

**For information
on 8 July 2002**

**Legislative Council
Panel on Information Technology and Broadcasting**

**Progress of the Formulation of
Digital Terrestrial Broadcasting Policy**

Purpose

This paper informs Members of the latest position regarding the Administration's deliberation on the policy for digital terrestrial broadcasting.

Background

2. Digital broadcasting is a new technology of transmitting sound and television services. Sound and pictures are processed electronically and converted into digital format for transmission. The signals will be reconverted by appropriate receivers or set-top boxes into sound or TV programmes. Digital broadcasting makes more efficient use of the available spectrum by enabling more programme services to be compressed into the frequency currently required to transmit one analogue service. The benefits of digital broadcasting include the possibility of an increase in the number of channels, new interactive multimedia services and high quality sound and pictures. In addition to terrestrial radiocommunication, digital television can be transmitted via cable and satellite.

Public Consultation

3. In December 2000, the Government initiated a three-month public consultation on the policy and regulatory proposals for digital terrestrial broadcasting in Hong Kong. The scope of the consultation covered the choice of the Digital Terrestrial Television (DTT) technical standard, the frequency plan, the licensing approach, the arrangements for transition from analogue to digital television broadcasting, the determination of an analogue switch-off date, the requirements of set-top boxes and the prerequisites for introducing Digital Audio Broadcasting (DAB).

4. We received a total of 23 submissions and some subsequent supplementary submissions from broadcasters. For DTT, respondents in general agreed to our proposed licensing approach. We will take into account some comments on the proposed technical requirements for operating the multiplexes. There was support for the Government's recommendation to adopt the European DVB-T standard as it is a proven technology adopted in Europe and many Asian countries. On the other hand, the incumbent domestic free television programme service licensees strongly advised that we should wait for the emerging Mainland DTT standard before making the decision. This may lead to a delay in the implementation of DTT as the Mainland standard has yet to be confirmed and consumer products are not readily available at this stage. There were also different opinions about the method of allocating spectrum capacity to the licensees. For DAB, we recommended that applications for providing DAB services would be invited when there were clear market potential of the services and affordable consumer equipment. The existing sound broadcasting licensees in general agreed that the introduction of DAB services should be market-driven.

5. In parallel to reviewing the submissions, we have been closely following the developments of digital broadcasting in other countries that may have implications on our policy.

Recent Developments in Digital Broadcasting

Development of Mainland DTT Standard

6. Our objective is to adopt the most suitable proven technology available to ensure that consumers can benefit from the most advanced technology. We are aware that the Mainland is developing its own national DTT technical standard. To the best of our knowledge, the authorities will conduct technical trials for the candidate DTT standards during 2002 and announce the decision on the DTT standard by end 2003. We will continue to take stock of the technical development in the Mainland.

Implementation of Digital Broadcasting in Other Countries

7. Recent developments in other countries have somehow illustrated that the implementation of digital broadcasting may not be as smooth as originally expected. An account of overseas developments is at the **Annex**. In particular, we note that:-

- i) in the UK, ITV Digital, the commercial DTT operator which launched its digital services in November 1998, went bankrupt. The transmission of its services was finally terminated on 1 May 2002;
- ii) in the US, the majority of the television transmitting stations have missed the deadline of 1 May 2002 for full digitization; and
- iii) in Europe, well developed countries like France, Germany, Italy, Austria and Switzerland have not yet established commercial DTT services at present.

Way Forward

8. Overseas experience seem to suggest that the investment climate, the availability of incentives such as additional services and attractive content for consumers to switch to digital services, and the availability of affordable consumer products are critical factors for the successful implementation of DTT. We are inclined to take a cautious approach and will fine-tune our policy and regulatory proposals after assessing overseas experience, market conditions, and the implications of an emerging Mainland DTT technical standard (such as technical merits and availability of compatible consumer products) and other alternative technologies.

Information Technology and Broadcasting Bureau

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Overseas Developments in Digital Terrestrial Broadcasting Services

This annex provides a snapshot of latest overseas developments in digital terrestrial broadcasting services. Although Digital Terrestrial Television (DTT) and Digital Audio Broadcasting (DAB) services have been launched in some countries for quite some time, the level of acceptance by the public remains unsatisfactory.

Development of DTT

Australia

2. In Australia, the Television Broadcasting Services (Digital Conversion) Act 1998 laid down the basic rules governing the introduction of DTT services by television broadcasters. The DVB-T standard with Dolby AC-3 was adopted as the Australian DTT standard. DTT services officially commenced in January 2001 in Sydney, Melbourne, Brisbane, Adelaide and Perth. The Government expects that full coverage of DTT services can be achieved by 2004.

3. The Government originally planned to use High Definition Television (HDTV) broadcasting to drive the take up of digital television. Broadcasters are required to broadcast HDTV content and multi-channel services are not allowed on the digital platform. However, the slow take-up of digital television has prompted the Government to consider relaxing the restriction on multi-channel programming by the commercial broadcasters.

The United Kingdom

4. The licensing framework for DTT is set out in the 1996 Broadcasting Act. The Government adopted the DVB-T standard and commercial broadcasts of DTT started in November 1998 by ITV Digital. The Government's target is to switch off the analogue TV signals from 2006 to 2010.

5. ITV Digital had 1.2 million subscribers by February 2002 which fell short of its business plan of attracting 2 million subscribers by 2002. The loss-making venture eventually went bankrupt after costing its shareholders about £1.1 billion. Its services were terminated on 1 May 2002. In early 2002 before the collapse of ITV Digital, digital television take-up (including terrestrial and satellite) reached 40% of all UK homes.

The United States

6. The US has officially adopted the ATSC standard. The basic digital television (DTV) transition process promulgated by the Federal Communications Commission (FCC) in April 1997 requires that all the commercial television transmitting stations must be digitized by 1 May 2002. However, at present, only about 270 out of the total 1680 television transmitting stations have met the requirement. A report issued by the General Accounting Office related the problem to the high cost of the digital technology, low consumer interest caused by high prices of consumer equipment, and a number of technical issues like tower construction.

7. In order to expedite the transition process such that the valuable spectrum resources can be freed up for other purposes, the FCC Chairman released in April 2002 a proposal for “Voluntary Industry Actions to Speed the Digital Television Transition”. The objectives of the proposal are to persuade manufacturers to massively produce digital TV sets and urge broadcasters to provide HDTV programmes to drive digital television take-up.

Europe

8. Only the UK, Spain, Finland and Sweden have launched DTT services. Other well developed countries like France, Germany, Italy, Austria and Switzerland have not yet established commercial DTT networks.

Development of DAB

9. Although DAB services have been launched in some countries since 1999, the adoption of the technology by consumers has been extremely slow. Viable business models exploiting the full potential of the technology are yet to be established. Most of the operating networks are still at an infant stage where the network operators still need to make a significant amount of capital investments. At present, DAB receivers cost about HKD 3,000. In some countries like Germany and the United States, promoters of DAB collaborated with car manufacturers to have DAB mobile receiver as a built-in item in new car models.

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