GUIDELINES FOR THE APPLICATION FOR A SPACE STATION CARRIER LICENCE

Section 1 - Introduction

1.1 Pursuant to section 7(5) of the Telecommunications Ordinance (hereinafter "the Ordinance"), the Communications Authority (CA) may issue a Space Station Carrier Licence. The general conditions and the licence fees of such a licence are prescribed by the Telecommunications (Carrier Licences) Regulation (hereinafter "the Regulation") made under section 7(2) of the Ordinance.

1.2 These guidelines are issued under section 6D(2)(a) of the Ordinance. They indicate the manner in which the CA proposes to perform his function of determining applications for Space Station Carrier Licences, including the licensing criteria and other relevant matters which he may take into consideration.

Section 2 – Scope of Service

2.1 As defined in the Ordinance, a "Carrier Licence" means a licence issued for the establishment or maintenance of a telecommunications network for carrying communications to or from the public between fixed locations, between moving locations or between fixed locations and moving locations within Hong Kong, or between Hong Kong and places outside Hong Kong on a point-to-point, point-to-multipoint or broadcasting basis, such locations within Hong Kong being separated by unleased Government land, but does not include the licences listed in the Schedule. As defined in Telecommunications (Carrier Licences) Regulation, a "Space Station Carrier Licence" means a carrier licence issued for the licensee to establish, possess, maintain , use and operate a space station or earth station for telemetry, tracking, control and monitoring of a space object and for space radiocommunications.

2.2 The holder of a Space Station Carrier Licence is permitted to establish, maintain, possess, use and operate radiocommunication stations as follows:

(a) earth stations for telemetry, tracking and control of space objects;

(b) earth stations for monitoring space objects;

(c) space stations on board a space object for radiocommunications; and/or

(d) space stations on board a space object for telemetry, tracking and control of such space object.

Section 3 – Licensing Criteria

3.1 In deciding whether a Space Station Carrier Licence should be granted to an applicant, the CA may take into consideration the following:

3.1.1 The Applicant

The applicant for a Space Station Carrier Licence should normally be a

company registered in the Hong Kong Special Administration Region (HKSAR) under the Companies Ordinance (Cap 622).

3.1.2 Financial Capability

The applicant should possess sufficient financial capability in establishing and maintaining the operation of the satellite network. The applicant should demonstrate to the satisfaction of 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 activities to be licensed. The applicant should have sound and detailed business plans with contingency measures to face unexpected circumstances.

3.1.3 Managerial Strength

The applicant should possess the managerial strength required for the establishment and operation of satellite networks, including the procurement of satellite, procurement of launch of satellite, arrangement for insurance, coordination and registration of satellite networks in accordance with the regulations of the International Telecommunication Union (ITU), etc.

3.1.4 Technical Competence and Experience

The applicant should possess sufficient technical expertise and be experienced in the establishment and operation of satellite networks. In addition, the applicant should be familiar with the prevailing regulations of the ITU and be conversant with the rules and procedure of the Radio Regulations related to the application of satellite services.

3.1.5 Technologies Employed

The proposed satellite network to be operated by the applicant should fulfil all the technical requirements as set out in the Radio Regulations of the ITU. For the provision of Broadcasting Satellite Service using the Appendix 30 Plan of the Radio Regulations, the CA would only license satellite systems which employ digital format for service delivery.

3.1.6 Performance Bond

Where appropriate, the CA may require the applicant to pledge a performance bond before a licence is granted. The form of the performance bond, the amount of the bond and the specific milestones to be accomplished in the development of the proposed satellite network and service will be determined by the CA on a case-by-case basis.

3.1.7 Status of Frequency Coordination

With respect to the ITU satellite filings based on which the applicant develops its satellite networks, the applicant should demonstrate that the coordination with other relevant satellite networks has progressed satisfactorily to such a stage as to warrant the CA to issue a licence.

3.1.8 Implementation Schedule

Where appropriate, the CA may require that the satellite network proposed by the applicant be rolled out within a reasonable time-scale. In this situation, the applicant may be required to provide a comprehensive roll out plan taking into consideration contingencies (e.g. launch failure) and demonstrate a strong commitment to adhere to the implementation schedule (e.g. through performance bonds or other forms of assurances if necessary).

