

**For Information**  
**14 April 2003**

**Legislative Council**  
**Panel on Information Technology and Broadcasting**  
**Mobile Phone and Television Coverage**

**Purpose**

This note informs the Panel of mobile phone and television coverage in Hong Kong.

**Background**

2. At the meeting between Members of the Legislative Council and the Yuen Long District Council on 31 October 2002, the issue of unsatisfactory mobile phone and television reception in certain areas of Yuen Long was raised. The Panel Chairman considered that the issue should be examined from a “territory-wide” perspective and requested the Government to inform the Panel of the following:

- (a) the existing regulatory framework and requirements regarding fixed line/mobile phone and television coverage;
- (b) the existing coverage of mobile phone and television services and extent of the problem of unsatisfactory reception; and
- (c) the number of complaints received and improvement measures.

## **Existing regulatory framework and requirements**

### *Fixed/mobile phone service*

3. Under the existing regulatory framework, only the incumbent of the local fixed voice telephony service is subject to the “universal coverage” requirement. Hence, PCCW-HKTC is obliged under licence conditions to provide local fixed voice telephony service throughout Hong Kong. As to mobile phone services, investment in mobile network is private sector-led and market driven. With a highly competitive mobile market of six mobile operators, it is the commercial decisions of individual mobile operators to improve mobile phone coverage and upgrade their networks with the latest mobile technology. Unlike PCCW-HKTC, mobile operators are not subject to “universal coverage” requirement as mentioned above.

### *Television service*

4. Under the existing regulatory framework, only domestic free television programme service is subject to the “universal coverage” requirement. According to section 18 of the Broadcasting Ordinance (Cap. 562), the licensees, Asia Television Limited (ATV) and Television Broadcasts Limited (TVB), are required to provide the free television service throughout Hong Kong to the satisfaction of the Broadcasting Authority (BA). The “universal coverage” requirement does not apply to domestic pay television programme service licensees. They are only required to provide the pay television service according to the coverage specified in their licences. The coverage requirement is stated in terms of the number of premises passed by the transmission network without reference to specific locations. For example, the Hong Kong Cable Television Limited (HKCTV) is required by its licence to provide service covering not less than 1.769 million premises by May 2005. There are additional requirements on the minimum number of premises-passed for different areas as set out in the Licence. The Licence further states that for the premises passed (currently about 93% of households in Hong Kong), HKCTV is required to provide service within 28 days upon request from a person occupying residential premises situated in Premises Passed by HKCTV.

## **Existing coverage and extent of the problem of unsatisfactory reception**

### *Mobile phone service*

5. Over the years, the six mobile operators have taken steps to improve coverage. As a result, Hong Kong has almost ubiquitous mobile phone coverage, which is one of the best in the world.

6. In respect of coverage in Yuen Long, the Office of the Telecommunications Authority (OFTA) conducted a survey in 2002 and revealed that the coverage in the urban area of Yuen Long was satisfactory. In some rural areas, mobile phone coverage was marginal or poor mainly due to the lack of suitable locations for the installation of mobile base stations. The difficulties in identifying suitable locations arise from terrain conditions, and objection to the installation by villagers. Despite these, the mobile operators plan to install mobile base stations in Tai Tong Tsuen with a view to improving mobile phone coverage in Yuen Long. The installation is expected to be completed by end 2003.

### *Television service*

7. Almost all households in Hong Kong can receive the services of ATV and TVB. As regards HKCTV's service, its network passed 1.976 million premises or about 93% of all the residential households as at the end of February 2003. This exceeds the licence requirement of passing 1.769 million premises by May 2005.

8. More than 98.5% of the television households in Hong Kong are able to receive ATV and TVB's services with good picture quality. Only less than 1.5% of the households have television reception problems arising from two major reasons. First, the TV signals may be blocked by high-rise buildings in the vicinity. Second, the area in question may not be served by any of the existing transposers built by the licensees. These areas are either remote (near the border for example) or with low population. The extent of such problems in different geographical areas is set out in the table at **Annex 1**.

## **Complaints and improvement measures**

### *Mobile phone service*

9. In 2002, OFTA received 15 complaints on mobile phone coverage in Hong Kong. All complaints were referred to the relevant mobile operators so that they may follow up with on-site checks and carry out service improvement works in accordance with their own business plans.

### *Television service*

#### Number of complaints

10. In 2002, OFTA received a total of 195 individual complaints about poor television reception (ATV and TVB's services) in different districts. The breakdown of the complaints in terms of geographical areas is at **Annex 2**. For HKCTV's domestic pay television programme service, OFTA received a total of 76 complaints about unavailability of cable television service.

