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16 June 2008

Ms Yue Tin Po
Clerk to Panel on
Information Technology and Broadcasting
3/F, Citibank Tower
3 Garden Road
Hong Kong

Dear Ms Yue,

**Panel on Information Technology and Broadcasting
Meetings held on 16 October 2007 and 19 February 2008**

At the meeting on 16 October 2007, Members requested the Administration to provide the Panel with a plan of further improving the coverage of AM and FM broadcasting in Hong Kong. At another meeting on 19 February 2008, Members requested the Administration to provide supplementary information about criteria and policies with respect to issuing short-term permits for sound broadcasting¹ on event-specific occasions as well as the details of the radio frequencies approved for use at the Hong Kong Franklin Graham Festival held at end 2007. The following is a coordinated

¹ The system transmitting audio messages on FM frequencies for coverage of a confined and outdoor location during an event is referred to as "wireless public address system".

response from this Bureau and the Office of the Telecommunications Authority (“OFTA”).

Plan to improve sound broadcasting coverage

The three sound broadcasters, namely Radio Television Hong Kong, Hong Kong Commercial Broadcasting Company Limited and Metro Broadcast Corporation Limited, are together offering seven FM and six AM channels in Hong Kong currently. With the hilly terrain and high density of high-rise buildings, there are some areas with unsatisfactory reception in the territory. To improve the coverage of the AM and FM broadcasting services, the three broadcasters are working on a plan to install additional transposers in such areas with the details as set out in Annex A.

A

Issue of permits for wireless public address system

Under section 7E(1)(c) of the Telecommunications Ordinance (“TO”) (Cap. 106), the Telecommunications Authority (“TA”) may issue a permit to a person to establish a means of telecommunications for a period not exceeding six months in connection with an event. In the past five years, the TA has issued the following permits for the operation of wireless public address systems in the FM band (88 – 108 MHz) in connection with an event:

- (a) Rugby Sevens Tournament at the Hong Kong Stadium during the period from 26 to 30 March 2003;
- (b) Equestrian Events at the Shatin Racecourse and Beas River Jockey Club during the period from 1 to 14 August 2007; and
- (c) Franklin Graham Festival at the Hong Kong Stadium during the period from 28 November to 2 December 2007.

The TA will consider the following three broad criteria when assessing an application for such permit:

- (a) the use of the system shall not cause any interference to the existing FM broadcasting services and other legitimate radiocommunications services;
- (b) the coverage of such system shall be in a confined and outdoor location and shall not cross any public street or unleased Government land; and
- (c) the event shall be one which is infrequently held.

When considering such an application, OFTA needs to conduct on-site scanning of the whole FM band and identify the suitable FM channel(s) available for such short-term usage within the intended coverage area. OFTA will also consult the relevant bureaux/departments as appropriate. In particular, OFTA will seek comments from the Civil Aviation Department to ensure that no harmful interference will be caused to aeronautical communication channels. OFTA will also coordinate with the Mainland authorities should the intended coverage be located near the border. Normally, the processing of a permit application would require lead time of around three to six weeks. To avoid overspill of the radio signal outside the intended coverage area, OFTA would impose a radiated power restriction on the wireless public address systems. The guidelines for application for a permit under section 7E of the TO for temporary establishment, maintenance and use of such systems in the FM band is at Annex B.

Frequencies assigned for Hong Kong Franklin Graham Festival

With respect to the Franklin Graham Festival held during the period from 28 November to 2 December 2007, the application for use of the wireless public address system was submitted to OFTA in April 2007 and the permit was issued accordingly. The radio coverage was confined to the Hong Kong Stadium only. Five FM frequencies, as listed in Annex C, were assigned and the transmitting

power was limited to a maximum of 0.5 Watt (effective radiated power). We understand that the event organizer had also made use of commercial services provided by public telecommunications operators for relaying the video and audio signals from the Hong Kong Stadium to Yuen Long Stadium and Macau for use in these venues simultaneously during the event.

Yours sincerely,



(Kevin Choi)

for Secretary for Commerce and
Economic Development

c.c.

Director-General of Telecommunications (Attn: Mr. Danny Lau)

Director of Broadcasting (Attn.: Mr. K M Tai)

Plan for Improving Service Coverage of AM and FM Broadcasting

Introduction

This note provides a snapshot of the current coverage of AM and FM broadcasting services and the plan of the broadcasters in enhancing the coverage of the sound broadcasting services.

