



## 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 2007, the gross output of the telecommunications sector was HK\$ 52.5 billion, an increase of 7.36 per cent over that of 2006.

All sectors of Hong Kong's telecommunications market have been liberalised with no foreign ownership restrictions. Our regulatory regime is pro-competition and pro-consumer. The 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, speed and price.

### **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 nor investment. The level of investment will be determined by the market.

As at September 2009, there were 11 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, CM TEL (HK) Limited, TraxComm Limited, HKC Network Limited, Hong Kong Cable Television Limited and SmarTone Communications Limited.

As a result of open competition in the local fixed services market and the active network rollout by new fixed carriers since 1995, as well as the Government's impetus to encourage further network rollout by the withdrawal of

mandatory Type II interconnection policy at the end of June 2008, as at March 2009, 85 per cent of residential households were able to enjoy a choice of at least two local fixed networks. 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 fixed 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 voice telephone services to consumers anywhere in Hong Kong within a reasonable period of time.

As at July 2009, there were over 4.1 million exchange lines. The telephone density was 100.2 lines per 100 households or 59 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 the 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. Apart from fixed carriers, as at September 2009, there were 165 Internet service providers licensed to provide broadband services. As at July 2009, there were about 1.99 million registered customers, using broadband services with speed up to 1 000 Mbps (Megabits per second). In the residential market, 79 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 also a world leader in the deployment of FTTH technologies. As at September 2009, the household penetration of FTTH, FTTB and local area networks was over 30 per cent.

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. In mid of 2009, there were nearly 1.2 million IPTV subscribers, which is among the highest in the world in terms of household penetration.

There were more than 8 600 public Wi-Fi hot spots in the city as at September 2009 and the number was on the

growth. Complementing the commercial supply of hot spots, the Government earmarked HK\$210 million in 2007 to provide public free Wi-Fi services in different government premises in phases. As at September 2009, free Wi-Fi services were available to the public in 365 government premises.

**External Telecommunications Services:** As at September 2009, there were 263 external telecommunications services (ETS) licensees in Hong Kong.

International Direct Dialing (IDD) service to most countries and regions of the world is available. In the first half of 2009, the volume of outgoing and incoming traffic for telephone calls were 3 846 million minutes and 1 095 million minutes respectively.

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

**External Telecommunications Facilities:** As at September 2009, there were five licensees operating satellite-based external fixed network facilities and 29 licensees for cable-based external fixed network facilities. In addition, 7 local fixed carriers have also been licensed to provide 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 60 satellite earth station antennas operated by Reach Networks Hong Kong Limited, Reach Cable Network Limited and Reach Global Services Limited, Asia Satellite Telecommunications Company Limited, APT Satellite Company Limited, and a number of fixed carriers and broadcasters.

**Mobile Services:** Competition in public mobile services is vibrant. As at September 2009, there were 14 digital networks operating in the 800/900 MHz (Megahertz) bands (4 networks), 1 700-1 900 MHz bands (6 networks) and UMTS bands (4 networks), and 5 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 & SmarTone 3G 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 July 2009, the number of mobile service subscribers was boosted to 11.84 million, representing one of the highest penetration rates in the world at about 169 per cent. Among these 11.84 million subscribers, 3.20 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 commonly available anywhere, anytime and are very popular among consumers. As at July 2009, local mobile data usage recorded a remarkable surge to 384 Terabytes (i.e. 383 860 Gigabytes), or an average of 86.3 Mbytes per 2.5G/3G mobile user. This represents 6.1 times and 25.9 times the mobile data usage over the same period in 2008 and 2007 respectively.

All four 3G operators have deployed 3.5G services utilizing High Speed Downlink Packet Access (HSDPA) technology which supports download at a speed up to 14.4 Mbps. Subscribers can now download and upload large files including email attachments via the Internet, enjoy faster and better quality video-streaming and downloading, as well as experience high-speed web-browsing on mobile devices. In March 2009, one of the 3G operators implemented the new Evolved High Speed Packet Access (HSPA+) technology in Hong Kong. Subscribers are able to enjoy even faster mobile data services at a speed up to 21Mbps.

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.

In January 2009, OFTA assigned radio spectrum for the provision of broadband wireless access services by an auction to three successful bidders. The relevant licences were granted to them in March 2009.