Annex 2

#### Improvement measures

11. For domestic free television programme service, OFTA will conduct on-site investigations upon receipt of complaints. OFTA will assist complainants in solving the reception problem by adjusting the direction and location of the receiving antenna, or the installation of TV booster apparatus. The BA may require ATV and TVB to construct an additional TV transposer pursuant to the power under the licences if the population affected exceeds 2,000 persons within an area of a radius of three kilometers (the threshold). If the affected area meets the threshold, OFTA will conduct a technical feasibility study on the construction of new TV transposer to improve the quality of reception and submit its recommendation to the BA. In cases where the problem concerns an area that does not meet the threshold, OFTA may advise the affected residents to install a low-power domestic-grade transposer at their own expenses.

12. Since 1995, the BA has directed ATV and TVB to build a total of 15 television transposer stations in accordance with the recommendations submitted by OFTA. Nine of the stations are already in use while six stations are still under construction. A summary of the stations and their status is at **Annex 3**. In the longer run, we expect that the eventual launch of digital terrestrial television service will help improve television reception across the territory as digital broadcasting does not require direct-line-of-sight reception which is the case for analogue broadcasting.

13. As regards complaints on unavailability of cable TV service, upon receipt of a complaint, OFTA will conduct on-site investigation to identify whether the premises in question is passed by HKCTV's network. Out of the 76 cases, 14 cases are related to premises passed by HKCTV's network. HKCTV has confirmed that it has contacted the complainants for service provision. The remaining 62 cases are related to premises not passed by HKCTV's network and hence HKCTV has no obligation to provide service. Nonetheless, OFTA took the initiative to inform HKCTV of the demand of the television service in these premises and invited HKCTV to consider providing its service to these locations. We understand that HKCTV is contacting the concerned premises for the connection of service if technically feasible.

4 April 2003

Office of the Telecommunications Authority

## Annex 1

### Areas in Hong Kong with TV Reception Problems

Location	Estimated total population	Estimated affected population	Main Causes	Major reception problem	Status
Wanchai	69200	35500	Signals blocked by high-rise buildings	ghosting	Frequency channels are not available in these areas. Strong Multi-path signals causing ghost effect exist.
Sham Shui Po	93200	13200		ghosting	Ditto
Causeway Bay	26900	13000		ghosting	Ditto
Shau Kei Wan	53900	11400		ghosting	Ditto
Shatin villages	13600	7100		ghosting	There is no single site which can provide full coverage of Shatin villages. Strong Multi-path signals causing ghost effect exist.
Lau Fau Shan	4500	2500	Not well covered by existing transposers	Inadequate signal	Frequency channels are not available.
Tak Wah Street, Tsuen Wan	>2000	>2000	Signals blocked by high-rise buildings	Ghosting	Frequency channels are not available.
Ap Lei Chau Main Street	>2000	>2000		Ghosting	Feasibility Study for construction a transposer is being conducted
Sha Tau Kok	<2000	<2000	Not well covered by existing transposers	Inadequate signal	Technical solution recommended.
Sai Kung Country Park / Kei Ling Ha	to be confirmed	to be confirmed		Inadequate signal	No single site which can serve all the affected areas

**Annex 2**

**Number of complaints  
about television reception problems received in 2002**

<b>District</b>	<b>Number of cases</b>
Central & Western	31
Wan Chai	14
Eastern	17
Southern	10
Yau Tsim Mong	6
Sham Shui Po	3
Kowloon City	3
Wong Tai Sin	8
Kwun Tong	4
Tsuen Wan	10
Tuen Mun	5
Yuen Long	26
North	4
Tai Po	6
Sai Kung	12
Shatin	9
Kwai Ching	15
Islands	12
Total	195

### Annex 3

#### Locations of transposers endorsed by the BA since 1995

<b>Transposer Site</b>	<b>Completion Date (*Expected Date)</b>
Pokfulam Village	1996
Tui Min Hoi, Sai Kung	1996
Sham Tseng	1996
Tsing Yi	1997
Ying Pun	Mid-2003*
Yuen Long Town Centre	Mid-2003*
Tseung Kwan O Village	2001
Hang Hau Village	2002
Tuen Mun Village	2002
Tung Chung Village	Early 2003*
Fuk Hang Tsuen and Fu Tei of Tuen Mun	2001
Central & Western Districts	End 2002
Kau Wah Keng	Mid-2003*
Cheung Chau	Early 2004*
Tai Pak Tin	Early 2004*