For discussion on
14 December 2009

Legislative Council Panel on Information Technology and Broadcasting

Progress Update on the Implementation of Digital Terrestrial Television Broadcasting

Purpose

This paper provides Members an update on the latest progress of implementation of the digital terrestrial television (DTT) services including progress on network rollout, supply of receiver products in the consumer electronics market, public response and latest publicity.

DTT Network Rollout

Construction of DTT transmitting stations

2. Digital broadcasting of the free-to-air television channels in Hong Kong was launched at the end of 2007. Similar to overseas practices, the construction of the digital broadcast network in Hong Kong follows a phased programme to ensure a smooth rollout of DTT services.

3. The two domestic free television programme services licensees, namely Asia Television Limited (ATV) and Television Broadcasts Limited (TVB), have extended their DTT transmission network in accordance with the requirements under their respective licences. In this connection, two major milestones have so far been achieved by the two broadcasters, which are:

(a) construction of the principal transmitting station at Temple Hill was completed at end-2007, providing 50% initial coverage; and

(b) DTT network was extended to provide 75% coverage across the 18 districts through completion of six more transmitting stations at Castle Peak, Cloudy Hill, Golden Hill, Kowloon Peak, Lamma Island and Mount Nicholson in early August 2008, in time for most viewers to watch Beijing Olympic Games programmes through DTT.

4. On top of the above seven transmitting stations, the two broadcasters will continue to expand the digital broadcast network by phases. Construction of five more fill-in stations will be completed by the end of this year. They will serve areas with substantial populations where DTT signals are not adequate from the current seven transmitting stations. The expected digital coverage will then be extended to about 85% of the population, or an additional 700 000 people will be covered. The intended covered areas and the service launch schedule of the five fill-in stations are set out in the table below:

Transmitting Stations	Intended Covered Areas[1]	Launch Schedule
Sheung Yeung Shan	Tseung Kwan O, Sheung Yeung, Ha Yeung, Sheung Sze Wan	31 December 2009
Sai Wan Shan (Chai Wan)	Chai Wan, Siu Sai Wan	
Piper's Hill	Cheung Sha Wan, Sham Shui Po	
Brick Hill	Aberdeen, Shouson Hill, Repulse Bay, Chung Hom Kok	
Beacon Hill	Hin Tin, Tai Wai	

5. Before the formal roll-out of the fill-in stations, ATV and TVB will test the transmission signals by broadcasting the DTT services from these fill-in stations, as a "soft" launch. This will allow the broadcasters to test the transmission signals before formal roll-out of the services and the community concerned will be given an early opportunity to prepare for the upgrade of their in-building

[1] The areas listed are covered entirely or partially by the DTT signals of the respective transmitting stations.

coaxial cable distribution system (IBCCDS)[2] for the reception of DTT services.

6. There will be 17 more fill-in stations to be constructed from 2010 to 2011. The ultimate DTT coverage will be at least on par with that of the current analogue television broadcasting.

7. During the planning for these fill-in stations, the Office of the Telecommunications Authority (OFTA), together with ATV and TVB, will take the opportunity to study how best to maximise the DTT coverage and, at the same time, improve the television reception in those areas currently suffering from unsatisfactory analogue television reception.

On-line database for DTT coverage and reception

8. Since January 2008, OFTA has introduced an on-line database on its website to facilitate the public to check the current status of DTT coverage of a particular residential or commercial building. The database will be further enhanced by early 2010 to include the updated building list under the new DTT coverage and latest upgrading status of the IBCCDS of a particular building based on information obtained from the building owners or their management. The provision of the database has been well received by the general public. By mid-November 2009, there were about 430 000 visits and over 2 million DTT coverage searches of the database.

DTT Services

9. ATV and TVB have been assigned three digital multiplexes[3] to provide DTT services to the viewing public. They

[2] In-Building Coaxial Cable Distribution System (IBCCDS) is a coaxial cable system installed inside a building for distributing and relaying signals for telecommunications, broadcasting and security services.