3.2 The licensing criteria as set out above are not intended to be a definitive list of criteria for assessing the applicant's proposal. They are indicative only and the CA will decide each case on its own merit.

Section 4 – Information to be Provided

4.1 To enable the CA to assess an application against the licensing criteria, the applicant should normally be required to provide the following information:

4.1.1 Company Information

Details of the company, 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 relationship with holding or related companies;

(c) certified true copies of the company's Memorandum and Articles of Association;

(d) details on the composition of the company's Board of Directors and key officers; and

(e) the organizational/management structure and staffing levels of the company and any principal contractors to be employed for the construction and maintenance of the space segment facilities and the ground segment facilities in HKSAR.

4.1.2 Financial Strength

Details to demonstrate the applicant's financial strength.

if the applicant is an established company:

(a) copies of audited profit and loss accounts and balance sheets and audit or reports for the last three full years, together with the most recently published interim results;

(b) a business and capital investment plan, including details of proposed financing structure, credit facilities and financial arrangements used by the applicant; and

(c) the level of the shareholders' support to satisfy the Government that the applicant is capable of bearing the financial risks of variations in the costs of establishment and/or maintenance of the operation of the satellite network.

if the applicant is a newly-formed company:

(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 profit and loss accounts and balance sheets and auditor reports for the last three full years, together with the most recently published interim results, of the company's shareholding companies.

4.1.3 Technical Information

The following technical information, where applicable and when appropriate:

(a) Earth stations for telemetry, tracking and control of the satellite

(i) Location (address, grid in longitude and latitude, and height above sea level)

(ii) Transmit frequencies

(iii) Receive frequencies

(iv) Designation of emission

(v) Maximum transmit power at antenna port

(vi) Polarization

(vii) Antenna characteristics:

(1) Number of antennas

(2) Size of antennas

(3) Maximum transmit antenna gain

(4) Sidelobe performance

(5) Elevation and azimuth angles of operation

(b) Earth stations for monitoring the satellite

(i) Location (address, grid in longitude and latitude, and height above sea level)

(ii) Receive frequencies

(c) Space stations on board the satellite

(i) Orbital position

(ii) Number of communications transponders

(iii) Operating bands:

(1) Uplink

(2) Downlink

(iv) Polarization

(v) Centre frequencies of transponders for uplink

(vi) Centre frequencies of transponders for downlink

(vii) Transponder bandwidth

(viii) Maximum equivalent isotropically radiated power (EIRP)

(ix) Service coverage

(d) Space stations on board the satellite for telemetry, tracking and control of the said satellite

(i) Transmit frequencies

(ii) Receive frequencies

(iii) Designation of emission

(iv) Maximum EIRP

(v) Polarization

(e) Spacecraft manufacturer

(i) Name of spacecraft manufacturer

(ii) Date of execution of contract

(iii) Contractual delivery window

(iv) Technical commitments

(f) Launch service provider

(i) Name of launch service provider

(ii) Date of execution of contract

(iii) Anticipated launch or in-orbit delivery window

(iv) Name of launch vehicle

(v) Name and location of the launch facility

(vi) Technical commitments

(g) the status of coordination with other relevant satellite networks in accordance with the ITU Radio Regulations for the frequencies used by the satellite network;

(h) technical measures to be taken to ensure proper operation of the satellite which is co-located with other satellites at the same orbital position, where

appropriate;

(i) detailed calculations of the safety zones for the following regarding the level of emissions generated by the proposed earth station(s):

(a) human being;
(b) flammable gases;
(c) electro-explosive devices,

(j) safety measures, where necessary, to be implemented to guard against the harmful emissions mentioned in (i);

(k) documentary proof that permissions from the relevant government departments have been obtained in relation to the use of land for the installation of earth stations; and

(l) details of the mitigating measures to be implemented as specified in Section 10.2 below.

4.1.4 Range of Services

A description of the ranges of telecommunications, broadcasting and any other services, which can be provided via the satellite network.

4.1.5 Technical Support

Details of technical support facilities and maintenance centres which the applicant has or intends to set up in the HKSAR, 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.

4.1.6 Previous Relevant Experience

Details on the previous experience of the applicant, its shareholders and key personnel in establishing and/or maintaining the operation of satellite networks, as well as information on the current status of these networks.