Current Situation

2. AM and FM services are being provided by three sound broadcasters, namely Radio Television Hong Kong (RTHK), Hong Kong Commercial Broadcasting Company Limited (CRHK) and Metro Broadcast Corporation Limited (Metro), and a total of 13 programme channels are provided as set out in the following table:

Sound Broadcasters	FM Programme Channels	AM Programme Channels
RTHK	RTHK 1	RTHK 3
	RTHK 2	RTHK 5
	RTHK 4	RTHK 6 Putonghua
CRHK	CR 1	CRE
	CR 2	
Metro	Metro Info	AM1044 Metro Plus
	Metro Finance	

3. The AM signals are broadcast by the transmitting stations located at Golden Hill or Peng Chau. As the indoor reception of AM signals is susceptible to degradation due to shielding by concrete walls and interference by some domestic electrical appliances, RTHK has built six additional transposers in different districts to relay their AM programmes with the use of FM frequencies. With regard to FM broadcasting, it is currently broadcast by seven hill-top transmitting stations with details of

frequencies used as set out in the **Appendix A1**. These stations provide nearly territory-wide coverage albeit there are still some areas with unsatisfactory reception arising from the undulating terrain of Hong Kong. Other than the seven main FM transposers erected at the hill-top sites by the broadcasters, Metro has also built a low power FM transposer at Red Hill to improve the coverage of its two FM programme channels in the region.

Improvement Plan

4. The Office of the Telecommunications Authority (OFTA) and the sound broadcasters receive from time to time requests for assistance / advice from the general public regarding unsatisfactory reception of AM and FM broadcasting services. In 2007, OFTA received a total of 135 cases requesting improvement of sound broadcasting coverage such as in Yuen Long, Tuen Mun and the Eastern District. With a view to addressing the public demand of better reception quality of AM and FM programmes in these areas, OFTA has liaised with the sound broadcasters for installation of additional FM transposers as depicted in the ensuing paragraphs.

FM Programme Channels

- *Kam Tin, Pat Heung and Tsing Long Highway*
The three broadcasters intend to jointly build a transposer at Hill 374 to relay all FM programme channels. A transmission trial was successfully conducted in February 2008. Subject to funding to be secured, the new transposer will be constructed and brought into service by 2010.

AM Programme Channels

- *Tuen Mun (for RTHK Putonghua channel)*
RTHK will build a FM transposer at Castle Peak for relaying its Putonghua channel in Tuen Mun. Frequency coordination with the mainland authorities has been completed. The transposer is expected to be launched in mid 2008.

- *Eastern District (for RTHK3, RTHK5 and Putonghua channels)*
RTHK will add a FM transposer for RTHK5 and relocate an existing FM transposer for Putonghua channel from Tai Hang to Mount Nicholson station for better coverage in the western part of the Eastern District (including Happy Valley, Tai Hang, etc.) Such works are planned to be completed in late 2008. RTHK is also sourcing a site for relaying RTHK3, RTHK5 and Putonghua channels in FM frequencies for the eastern part of the Eastern District (including Shaukiwan, Chai Wan and Siu Sai Wan). A knoll in Lei Yue Mun Park has been identified for further site investigation and technical assessment after which an implementation schedule will be worked out by RTHK.

Way Forward

5. The sound broadcasters are collaborating for timely implementation of the above improvement plan. OFTA will continue to assist in hill-top site coordination and assign frequencies for use by the sound broadcasters in the concerned areas.

