

Consultation Paper on the Creation of a Class Licence for the Provision of Public Wireless Local Area Network Services under Section 7B(2) of the Telecommunications Ordinance

Issued by the Telecommunications Authority, Hong Kong

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Introduction

Under section 8(1)(b) of the Telecommunications Ordinance (the Ordinance), the possession or use of radiocommunications apparatus is subject to licensing requirement. The Ordinance also provides for an exemption mechanism to exempt the licensing requirement under defined circumstances. At present, a number of exemption orders made under the Ordinance are in place to exempt persons using various kinds of radiocommunications apparatus from obtaining a licence. The exemption orders include:

- Telecommunications (Cordless Telecommunications Apparatus) (Exemption from Licensing) Order; and
- Telecommunications (Low Power Devices) (Exemption from Licensing) Order.

2. We intend to update the exemption orders, which will be the subject of a separate legislative exercise. Our current thinking is that additional frequency allocations will be introduced to allow more choices and new types of radiocommunications apparatus to be used by the general public. The new exemption arrangement will exempt persons who possess, use, establish and/or maintain telecommunications apparatus (including radiocommunications apparatus) falling within the description of the exemption order from licensing, *so long as* they do not make use of these apparatus to provide a public telecommunications service.

3. For persons using these apparatus for the provision of public telecommunications services, there is a need to subject them to the licensing regime under the Ordinance. This is to protect consumers' interests and ensure a level playing field for all operators providing public

telecommunications services, as many of the obligations under the Ordinance (e.g. the fair competition provisions, the provision governing misleading or deceptive conduct etc.) apply only to “licensees”, but not to persons exempted from licensing,

Class Licence for the Provision of Public Wireless Local Area Network Services

4. Noting the increasing popularity of wireless local area network (wireless LAN) services, the Telecommunications Authority (TA) proposes to create a class licence to license the provision of public telecommunications services using radiocommunications apparatus the technical parameters of which fall within the exemption orders and that can be used for establishing wireless LAN. The class licence will be called “Class Licence for the Provision of Public Wireless Local Area Network Services”. No individual licence application nor approval process is required for the grant of a class licence. Operators meeting the specified eligibility criteria and condition will automatically become class licensees. This is a streamlined licensing procedure which meets the objective of protecting consumers’ interests.

5. A draft of the Class Licence is attached to this Consultation Paper in the Annex. The TA invites all interested parties to comment on his proposal.

Wireless Local Area Network

6. Wireless LAN is becoming popular to enable voice and data communications within a local area through wireless means. At present, certain frequencies (namely 2400 – 2483.5 MHz, 5150 – 5350 MHz, and 5725 – 5850 MHz) have been widely designated for establishing wireless LAN. These frequencies are intended to be included in the aforementioned exemption arrangement, so that persons using radiocommunications apparatus employing these frequencies will not be required to obtain licences so long as the apparatus are for their personal use. In the circumstances, a private wireless LAN established by these radiocommunications apparatus will not be subject to licensing requirements.

7. However, where the radiocommunications apparatus are used to establish a wireless LAN to provide public telecommunications services, the TA proposes that the operator of the *public* wireless LAN will be licensed under the Class Licence. It is intended that the services that can be provided under the Class Licence will include communications within the coverage of the wireless LAN, as well as access to and/or resale of a public telecommunications service duly licensed under a public telecommunications network or services licence. Examples of these public telecommunications services include Internet access services and external telecommunications services provided by a public non-exclusive telecommunications services (PNETS) or fixed carrier licensee¹.

8. The Schedule to the draft Class Licence describes the radiocommunications apparatus that the TA proposes to be allowed to operate under the Class Licence. The apparatus will need to meet the technical criteria on frequency band, maximum transmitter power level and spurious emission limit. Further, the apparatus will be required to comply with any type approval and labelling requirements as may be prescribed by the TA pursuant to sections 32D and / or 32E of the Ordinance.

