



Telecommunications

Hong Kong has one of the most sophisticated and successful telecommunications markets in the world. This has been an important factor in Hong Kong's development as a leading business and financial centre. In 2009, the gross output of the telecommunications sector amounted to HK\$53.4 billion and employed around 17 000 persons.

All sectors of Hong Kong's telecommunications market have been liberalised with no foreign ownership restrictions. The government's objectives are to provide a level playing field in the telecommunications market and ensure that consumers get the best services available in terms of capacity, quality and price. A consultancy study released in May 2011 shows that the pro-competition policy and pro-market approach have been very successful in delivering the best consumer benefits. Hong Kong consumers and business users pay as low as one-tenth of the telecommunications charges as their counterparts in six other cities under comparison. Quality telecommunications services are enjoyed at well affordable prices.

Office of the Telecommunications Authority (OFTA):

OFTA is the executive arm of the Telecommunications Authority (TA), who is the statutory body responsible for regulating the telecommunications industry in Hong Kong. Its vision is that Hong Kong has the best telecommunications services to meet the challenges of the information age. The work of OFTA covers six main areas:

- Regulating public telecommunications services
- Enforcing fair competition in the telecommunications sector
- Managing radio frequency spectrum and coordinating satellite orbital positions
- Advising the Government on telecommunications matters
- Enforcing the Unsolicited Electronic Messages Ordinance (except those parts related to fraudulent activities)
- Representing Hong Kong in international telecommunications organisations and fora

Local Fixed Carrier Services: The local fixed carrier services market is fully liberalised. There is no pre-set limit on the number of licences issued, nor deadline for applications. Furthermore, there is no specific requirement on network rollout or investment. The level of investment will be determined by the market.

As at April 2011, there were 16 companies licensed to provide local fixed carrier services on a competitive basis. They are PCCW-HKT Telephone Limited and Hong Kong Telecommunications (HKT) Limited, New World Telecommunications Limited, Wharf T&T Limited, Hutchison Global Communications Limited, Hong Kong Broadband Network Limited, Towngas Telecommunications Fixed Network Limited, ComNet Telecom (HK) Limited, TraxComm Limited, HKC Network

Limited, Hong Kong Cable Television Limited, Reach Networks Hong Kong Limited and Reach Cable Networks Limited, Telstra International HK Limited and Reach Global Services Limited, Verizon Hong Kong Limited, SmarTone Communications Limited, Cable and Wireless Global Network (Hong Kong) Limited and CSL Limited.

As a result of open competition in the local fixed services market, the active network rollout by fixed carriers since 1995 and the Government's impetus to encourage further network rollout by the withdrawal of mandatory Type II interconnection policy at the end of June 2008, 86 per cent of residential households were able to enjoy a choice of at least two local fixed networks as at March 2010. It is expected that the figure will keep growing as the operators continue to roll out their networks.

Fixed-line users can make an unlimited number of calls within Hong Kong on payment of a fixed monthly charge. With the emergence of new technologies, Internet protocol telephony services are also available in the market. Further, under the unified carrier licence jointly held by PCCW-HKT Telephone Limited and Hong Kong Telecommunications (HKT) Limited, the licensee has a universal service obligation to provide a good, efficient and continuous basic service, including the provision of public switched telephone services to consumers anywhere in Hong Kong within a reasonable period of time.

As at February 2011, there were over 4.2 million exchange lines. The telephone density was 103 lines per 100 households or 60 per cent by population, which was among the highest in the world.

Local fixed carriers are required to facilitate fixed number portability which enables consumers to switch to another local fixed operator without having to change their telephone numbers.

Broadband Services: Broadband Internet access services are very popular in Hong Kong. All local fixed carriers are allowed under their licences to provide broadband services. With the increased competition and coverage of broadband service using asymmetric digital subscriber line (ADSL), fibre-to-the-building (FTTB)/fibre-to-the-home (FTTH), hybrid fibre coaxial cable and other technologies, broadband networks cover virtually all commercial buildings and households. As at April 2011, there were 186 Internet service providers licensed to provide broadband services. As at February 2011, there were about 2.14 million registered customers, using broadband services with speed up to 1 000 Mbps (Megabits per second). In the residential market, 83 per cent of the households are using broadband service. Internationally, Hong Kong's broadband penetration rate is among the highest in the world. The city is one of the world leaders in the deployment of FTTH technologies. As at February 2011, the household penetration of FTTH, FTTB and local area networks was around 34 per cent. Hong Kong is also at the forefront in

broadband service quality, according to a study conducted by the University of Oxford in 2010.