Office of the Telecommunications Authority

May 2008

FREQUENCY TABLE FOR SOUND BROADCASTING SERVICES IN HONG KONG

BROADCASTER	STATION NAME	VHF/FM FREQUENCY (MHz)								MF/AM FREQUENCY (kHz)			
		MOUNT GOBBRI	CLLOUDY HILL	CASILE PEAK	GOLDEN HILL	LAMMA ISLAND	BEACON HILL	KOWLOON PEAK	GOLDEN HILL	HENG CHAU			
HKCB	CR1	88.1	88.3	88.6	88.9	89.1	89.2	89.5	---	---			
	CR2	90.3	90.7	91.2	90.9	91.6	91.1	92.1	---	---			
	CR6	---	---	---	---	---	---	---	---	---			
RTHK	RTHK1	92.6	93.2	93.4	92.9	93.6	93.5	94.4	---	---			
	RTHK2	94.8	95.3	96.4	95.6	96.0	96.3	96.9	---	---			
	RTHK3	---	---	---	---	---	---	---	---	---			
	RTHK4	97.6	97.8	98.7	98.4	98.2	98.1	98.9	567	---			
	RTHK5	---	---	---	---	---	---	---	---	---			
	RTHK6	---	---	---	---	---	---	---	783	---			
MB	PUTONGHUA	---	---	---	---	---	---	---	---	675			
	Metro Showbiz	99.7	100.0	100.4	101.6	102.1	100.5	101.8	---	---			
	Metro Finance	104.0	104.7	102.5	105.5	104.5	102.4	106.3	---	---			
Effective Radiated Power (kW)	AM104.1 Metro Plus	---	---	---	---	---	---	---	---	104.4			
	TRAFFIC TUNNEL	3	0.5	0.7	0.1	0.5	0.15	1	20	10			
REBROADCAST FREQUENCY	Close Harbour	Eastern Harbour	Tai's Cove	Western Harbour	Tai Lam	Lion Rock	Aberdeen	Kat Tak	Shing Mun	Tsung Kwan O	Chungking	Discovery Bay	
	FM - Mount Gough AM - Golden Hill & Peng Chau	FM - Kowloon Peak AM - Golden Hill & Peng Chau	FM - Kowloon Peak AM - Golden Hill & Peng Chau	FM - Mount Gough AM - Golden Hill & Peng Chau	FM - Golden Hill AM - Golden Hill & Peng Chau	FM - Mount Gough AM - Golden Hill & Peng Chau	FM - Mount Gough AM - Golden Hill & Peng Chau	FM - Mount Gough AM - Golden Hill & Peng Chau	FM - Mount Gough AM - Golden Hill & Peng Chau	FM - Golden Hill AM - Golden Hill & Peng Chau	FM - Kowloon Peak AM - Golden Hill & Peng Chau	FM - Mount Gough AM - Golden Hill & Peng Chau	FM - Castle Peak AM - Golden Hill & Peng Chau

Note 1: RTHK3 is also available locally at 97.9 MHz (FM, 20 W transmitter power, Mt. Nicholas), 106.8 MHz (FM, 60 W transmitter power, Chung Hon Kok), 158.4 kHz (AM, 100 W transmitter power, Chung Hon Kok) and 107.8 MHz (FM, 15 W transmitter power, Tsung Kwan O, FM, 37.5 W transmitter power, Tin Shui Wai). RTHK5 is also available locally at 106.8 MHz (FM, 10 W transmitter power, Castle Peak), 99.4 MHz (FM, 15 W transmitter power, Tsung Kwan O) and 92.3 MHz (FM, 37.5 W transmitter power, Tin Shui Wai). RTHK's Putonghua channel is also available locally at 104.9 MHz (FM, 5 W transmitter power, Tai Hang Road) and 103.3 MHz (FM, 15 W transmitter power, Tsung Kwan O, FM, 37.5 W transmitter power, Tin Shui Wai). Metro Showbiz is also available locally at 104 MHz (FM, 5 W transmitter power, Red Hill). Metro Finance is also available locally at 102.6 MHz (FM, 5 W transmitter power, Red Hill).

Note 2: All of the radio services from HKCB, RTHK and Metro are rebroadcast outside the traffic tunnels.
Legend: HKCB Hong Kong Commercial Broadcasting Co. Ltd.
RTHK Radio Television Hong Kong
MB Metro Broadcast Corporation Ltd.

OFFICE OF THE TELECOMMUNICATIONS AUTHORITY
DECEMBER 2006

Remark: the frequency table is up-to-date as in May 2008.

**Guidelines for Application for a Permit
under Section 7E of the Telecommunications Ordinance (Cap. 106)
for Temporary Establishment, Maintenance and Use
of a Wireless Public Address System in the 88 – 108 MHz Band**

Under section 7E of the Telecommunications Ordinance (Cap 106) (**Appendix B1**), the Telecommunications Authority (TA) may issue a permit to a person to carry out an activity prohibited under section 8 (**Appendix B2**) for a period not exceeding six months for the purpose of a field test, a demonstration, in connection with an event or for a purpose that the TA determines.