9. As mentioned in paragraph 6, the frequency bands that the TA intends to open for establishing public wireless LAN are 2400 – 2483.5 MHz, 5150 – 5350 MHz, and 5725 – 5850 MHz. For 5150 – 5350 MHz, it is to be noted that the band 5150 – 5250 MHz is currently restricted to indoor operations in the US and Europe, in order to protect the feeder links of the mobile satellite service. The band 5250 – 5350 MHz is also limited to indoor operations in Europe. In the World Radiocommunications Conference to be held in June 2003 (WRC-2003), the International Telecommunication Union (ITU) will consider new allocations in the 5150 – 5725 MHz band for wireless access systems including wireless LAN and fixed wireless access. It remains to be seen whether the WRC-2003 may impose indoor deployment and/or other requirements for the 5150 – 5350 MHz band in view of the approach adopted by the US and Europe. Pending a decision to be made by the ITU, it is proposed that the use of 5150 – 5350 MHz band under the Class Licence will be restricted to indoor operations, until such requirements are finalised by the

¹ For the avoidance of doubt, the Class Licence does not cover the provision of the Internet access services or external telecommunications services which need to be separately licensed under PNETS or fixed carrier licences.

ITU in WRC-2003.

Class licensee

10. The TA proposes that any person who uses radiocommunications apparatus falling within the description in the Schedule to the Class Licence to provide the following public telecommunications services is a class licensee under the Class Licence:

- (a) communications within the coverage of the radiocommunications apparatus being used; and /or
- (b) access to and/or resale of a public telecommunications service duly licensed under a public telecommunications network or services licence.

11. A class licensee will be subject to the terms and conditions of the Class Licence, as well as the provisions of the Ordinance applicable to class licensees.

Scope of services

12. A class licensee will be permitted to provide public telecommunications services described in paragraph 10 above making use of the radiocommunications apparatus falling within the description of the Schedule to the Class Licence.

Licence conditions

Registration (Condition 5)

13. The TA sees merits in requiring the class licensees to register with the TA, so that he can effectively monitor the provision of public telecommunications services under the Class Licence. He therefore proposes that the class licensees should register the following information with the TA

before the establishment of business under the Class Licence:

- The name and contact details of the class licensee
- The location in which the radiocommunications apparatus are installed or established
- The frequency band employed by the radiocommunications apparatus

The class licensees will also be required to update the information provided to the TA before the registered details are changed and to notify the TA within one month if he ceases to operate any business under the Class Licence. A transitional arrangement will be provided to those who may already have established public wireless LAN services under the current exemption orders. These persons will be allowed to register with the TA within one month of the operation of the Class Licence.

14. Because of the expected low administrative cost, the TA does not propose to levy any licence or registration fee for the Class Licence for the time being. He will review the fee arrangement on a regular basis.

Interference (Condition 7)

15. The frequency bands allowed under the Class Licence are to be used on a shared basis in an uncoordinated manner. Whilst use of the radiocommunications apparatus employing these frequency bands shall not cause any harmful interference to any other authorized telecommunications apparatus or system, the apparatus shall also be required to tolerate interference from other authorized telecommunications apparatus or system sharing the bands in which the wireless LAN operates.

Not to cross public street or unleased Government land (Condition 8)

16. Wireless LAN is intended for communications within a relatively confined area such as shopping arcade, office, or university campus. It is not intended to be used to provide territory-wide services where the installations or the radio path of the apparatus cross public street or unleased Government land. A telecommunications network which is able to carry communications to or from the public between locations separated by unleased Government land

constitutes a carrier network under the ambit of a carrier licence. Under section 7B(4) of the Ordinance, a class licence cannot cover a telecommunications network, system, installation or service subject to the requirement for a carrier licence. In the circumstances, it is necessary to impose a condition in the proposed Class Licence that the licensee is not allowed to offer any public telecommunications service to customers separated from the radiocommunications apparatus operated by the licensee by any unleased Government land or public street.

Other conditions

17. Subject to the above conditions which are proposed pertaining to the nature of operation to be licensed, the TA considers that the provisions in the Ordinance that are applicable to licensees in general (including class licensees) have already provided sufficient safeguard on matters such as fair competition. The other licence conditions imposed on the Class Licence will only be the usual licence conditions providing for matters such as

- to comply with the directions, guidelines, codes of practice to be issued by the TA (Condition 4)
- to provide service in a satisfactory manner (Condition 6)
- to furnish information to the TA upon request (Condition 9)
- to ensure metering accuracy (Condition 10)
- to publish tariffs (Condition 11).