[3] A multiplex is a digital transmission frequency channel which combines television programme materials and other data in digital form for transmission via a frequency channel. The process of combining digital signals is called multiplexing.

share one multiplex for the digital simulcast[4] of their four analogue television programmes. In addition, each broadcaster takes up one additional multiplex to provide new digital television programme channels and services.

Digital television channels

10. With the feasibility of multi-channel broadcasting for a digital multiplex over the DTT platform, the two broadcasters have introduced a greater variety of television programmes to the viewing public. The digital television services include both standard-definition television (SDTV) and high-definition television (HDTV) channels, round-the-clock news reporting channel, and a wide variety of entertainment channels originated from Hong Kong, the Mainland and Taiwan. A full list of DTT programme channels of ATV and TVB is tabulated as follows:

Channel number	Programme Channel	Programme Description
ATV		
11	Home	Digital simulcast of ATV Home Channel
12	HD Channel	A variety of programmes in HDTV format
13	TVS	A Cantonese channel originated from the Guangdong province of Mainland China
14	CTI-Asia	A Taiwanese-originated channel for the greater China region
15	CCTV 4	Satellite live feed of China Central Television (CCTV) Channel 4, an international channel originated from the Mainland
16	World	Digital simulcast of ATV World Channel

[4] Simulcast means simultaneously broadcasting the same television programme services in both digital and analogue formats.

Channel number	Programme Channel	Programme Description
TVB		
81	Jade	Digital simulcast of TVB Jade Channel
82	J2 Channel*	A variety of programmes focused on young audience
83	I News*	Programmes on news, finance and information
84	Pearl	Digital simulcast of TVB Pearl Channel
85	High Definition Jade Channel*	A variety of HDTV programme with local and overseas productions

* Interactive television service is available on these digital channels

Value-added services

11. A special feature of DTT is the possibility of introducing value-added services such as the interactive television services. TVB launched its first interactive television service in August 2008, which is now available on its three new digital television programme channels (as indicated in the table of paragraph 10). Through a DTT receiver supporting MHEG-5[5] standard, viewers can access a wide variety of information (e.g. weather forecast, news headlines, Hang Seng index, delayed quotes of individual stock prices, etc.) by pressing designated colour buttons on the remote control. The community has been generally receptive to these additional features. There are a number of DTT receivers in the market which are MHEG-5 enabled and capable of supporting the interactive services.

[5] MHEG-5 is a set of international standards relating to the presentation of multimedia information standardised by the Multimedia and Hypermedia Expert Group (MHEG). It is most commonly used as a language to describe interactive television services. Both the United Kingdom and New Zealand have adopted MHEG-5 to provide interactive services for their DTT broadcasting. In August 2008, TVB launched its interactive television service adopting MHEG-5 standard.

Supply of DTT Receivers

Voluntary labelling scheme for DTT receivers

12. In November 2007, OFTA introduced a voluntary scheme to label DTT receivers[6] capable of receiving local DTT programme channels. A register is published for the public to check the brand names and models of DTT receivers that are authorised to use the labels. As at end-November 2009, the OFTA has authorised 214 models of DTT receivers to use the "higher-tier" label, including 102 set-top boxes and 112 integrated digital TV sets (i.e., TV sets with built-in decoders).

Market supply of consumer products

13. The market for DTT receivers continues to prosper, in particular the sector of integrated digital television (iDTV) set. The variety and choice of iDTV sets keep increasing while the price is becoming more competitive. For the set-top box, the average price keeps falling at a moderate rate and is currently below $1,000. Most set-top boxes have built-in functions for digital recording and playback by connecting to an external storage device. Some come with internal storage and are packaged as personal video recorders to enhance competition in the market. Other than iDTV and set-top box, using computer accessories (e.g. TV cards and USB tuners) to receive DTT is also a popular means due to the cheaper cost of the required hardware which is down to a few hundred dollars.

