommunications service, specific technical criteria must be complied with (e.g. frequency band of operation, channel width, etc.).
- 3.1.2 The service proposed in the application must be technically sound and compatible with the local environment. This includes the expertise required in the operation and maintenance of the system. Previous experience of the applicant in operating similar services will be taken into account.
- 3.1.3 The applicant must have the financial capability and willingness to invest sufficient capital to provide a satisfactory public service.
- 3.1.4 The proposed service and facilities will be expected to comply with the relevant international Radio Regulations, ITU-R/ITU-T Recommendations except as specifically agreed otherwise by the CA.
- 3.1.5 The equipment to be used shall be type-approved or type-accepted by the CA.
- 3.1.6 The proposed system shall not make use of any hill-top sites under Government Private Treaty Grants.
- 3.1.7 If interconnection with other public telecommunications networks/services is required, the equipment of the proposed service shall meet the technical specifications for interconnection with such networks/services as specified by the CA.
- 3.1.8 The proposed service shall not carry unsolicited advertisements or entertainment materials.
- 3.1.9 The successful applicant must establish the service in accordance with the application within the period specified by the CA after a frequency has been assigned to him.

3.2 General Criteria for the Application for PRS Licence for the Provision of Public Radio Paging Services

- 3.2.1 In addition to the general criteria listed in paragraph 3.1, applicants who apply for PRS Licence for the provision of public radio paging services should also observe the criteria in paragraph 3.2.
- 3.2.2 The service proposed in the application shall be a public radio paging service for territory-wide coverage.
- 3.2.3 A licence will only be granted to an applicant who has a genuine intention to operate a service meeting prescribed criteria before a specified target date. The successful applicant will be assigned a frequency and he must establish the service in accordance with the application within a year otherwise the frequency assignment will be withdrawn and a licence will not be granted.
- 3.2.4 The service may be used to transmit financial and other information to subscribers.
- 3.2.5 The service may not transmit over the radio channels voice messages in any form.
- 3.2.6 The service may employ operators for the transmission of paging messages, or alternatively, it may be connected to the Public Switched Telephone Network for direct input of the paging messages by the callers.
- 3.2.7 The service shall use a commonly adopted encoding format which enables paging receivers of different makes to be accepted into the service. The service shall be provided, on a non-discriminatory basis, to all paging receivers which conform to specifications stipulated by the CA regardless of whether the receivers are purchased from the service operator or not.
- 3.2.8 The system providing the service shall meet the following technical specifications:
- 3.2.8.1 The operating frequency band shall be 172-173 MHz or 279-281 MHz.
- 3.2.8.2 The channel spacing shall be 25 kHz.
- 3.2.8.3 The maximum permissible effective radiated power shall be 25W (for 172-173 MHz) or 100W (for 279-281 MHz).

3.2.8.4 The service shall cover at least 90% of the populated areas of Hong Kong.

3.2.8.5 To minimize as far as practicable the overloading of mobile radio and paging receivers by the near field of the paging transmitters, the transmitting aerials shall be so designed as to reduce excessive field strength at locations close to the aerials and at large negative elevation angles from the aerials.

3.3 Information that has to be included in the application

3.3.1 Company Structure and Financial Capability

3.3.1.1 Details of the company which wishes to establish and operate the proposed service, including information on the corporate structure of the company.

The following documentary evidence should be provided:

- (a) a copy of the Certificate of Incorporation;
- (b) a certified list of directors or a copy of “Form D1 -- Notification of first secretary and directors” and, where applicable, a copy of “Form D2 -- Notification of changes of secretary and directors” issued by the Registrar of Companies;
- (c) a copy of the Business Registration Certificate; and
- (d) documents showing the authorised, issued and paid-up share capital and the current share holding structure of the company, e.g. “Form AR1 -- Annual Return” or “Form SC1 -- Return of allotments”.

3.3.1.2 If the applicant is an established company, a copy of its audited profit and loss accounts and balance sheets for the last three years.

3.3.1.3 If the applicant is a newly-formed company, directors' certificate of the amount of issued and paid-up share capital together with bankers' confirmation of the amount of its deposits and/or available credit facilities, and copies of audited accounts for the last three years of the company's shareholders, if any.

3.3.1.4 A budgeted profit and loss statement for the proposed service for the first five years' operation, with estimated number of subscribers, planned system capacity, the breakdown of initial capital investment, level of charges and estimated annual revenue and operating costs.

3.3.1.5 Sufficient documentary evidence to prove that the applicant has the financial capability to meet the capital investment required in the financial plan.

3.3.2 Description of the Service

A detailed description of the service to be provided, including any special operational features available.

3.3.3 Technical Details of the System

3.3.3.1 A description of the system to be installed, including system configuration, proposed transmitter locations, coverage, designed grade of service, response time, etc.

3.3.3.2 The immediate and projected number of channels required, including a 5-year forecast of usage. The applicant should provide sufficient reasons to satisfy the CA that the number of channels requested are justified.

3.3.3.3 Channel capacity calculations, including, if applicable, the estimated allocation of air-time for the various components of the service.

3.3.3.4 Specifications of the radio transmitting/receiving equipment :

(a) functional specifications

(b) coding format

(c) others -

(i) modulation and emission type

(ii) occupied bandwidth

(iii) operating band

- (iv) transmitter power
- (v) harmonics and spurious output level
- (vi) antenna characteristics

3.3.3.5 Description, where applicable, of the arrangements for interconnection with other public telecommunications networks/services.

3.3.3.6 Relevant specifications and equipment brochures and catalogues.

3.3.4 Technical Support

Technical support facilities in Hong Kong, including a description of the technical personnel responsible for the day-to-day operation and maintenance of the facilities and the routine maintenance procedure.

3.3.5 Previous Experience of Applicant

3.3.5.1 Previous experience in the establishment and operation of the system proposed, with details of cities or countries in which an identical or a similar system is operating, with timescales, system capacities, etc.

3.3.5.2 Experience, if any, in the Hong Kong Special Administrative Region of providing telecommunications services in general.

3.3.6 Other Information

3.3.6.1 The implementation programme, which is particularly important if it is proposed to introduce the service in stages.

3.3.6.2 Confirmation of compliance with the ITU-T/ITU-R Recommendations and other specifications or standards which are specifically relevant to the proposed service.

Section IV - Application Procedure

4.1 To assist the provision of the required information for the processing of the application, interested parties are required to complete the application form for PRS Licence OFCA A821(19) and provide the required supporting documents and information to:

Senior Regulatory Affairs Manager (Regulatory Section 22)
Office of the Communications Authority,
29/F, Wu Chung House,
213 Queen's Road East, Wanchai,
Hong Kong.

4.2 The applicant and the proposed service should meet the general criteria listed under paragraph 3.1 of Section III (the criteria listed under paragraph 3.2 should also be met if the proposed service is a public radio paging service) and the application should include a point-to-point response to the information requested under paragraph 3.3 of Section III. OFCA may request the applicant to provide additional information or clarification, if necessary.

4.3 Enquiries may be made at:

Telephone : (852) 2961 6236
Fax : (852) 2591 0316