For discussion on
11 May 2009

Legislative Council Panel on Information Technology and Broadcasting

Progress Update on the Implementation of Digital Terrestrial Television Broadcasting

Purpose

Digital broadcasting of the free to air television channels in Hong Kong commenced at the end of 2007. This paper provides Members an update on the latest development of digital terrestrial television (DTT) services, including progress on network rollout, market supply of consumer products, public response so far and further action ahead.

DTT Network Rollout

Construction of DTT transmitting stations

2. The two domestic free television programme services licensees, namely Asia Television Limited (ATV) and Television Broadcasts Limited (TVB), are responsible for constructing the DTT transmission network under their respective licences.

3. Similar to overseas practice, the construction of the DTT network in Hong Kong follows a phased programme to ensure a smooth rollout that does not cause any interruption to the analogue service. In this connection, the two broadcasters have now achieved two major milestones:

(a) constructing the principal transmitting station at Temple Hill which provides about 50% initial coverage in end-2007; and

(b) expanding the network coverage to 75% through six more transmitting stations at Castle Peak, Cloudy Hill, Golden Hill, Kowloon Peak, Lamma Island and Mount Nicholson respectively in early August 2008.

4. After launching the seven transmitting stations, the two broadcasters will continue to expand the digital network in phases. Between 2009 and 2011, 22 more fill-in stations are to be built, of which five will be completed within this year. The ultimate DTT coverage will be at least on a par with that of the existing analogue television broadcasting.

5. The five fill-in stations to be constructed by the end of this year are set out in the table below. They will serve areas with substantial populations whereby DTT signals cannot be well received through the current seven transmitting stations. The overall digital coverage will be extended to about 85% of the population, or an additional 700 000 people, by end-2009. The respective planning and construction work is underway.

Transmitting Stations	Covered Areas
Sheung Yeung Shan	Tseung Kwan O, Sheung Yeung, Ha Yeung, Sheung Sze Wan
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

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

On-line database for DTT coverage and reception

7. In order to facilitate the public to check the current status

of DTT coverage of a particular residential or commercial premises, the OFTA launched an on-line database in January 2008. The database was further enhanced in July 2008 to include the latest upgrading status of the in-building coaxial cable distribution system (IBCCDS)[1] of a particular building (referred to as "DTT-ready building") based on information obtained from the building owners or their management. The database has been well received by the general public. By mid-April 2009, there were about 391 700 visits and 1.94 million DTT coverage searches of the database. As at mid-March 2009, there are a total of 6 675 DTT-ready buildings recorded on the database, which is based on the response of the survey for about 30 000 buildings conducted by the OFTA. The OFTA will conduct further surveys to update the database upon completion of new transmitting stations in phases, tentatively in early 2010.

DTT Services

8. According to our policy framework endorsed in 2004, the two broadcasters have been assigned three digital multiplexes[2] to provide DTT services to the viewing public. ATV and TVB share one multiplex to simulcast[3] their four analogue television programmes. In addition, each broadcaster takes up one additional multiplex to provide new DTT channels.

Digital channels

9. Since the launch of DTT services, the two broadcasters have been striving to introduce a new variety of programmes to Hong

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1 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.

2 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 digital combination of the signals is called multiplexing.

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

Kong viewers. On top of a round-the-clock high-definition television (HDTV) channel introduced since the kick-start in end-2007, TVB has also introduced two new standard-definition television (SDTV) channels, one targeting the younger generation in June 2008, and a 24-hour interactive news channel in January 2009. On the other hand, ATV has also re-arranged its programming strategy in April 2009 with the provision of a combination of HDTV and SDTV channels originated from Hong Kong, the Mainland and Taiwan, and they will launch an SDTV infotainment channel featuring mainly Hong Kong originated programmes in July 2009.