14. It is anticipated that the market for DTT consumer equipment will continue to flourish with abundant supply of a wide variety of products. The competition will not just be limited to price but would also expand to cover the features, functions and performance of the DTT products, which will be to the benefit of consumers in general.

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[6] DTT receivers labelled as "basic-tier" are capable of receiving the four TV programme channels simulcast in the digital format, whereas those labelled as "higher-tier" are capable of receiving all DTT channels of both SDTV and HDTV programmes.

Public Response and Publicity

DTT take-up and public response

15. DTT continues to be well recognised and accepted by the viewing public since its launch. The digital take-up keeps growing in good pace.

16. According to the latest public survey conducted in September 2009, some 41.9% of the families in Hong Kong (representing some 960 000 television households territory-wide) receive DTT services via set-top boxes, iDTV sets and computers. Set-top box remains the major type of receivers chosen by DTT users but the rate of using iDTV to receive DTT is growing rapidly. The survey also showed that about 79% of the respondents agreed that DTT provides better picture quality and for those already receiving DTT at homes, the ratio is even higher which is up to 89% who agreed that the picture quality of DTT is better. The survey also provided information on the key drivers for switching to DTT (e.g. awareness and experience of the benefits of DTT), which would help us formulate further promotion efforts to enhance the digital take-up.

Publicity

17. We will organise publicity activities in December to tie in with the launch of five new DTT fill-in stations mentioned in paragraph 4 above. We will also publicize the new 85% DTT coverage. We will issue a joint letter with ATV and TVB to all owners incorporations as well as residents in the new areas to be covered about the extended coverage of DTT. Posters and leaflets will also be distributed to the community through the public enquiry service centres of district offices and management offices of public estates.

Website and enquiry hotline

18. The OFTA provides a hotline and e-mail service to deal with public enquiries. By mid-November 2009, the OFTA has received and responded to nearly 17 000 public enquiries about DTT since its service launch. About 60% of these enquiries are about

DTT coverage, while the others are related to IBCCDS upgrade, reception of analogue television, and reception issues of DTT receivers, etc.

19. The Government has a dedicated digital television website (www.digitaltv.gov.hk) through which regular updates and necessary information about DTT are publicised to the industry and the viewing public. A new internet portal will be launched in collaboration with Radio Television Hong Kong (RTHK) to enrich consumer education in respect of DTT. The portal is designed with user-friendly and interesting interface and aims to provide an attractive means for general consumers to acquire do-it-yourself knowledge about the preparation for and installation of appropriate consumer devices for DTT reception.

Publicity in collaboration with other Government departments and relevant organisations

20. DTT publicity and consumer education in collaboration with other Government departments and relevant organisations are also carried out. The disseminated messages cover the market situation of DTT receivers, consumer protection and alerts, misconception about DTT, and other relevant messages in response to the current development of DTT services. For example, to tackle the deceptive selling activities related to DTT set-top boxes, alerts have been posted on the OFTA's website and our digital television website since June 2008. The message was also publicised through Metro Daily and Sing Tao Daily at end-2008 and early 2009 respectively. Announcement of public interest is broadcast via radio stations to educate consumers. In May 2009, we collaborated with the Consumer Council to issue consumer alerts through the Choice magazine and the phone-in radio programme "Smart Consumer" of RTHK. The Police is also committed to tackling fraudulent activities through educating the viewing public (e.g. via the RTHK television programme "Police Magazine") as well as its enforcement action. Between January to October 2009, the Police handled a total of 84 cases and 24 suspects were arrested.[7]

[7] In November 2009, one of the arrested persons was convicted and sentenced to 8-month imprisonment.

Way forward

21. We understand that the use of analogue television is still predominant in Hong Kong. While this is slowly changing, we are not yet in a position to conclude that the analogue services should be switched off. The Government will plan carefully for the analogue switch-off taking into account actual market situation including the DTT take-up rate. In the meantime, wide publicity will be made to encourage the public to switch to DTT. The Government will work to ensure a smooth migration from analogue television to DTT.

Commerce and Economic Development Bureau
and Office of the Telecommunications Authority

December 2009