In addition, Hong Kong's broadband services are very affordable. The high penetration rate together with the high bandwidth of broadband services in Hong Kong have formed a suitable platform for the launch of Internet protocol television (IPTV) services. By early-2011, there were about 1.2 million IPTV subscribers in Hong Kong.

Operators have been vigorously rolling out Wi-Fi networks. As at April 2011, there were more than 9 000 public Wi-Fi hot spots in the city and the number continues to grow. As at December 2010, free Wi-Fi services were available to the public in 390 government premises.

External Telecommunications Services: As at April 2011, there were 131 licensees authorized to provide external telecommunications services (ETS) in Hong Kong.

International Direct Dialing (IDD) service to most countries and regions of the world is available. From February 2010 to January 2011, the volume of outgoing and incoming traffic for telephone calls were 7 675 million minutes and 2 607 million minutes respectively.

Competition has resulted in a substantial reduction in IDD call rates and improved quality of services.

External Telecommunications Facilities: As at April 2011, there were 40 licensees permitted to operate either external cable or non-cable based facilities for the provision of external telecommunications services. In addition, 10 fixed carriers have been licensed to operate both local and external telecommunications facilities.

Hong Kong adopts the open sky policy in regulating the provision of satellite services. Satellite-based telecommunications and television broadcasting services are provided via a multitude of satellites in the region with more than 160 satellite earth station antennas operated by a number of fixed carriers and broadcasters.

As a major telecommunications and internet hub in the region, Hong Kong has six submarine cable landing stations and is connected to nine regional and trans-Pacific submarine cable systems. It is also connected with the overland cable networks of all three telecommunications operators in the Mainland. As of December 2010, the total equipped capacity of external telecommunications facilities was over 4 378 Gbps (Gigabits per second).

Mobile Services: Competition in public mobile services is vibrant. As at February 2011, there were 14 digital networks operating in the 800/900 MHz (Megahertz) bands (four networks), 1 700–1 900 MHz bands (six networks) and UMTS bands (four networks), and five

mobile network operators, namely, China Mobile Hong Kong Company Limited, CSL Limited, PCCW-HKT Telephone Limited & Hong Kong Telecommunications (HKT) Limited, Hutchison Telephone Company Limited and SmarTone Mobile Communications Limited. The availability of mobile number portability service since March 1, 1999 has contributed to promoting effective competition among the mobile network operators as it allows customers to retain their telephone numbers when they switch to another mobile network operator.

In February 2011, the number of mobile service subscribers was boosted to 13.71 million, representing one of the highest penetration rates in the world at about 193 per cent. Among these 13.71 million subscribers, 5.72 million were 3G/3.5G service customers.

Other than basic voice services, data services such as short messaging, mobile Internet services, all sorts of download services, multimedia services, video call services and mobile TV services are very popular among consumers. As at February 2011, local mobile data usage recorded a remarkable surge to 1 949 Terabytes (i.e. 1 948 760 Gigabytes), or an average of 291.2 Mbytes per 2.5G/3G mobile user. This represents 2.8 times the mobile data usage over the same period in 2010 and 12.1 times over the same period in 2009.

All four 3G operators have deployed 3.5G services utilizing High Speed Downlink Packet Access (HSDPA) technology. Subscribers can now download and upload large files including email attachments via the Internet, enjoy faster and better quality of video-streaming and downloading, as well as experience high-speed web-browsing on mobile devices. Some 3G operators have implemented the new Dual-Carrier Evolved High Speed Packet Access (DC-HSPA+) technology in Hong Kong facilitating consumers to enjoy mobile data services at a speed up to 42 Mbps.

With the launch of the CDMA2000 service in November 2008, visitors can now use roaming services through the CDMA2000 network, in addition to the GSM900/1800 and W-CDMA networks.

With the deployment of the Long Term Evolution (LTE) and other advanced technologies progressively by the three broadband wireless access services providers in the 2.5/2.6 GHz band, consumers will soon be able to enjoy even higher speed of mobile data services up to 100 Mbps.

In June 2010, the radio spectrum in the 678-686 MHz was assigned through auction to a service provider for the provision of broadcast-type mobile TV services. The service provider is actively building the service platform and targets to launch the service by 2011/2012. Both local residents and tourists will be able to enjoy the broadcast-type mobile TV programmes by the use of suitable supporting equipment.