Timing

18. The TA invites any interested parties to comment on his proposal. The consultation will last until 15 September 2002. After consideration of the comments received, the TA will finalise the Class Licence. It is intended that the Class Licence and the new exemption arrangement will be in force at the same time.

Invitation of Comments

19. Views and comments on this consultation paper should reach the

Office of the Telecommunications Authority on or before 15 September 2002. Any person who submits the views and comments should be aware that the TA may publish all or any part of the views and comments received and disclose the identity of the source in such manner as the TA sees fit. Any part of the submission which is considered commercially confidential should be marked. The TA would take such markings into account in making his decision as to whether or not to disclose such information. Submissions should be addressed to

Office of the Telecommunications Authority
29/F Wu Chung House
213 Queen's Road Central
Wanchai
Hong Kong
Attention: Senior Regulatory Affairs Manager (Economic
Regulation) 3
Fax: 2803 5112
E-mail: ecchui@ofta.gov.hk

An electronic copy of the submission should be provided by e-mail to the address indicated above.

Office of the Telecommunications Authority
2 August 2002

**TELECOMMUNICATIONS ORDINANCE
(Chapter 106)**

CLASS LICENCE

**PROVISION OF PUBLIC WIRELESS
LOCAL AREA NETWORK SERVICES**

The Telecommunications Authority, in exercise of the powers conferred on him by sections 7(5) and 7B(2) of the Telecommunications Ordinance (Cap 106), issues this Licence on this [] day of [], 200[].

1. Interpretation

1.1 In this Licence –

“Authority” means the Telecommunications Authority appointed under section 5 of the Ordinance;

“Licensee” means a person licensed under Condition 2.1 of this Licence;

“Ordinance” means the Telecommunications Ordinance (Cap 106);

“radiocommunications apparatus” means the radiocommunications apparatus falling with the description of the Schedule to this Licence.

1.2 Any word or expression used in this Licence shall, unless otherwise provided, have the same meaning as it has in the Ordinance or regulations made under the Ordinance.

1.3 For the purposes of interpreting this Licence, headings and titles shall be disregarded.

2. Grant of Licence

2.1 Subject to the terms and conditions of this Licence, a person is licensed to establish, maintain, use or possess a radiocommunications apparatus specified in Schedule 1 to provide a public telecommunications service more particularly described as follows:

(a) a service that provides communications between two or more points within the radio coverage of the radiocommunications apparatus being established, maintained, used or possessed by that person; or

(b) a service that provides access to or resale of a public telecommunications service provided by a person duly licensed under a public telecommunications network or services licence.

3. General

3.1 This Licence shall not be construed as granting an exclusive right to the Licensee.

3.2 This Licence replaces any licence or any exemption from licensing, however described, which the Authority may have granted to the Licensee.

3.3 This Licence shall remain in full force unless expressly revoked by the Authority.

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 and such guidelines or Codes of Practices which may be issued by the Authority as in his opinion are suitable for the purpose of providing practical guidance on any particular aspect of any conditions of the Licence.

5. Registration

5.1 The Licensee shall register the following information with the Authority before the commencement of the provision of the public telecommunications service:

- (a) the name and contact details of the Licensee;
- (b) the location in which the radiocommunications apparatus are established or maintained; and
- (c) the frequency band employed by the radiocommunications apparatus.

5.2 The Licensee shall update the information provided under Condition 5.1 before changes to the registered details are put into effect.

5.3 Notwithstanding Condition 5.1, the Licensee shall notify the Authority within one month of his ceasing to provide public telecommunications services under the Class Licence.

6. Provision of Satisfactory Service

6.1 The Licensee shall at all times and from time to time during the subsistence of this Licence operate, maintain and provide the public telecommunications service under Condition 2.1 in a manner satisfactory to the Authority.

7. Interference and Obstruction

7.1 The Licensee shall take reasonable measures to install, establish, operate and maintain the radiocommunications apparatus in such a way as not to cause any direct or indirect harmful interference with or physical obstruction to any lawful telecommunications service, or the installation, maintenance, operation, adjustment, repair, alteration, removal or replacement of the facilities of any lawful telecommunications or utility service provider.