10. A full channel list of ATV and TVB is as follows:

Channel number	Programme Channel	Programme Description
ATV		
11	Home	Digital simulcast of ATV Home Channel
12	HD aTV	A variety of programmes in HDTV format
13	Infotainment channel (to be launched in July 2009)	Featuring mainly Hong Kong originated infotainment programmes
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
TVB		
81	Jade	Digital simulcast of TVB Jade Channel
82	J2	A variety of programmes focused on young audience
83	iNews	Programmes on news, finance and information
84	Pearl	Digital simulcast of TVB Pearl

Channel number	Programme Channel	Programme Description
		Channel
85	High Definition Jade	A variety of HDTV programme with local and overseas productions

Value-added services

11. On top of general programming, DTT also offers opportunities to introduce new interactive services. In order to facilitate and support the industry to develop interactive television services over the DTT platform, the Hong Kong Applied Science and Technology Research Institute Company Limited (ASTRI), the Hong Kong Science and Technology Parks Corporation (HKSTP) and TVB have joined hands to develop the localised version of MHEG-5 standard [4] which is capable of supporting traditional Chinese characters.

12. Since August 2008, TVB has launched an interactive television service on its new digital channels, whereby viewers can access information on weather, news headlines, Hang Seng index, delayed quotes of individual stock prices, etc. by pressing designated colour button on the remote control of an MHEG-5 enabled DTT receiver. The market is generally receptive and most popular brands of DTT receivers are capable of supporting the interactive services provided by TVB.

Supply of DTT Receivers

Voluntary labelling scheme for DTT receivers

[4] MHEG-5 is part of 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.

13. To facilitate consumers to make an informed choice when purchasing DTT receivers, the OFTA introduced in November 2007 a voluntary scheme to label DTT receivers[5] 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.

14. As of April 2009, the OFTA has authorised 158 models of DTT receivers to use the "higher-tier" label, including 89 set-top boxes and 69 integrated digital TV sets (i.e., TV sets with built-in decoders).

Situation of consumer market

15. The market for DTT receivers is flourishing and functionality as well as ease of use are the main selling points. Set-top boxes now often contain or allow for storage to serve as personal video recorders for digital recording and playback. Integrated digital TV sets, with at least 15 different brands including some popular overseas brand names, allow viewers to receive DTT programmes without the need to connect to additional set-top boxes. The current price of a typical set-top box has dropped to the range of about $900 to $1,500, while that for an integrated digital TV set is also becoming more and more competitive when compared to that for an ordinary stand-alone flat-panel TV set. Using computer accessories (e.g. TV cards and USB tuners) is also a popular means to receive DTT. The price of tuners for connecting to computers ranges from $300 to $500.

16. We expect that the overall prices of DTT receivers will continue to fall and become more attractive to consumers, just like any other consumer electronics products under a free market environment.

Public Response and Publicity

[5] 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.

DTT take-up

17. DTT has been well recognised and accepted by the viewing public since its launch. The digital take-up grows as the DTT coverage extended. The Beijing Olympics last August helped significantly to boost the take-up as viewers could enjoy a brand new audio-visual experience when watching the games on DTT.

18. According to the public survey conducted in March 2009, about one-third of the families in Hong Kong (some 769 000 out of 2.2 million TV households territory-wide) receive DTT services via set-top boxes, integrated TV sets and computers. Set-top boxes remain the main form of receivers used for DTT services.

Publicity

19. We have been rolling out a series of promotion and publicity programmes for DTT, including announcements of public interest (APIs) via television and radio, leaflets and posters distributed via the district offices, public estates and consumer electronics retail outlets. In 2008, we conducted briefings on DTT for all 18 District Councils and responded to local enquiries and concerns. In summer 2008, we distributed educational kits targeting students to about 1 000 schools.

20. We will continue with the DTT publicity and consumer education in collaboration with the Consumer Council and other relevant organisations to disseminate messages about market situation of DTT receivers, consumer protection and precautions to be taken to avoid deceptive sales practice, misconception about DTT reception, etc. Such efforts would tie in with the DTT rollout of the five fill-in stations later this year to arouse public awareness.

Website and enquiry hotline

21. The OFTA has provided a free hotline and e-mail services to respond to public enquiries. By April 2009, the OFTA has

received and responded to around 12 800 public enquiries about DTT since the launch of DTT. About 59% of these enquiries are on DTT coverage, while the others are related to IBCCDS upgrade, reception of analogue television, and reception issues of DTT receivers, etc.

22. We will continue to provide updates and necessary information to the industry and the public through our dedicated digital television website (www.digitaltv.gov.hk). We are developing a new portal with user-friendlier interface, which will be launched in the second half of this year.

Commerce and Economic Development Bureau
and Office of the Telecommunications Authority

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