These guidelines are issued to provide practical guidance to persons who are interested in applying for a permit to temporarily establish, maintain and use a wireless public address system operating in the 88 – 108 MHz band for use in an event which is infrequently held. For the purpose of these guidelines, wireless public address system means a radiocommunications transmission system used to deliver audio signal for wireless reception by the participants in the event.

For the avoidance of doubt, these guidelines do not apply to the establishment, maintenance and use, etc. of the telecommunications system or radiocommunications apparatus used for sound broadcasting.

Application for the permit should be made in writing to:

Office of the Telecommunications Authority
29/F, Wu Chung House
213 Queen's Road East
Wan Chai
Hong Kong
(Attn.: Senior Telecommunications Engineer (AS)1)

The application should be submitted to the Office of the Telecommunications Authority (OFTA) at least six weeks before the

proposed use of the wireless public address system.

INFORMATION REQUIRED FROM APPLICANT

The applicant should provide the following information and documents:

- (1) A copy of the applicant's Business Registration Certificate and Certificate of Incorporation. For application in the name of an individual, please provide a copy of the relevant personal identification document.
- (2) The event where the proposed wireless public address system will be used.
- (3) The contact information of the responsible person of the proposed wireless public address system in the event that the TA may need to take the necessary remedial actions if there are reports of radio interference generated by the system.
- (4) The intended coverage area(s), which should be in a confined and outdoor location and should not cross any public street or unleased Government land.

(Note: For an indoor venue, a conventional public address system without the deployment of radiocommunications means should be a viable and simpler alternative.)

- (5) The technical proposal giving the details including but not limited to:
 - (i) a schematic diagram showing the system configuration;
 - (ii) a complete list of equipment to be used. The equipment deployed shall comply with the technical standards as specified by OFTA;
 - (iii) technical details of the transmitter and antenna to be deployed; and
 - (iv) a map showing the location of the transmitter and the antenna.

- (6) The operating hours, date and duration of the proposed wireless public address system including those for trial use before the event and for the event.
- (7) Duplicated copy of the relevant licence (e.g. Radio Dealers Licence (Unrestricted)) issued by the TA for a company or organization who will be responsible to supply, install and maintain the proposed wireless public address system.

PERIOD OF VALIDITY OF PERMIT

The period of validity shall be specified by the TA after considering the proposed operation duration. Pursuant to section 7E of the Telecommunications Ordinance, the period of validity of a permit shall not exceed six months.

FEE

Free of charge.

CONDITIONS FOR THE PERMIT

The permit shall be subject to such conditions as prescribed by the TA. The conditions may include without limitation the following:-

- (1) The applicant should operate the system on a non-commercial basis and should not promote commercially or advertise the use of the systems and its radio frequency channels. The applicant and its agents should seek the prior agreement of the TA before issuing any announcement or publicity about the operation of the system.
- (2) The applicant should not make use of the system to disseminate any message relating to business, news, propaganda and advertisement of any kind. The applicant should not use the system to relay the

programme content of any broadcasting services.

- (3) The applicant should observe any relevant laws, regulations and codes of practice, including but not limited to the following requirements.
 - (i) the installation of antenna and their supporting framework should be capable of sustaining the wind loads specified in the Hong Kong Code of Practice on Wind Effects;
 - (ii) the antenna and their supporting framework should be erected at a level below the height limit provisions of the Hong Kong Airport (Control of Obstructions) Ordinance (Cap. 301);
 - (iii) the installation work and the operation of the system shall comply with “the Code of Practice for the Protection of Workers and Members of Public Against Non-Ionizing Radiation Hazards from Radio Transmitting Equipment”; and
 - (iv) the message to be transmitted shall comply with the Control of Obscene and Indecent Articles Ordinance (Cap. 390) as well as the Prevention of Child Pornography Ordinance (Cap. 579).
- (4) The applicant should maintain and operate the system in such a manner as not to cause interference with any other means of telecommunications, comply with any direction given by the TA for the purpose of avoiding interference and disconnect or remove any part of the system which, in the opinion of the TA, is interfering or is likely to interfere with working of any other telecommunications systems.
- (5) The system must be designed and operated with the intention for sending signals for reception by the participants of the event within the coverage area(s) specified by this permit. The system must be used only at such location(s) with emissions at such frequency

channels and with such power and technical characteristics as specified in the permit.

For the avoidance of doubt, the issue of a permit for the operation of a wireless public address system shall not bind the TA to grant any licence or permit, or to assign any frequency for the future operation of the same system (or equipment thereof) or any other telecommunications systems or services by the applicant.