7.2 The Authority may give such reasonable directions as he thinks fit to avoid any direct or indirect harmful interference or physical obstruction referred to in Condition 7.1. The Licensee shall comply with the directions.

7.3 The Licensee should be aware that the bands allocated to the radiocommunications apparatus are shared with other applications in an uncoordinated manner and therefore not protected from harmful interference caused by other telecommunications installations or radio

equipment operating in accordance with the provisions of the Ordinance, or regulations or orders made under the Ordinance.

8. Installations and Radio Path not to Cross Public Street or Unleased Government Land

8.1 No wire shall be laid or maintained by the Licensee across any public street or unleased Government land.

8.2 The licensee shall not offer or provide any public telecommunications service under Condition 2.1 to a person who is separated from the radiocommunications apparatus established, maintained, used or possessed by the Licensee by unleased Government land or public street.

9. Requirement to Furnish Information to the Authority

9.1 The Licensee shall furnish to the Authority, in such manner and at such times as the Authority may request in writing, such information related to the business, including financial information, accounts and other records as the Authority may reasonably require in order to perform his functions under the Ordinance and this Licence and to ensure the Licensee's compliance with the conditions of this Licence and the Ordinance.

9.2 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 the 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.

10. Metering Accuracy

10.1 The Licensee shall take all reasonable steps to ensure that any metering equipment used in connection with the service operated under this Licence is accurate and reliable.

10.2 Upon written request of the Authority, the Licensee shall conduct tests on metering equipment 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 test or such other longer period as the Authority may determine.

11. Publication of Tariffs

11.1 The Licensee shall publish and charge no more than the tariffs for the service operated under this Licence. Publication may be effected by electronic means or by providing a copy to any person who may request it. The tariffs shall include the relevant terms and conditions for the provision of the service.

SCHEDULE 1

Radiocommunications Apparatus

Radiocommunications apparatus under this Licence refers to a radiocommunications apparatus which complies with the standards and / or certification requirements as may be prescribed by the Authority pursuant to sections 32D and / or 32E of the Ordinance and conforms to the technical criteria specified below:

(i) Interpretation

“effective radiated power (e.r.p.)”, “equivalent isotropically radiated power (e.i.r.p.)” and “spurious emission” have the meanings assigned to them respectively by Article 1 of Chapter 1 of the Radio Regulations published by the General Secretariat of the International Telecommunication Union, edition of 2001, as revised from time to time.

“modulation” has the meaning assigned to it by the Recommendation ITU-R V.662-3 “Terms and Definitions” approved by the International Telecommunication Union as revised from time to time.

“frequency hopping spread spectrum modulation” means a modulation system which hops to channel frequencies that are selected at the system hopping rate from a pseudorandomly ordered list of hopping frequencies.

“digital modulation” means the process by which the characteristics of a carrier wave are varied among a set of predetermined discrete values in accordance with a digital modulating function as specified in document ANSI C63.17-1998 published by American National Standards Institute.

(ii) Technical Criteria

The radiocommunications apparatus shall operate within the frequency bands shown in the first column of the following table and shall generate

output levels and spurious emissions no greater than the limits set out in the second column and third column respectively:

Frequency Band	Maximum Output Level	Spurious Emission Limit
2400 – 2483.5 MHz	Peak e.i.r.p. not to exceed 4 W for frequency hopping spread spectrum modulation or digital modulation systems, or aggregate e.r.p. not to exceed 100 mW for any modulation	e.r.p. not to exceed 10 μ W outside the frequency band in which the fundamental frequencies are located
5150 – 5350 MHz	200 mW e.i.r.p. using digital modulation. See also ^[1] .	e.r.p. not to exceed 10 μ W
5725 – 5850 MHz	Peak e.i.r.p. not to exceed 4 W for frequency hopping spread spectrum modulation or digital modulation systems, or aggregate e.r.p. not to exceed 100 mW for any modulation	e.r.p. not to exceed 10 μ W outside the frequency band in which the fundamental frequencies are located

^[1] Use of the band 5150 – 5350 MHz is restricted to indoor operations until the requirements of the International Telecommunication Union as applicable to the band are available, by which time the use of the band shall be in compliance with the requirements as laid down by the International Telecommunication Union.