4.1.7 Implementation Plan

An implementation plan giving the timing for significant milestones of implementation, including signing of contract for manufacture of the satellite, signing of contract for launch of the satellite, completion of final satellite design, delivery of satellite to launch site, launch of satellite, in-orbit testing, readiness for provision of services and contingency plan (e.g. in case of launch failure, or failure to obtain relevant export permits for the satellite.).

4.1.8 Other Information

Any other information as may be specifically required by the CA.

Section 5 – Form of Licence

5.1 Sample copies of the Space Station Carrier Licence may be obtained by contacting the officer as specified in Section 9.3 below or by downloading from OFCA's webpage at http://www.coms-auth.hk/en/licensing/telecommunications/carrier/space_station/index.html.

Section 6 – Period of Validity

6.1 The period of validity of a Space Station Carrier Licence shall be 20 years from the day on which it is issued.

Section 7 – Licence Fee

7.1 For a Space Station Carrier Licence other than a Space Station Carrier Licence specified in 7.2 below:

(a) an initial fee of $450,000 is payable on the issue of the licence; and

(b) a fee of $150,000 is payable on the anniversary of the issue of the licence in each year while the licence remains in force.

7.2 For a Space Station Carrier Licence, which permits the licensee to establish, possess, maintain, use and operate an earth station only:

(a) an initial fee of $120,000 is payable on the issue of the licence; and

(b) a fee of $80,000 is payable on the anniversary of the issue of the licence in each year while the licence remains in force.

Section 8 – Existing Licences

8.1 Prior to the enactment of the Telecommunication (Amendment) Ordinance 2000, Space Radiocommunication Telemetry, Tracking, Control and Monitoring Station Licences (TTC&M Licence) were granted by the Chief Executive in Council under the Telecommunications Ordinance for the provision of services (or part of the services) given in Section 2 of this Guidelines. These licences will remain valid until the expiry of the licence or until the satellite is retired, whichever is earlier. Upon the expiry of the TTC&M licence and if the satellite is still in active service, the Space Station Carrier Licences will be issued to replace the TTC&M licence. Holder of a valid TTC&M Licence may also apply for a replacement by a Space Station Carrier Licence at any time if he so wishes.

Section 9 – Submission of Applications

9.1 Applications may be submitted in any format that best suits the applicants but they should include detailed information as requested in Section 4 of these Guidelines and as much documentary evidence as possible to substantiate the claims made in the applications.

9.2 The applicants should use their best endeavours to ensure that all information contained in their application and any other subsequent submissions and representations are correct and accurate in all respect, in reliance upon which the CA will consider the applications.

9.3 Applications should be submitted in duplicate under confidential cover and reach the CA at the following address:

Office of the Communications Authority
29/F., Wu Chung House
213 Queen's Road East, Wanchai
Hong Kong
(Attn.: Senior Telecommunications Engineer (Spectrum Planning 2))

Tel: +852 2961 6338
Fax: +852 2803 5113
Email: SP2@ofca.gov.hk

9.4 Receipt of applications will be acknowledged.

9.5 The applicant may be asked from time to time to provide additional information/document to clarify or supplement the applications submitted. The applicants must provide such additional information/document before the application can be further processed.

Section 10 – Other Information

10.1 While the Space Station Carrier Licence covers the operation of the radiocommunication stations on board satellites and the associated earth stations, space related activities, including the launching, procuring the launch and operation of a space object, may be subject to licensing under the Outer Space Ordinance (Cap 523). Sample copies of the Outer Space Licence are available for downloading from OFCA webpage at: https://www.ofca.gov.hk/en/industry_focus/regulations_licensing/outer_space/index.html. Enquiries about this licence should also be directed to the officer as specified in Section 9.3 above.

10.2 Commencing 1 April 2020, the 3.4 – 3.7 GHz band is allocated to mobile service and the adjacent 3.7 – 4.2 GHz band for fixed satellite service (space-to-Earth). In this regard, the applicant shall implement appropriate mitigation measures to reduce any impact on the telecommunications installations (including radiocommunications installations for, among others, telemetry, tracking and control of the space object) of earth stations operating in the 3.7 – 4.2 GHz band, including but without limitation to measures in conformance with the relevant requirements set out and issued by the Authority from time to time, for their coexistence with systems of the mobile services operating in the adjacent band.

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