ENQUIRIES

Enquiries can be made by:

- (1) telephone at 2961 6333;
- (2) fax to 2803 5113;
- (3) email to wpas@ofta.gov.hk; or
- (4) mail to

Office of the Telecommunications Authority
29/F, Wu Chung House
213 Queen's Road East
Wan Chai, Hong Kong

Office of the Telecommunications Authority
June 2008

Appendix B1

Chapter: 106 Title: TELECOMMUNICATIONS ORDINANCE
Section: 7E Heading: **Permits**

- (1) The Authority may issue a permit to a person to carry out an activity prohibited under section 8 for a period not exceeding 6 months-
- (a) for the purpose of a field test;
 - (b) for the purpose of a demonstration;
 - (c) in connection with an event; or
 - (d) for a purpose that the Authority determines.
- (2) The Authority may issue a permit subject to conditions necessary or desirable for the regulation of telecommunications under this Ordinance.

Chapter: 106 Title: TELECOMMUNICATIONS ORDINANCE
Section: 8 Heading: **Prohibition of establishment and maintenance of means of telecommunications, etc., except under licence**

(1) Save under and in accordance with a licence granted by the Governor in Council² or with the appropriate licence granted or created by the Authority, no person shall in Hong Kong or on board any ship, aircraft or space object that is registered or licensed in Hong Kong-

- (a) establish or maintain any means of telecommunications; or
- (aa) offer in the course of business a telecommunications service; or
- (b) possess or use any apparatus for radiocommunications or any apparatus of any kind that generates and emits radio waves notwithstanding that the apparatus is not intended for radiocommunications; or
- (c) deal in the course of trade or business in apparatus or material for radiocommunications or in any component part of any such apparatus or in apparatus of any kind that generates and emits radio waves whether or not the apparatus is intended, or capable of being used, for radiocommunications; or
- (d) demonstrate, with a view to sale in the course of trade or business, any apparatus or material for radiocommunications.

(1A) For the purpose of subsection (1)(aa), a person is to be regarded as offering a telecommunications service if-

- (a) he makes an offer which, if accepted, would give rise to an agreement, arrangement or understanding for the provision of a telecommunications service by him or by another person with whom he has made an arrangement for the provision of the telecommunications service; or
- (b) he invites a person to make an offer of the kind referred to

² Chief Executive in Council in context.

in paragraph (a).

(2) For the avoidance of doubt, it is hereby declared that the fact that the person from whom any apparatus for telecommunications is loaned, leased or hired, or the person maintaining a means of telecommunications of which other apparatus forms part or with which other apparatus is connected, is the holder of a licence granted under this Ordinance, does not exempt the person to whom the apparatus is loaned, leased or hired, or the person maintaining, possessing or using the apparatus forming part of, or connected with, such means of telecommunications, as the case may be, from the necessity to obtain such licence or licences as may be required under this Ordinance.

(3) (Repealed)

(4) Notwithstanding anything contained in subsection (1), no licence shall be required under that subsection in respect of-

(a) any sound broadcast receiving apparatus;

(b) any material or component part of such sound broadcast receiving apparatus;

(c) any television receiver;

(d) any material or component part of a television receiver;

(e) any system which, without a change of frequency, carries from a single aerial, by wire or other material substance which does not cross a public street or unleased Government land, to outlet points in one building or in more than one building if such buildings are owned by the same person television programmes provided by any company licensed under the Broadcasting Ordinance (Cap 562); or

(f) any closed circuit television system consisting of a television transmitter unit, with or without an associated audio system, connected to reception units by wire or other material substance which does not cross a public street or unleased Government land, if-

(i) the system is operated solely for internal information or security communication purposes solely within premises occupied by the person operating the system or for private entertainment purposes in domestic premises occupied by such person; and

(ii) no advertising material is transmitted by means of the system, other than such material advertising only the goods or services sold or provided by the person operating the system or which is transmitted free of

charge by such person.

(5) Notwithstanding anything contained in subsection (1)(b), no licence shall be required for possession of radiocommunications transmitting apparatus if such apparatus is an article the import or export of which is exempted under section 9A, 9B or 9C.

**List of FM Frequencies
approved for use during Hong Kong Franklin Graham Festival**

93.1 MHz

99.3 MHz

101.4 MHz

104.4 MHz

107.6 MHz
