



Telecommunications

Overview

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 2014, the gross output of the telecommunications sector amounted to HK\$89 billion and employed around 18 700 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.

The Communications Authority

The Communications Authority (CA) is an independent statutory body established under the Communications Authority Ordinance (Cap. 616) on 1 April 2012. It is a unified regulatory body overseeing the broadcasting and telecommunications sectors in Hong Kong. It comprises 10 non-officials from various sectors of the community and two public officers as members. It regulates the broadcasting and telecommunications industries in Hong Kong in accordance with the Communications Authority Ordinance, the Broadcasting Ordinance, the Broadcasting (Miscellaneous Provisions) Ordinance, the Telecommunications Ordinance, the Trade Descriptions Ordinance and the Competition Ordinance. It also enforces the Unsolicited Electronic Messages Ordinance.

The Office of the Communications Authority (OFCA), the CA's executive arm and secretariat, assists the CA in administering and enforcing the relevant ordinances governing the broadcasting and telecommunications sectors.

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 is determined by the market.

As at May 2016, there were 25 licensees permitted 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 Telstra

International Limited, Verizon Hong Kong Limited, SmarTone Communications Limited, Vodafone Enterprise Global Network HK Limited, Hong Kong Telecommunications (HKT) Limited, China Mobile Hong Kong Company Limited, 21 ViaNet Group Limited, NTT Com Asia Limited, Equinix Hong Kong Limited, China Telecom Global Limited, TVB Network Vision Limited, PCCW Global (HK) Limited, Superloop (Hong Kong) Limited and China Unicom (Hong Kong) Operations Limited.

As a result of open competition in the local fixed carrier 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, 86.7 per cent and 78.9 per cent of residential households were able to enjoy a choice of at least two and three local fixed networks respectively as at March 2015.

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 March 2016, there were around 4.22 million fixed lines, including about 2.36 million lines for residential customers. The telephone density was over 57 per cent by population or 95 fixed lines per 100 households, 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.

Fixed Broadband Services

Fixed broadband Internet access services are very popular in Hong Kong. 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 May 2016, there were 217 Internet service providers licensed to provide broadband services. As at March 2016, there were about 2.35 million registered customers using fixed broadband services. Fixed broadband services are currently available at speeds up to 10 Gbps (Gigabits per second). In the residential market, over 84 per cent of the households are using fixed broadband service. Internationally, Hong Kong's fixed broadband penetration rate and average broadband speed are among the highest in the world. According to the *State of the Internet 4th Quarter, 2015 Report* published by the Internet content delivery provider Akamai, Hong Kong has an average peak connection speed of 105.2 Mbps which is one of the highest in the world.

Operators have been vigorously rolling out Wi-Fi networks. As at May 2016, there were 43 147 public Wi-Fi hotspots in the city and the number continues to grow, and free Wi-Fi services were available to the public in 603 government premises.

External Telecommunications Services

As at May 2016, there were 266 licensees authorised to provide external telecommunications services (ETS) in Hong Kong.

International Direct Dialing (IDD) service to most countries and regions of the world is available. In 2015, the volume of outgoing and incoming traffic for telephone calls were 8 351 million minutes and 2 002 million minutes respectively.

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

External Telecommunications Facilities

As at May 2016, there were 42 licensees permitted to operate either external cable or non-cable based facilities for the provision of external telecommunications services.

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 220 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 seven 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 four telecommunications operators in the Mainland. As of March 2016, the total equipped capacity of external telecommunications facilities was over 35 100 Gbps (Gigabits per second).

Mobile Services

Competition in public mobile services is vibrant. As at May 2016, there were four mobile network operators, namely, China Mobile Hong Kong Company Limited, Hong Kong Telecommunications (HKT) Limited, Hutchison Telephone Company Limited and SmarTone Mobile Communications Limited, providing a wide range of public mobile services. 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 March 2016, the number of mobile service subscribers was 16.72 million, representing one of the highest penetration rates in the world at about 228.3 per cent. Among these subscribers, 14.69 million were 3G/4G service customers.

Other than basic voice services, mobile data services are very popular among consumers. As at March 2016, local mobile data usage recorded a surge to 20 557 Terabytes (i.e. 20 557 188 Gigabytes), or an average of 1 358 Mbytes per 2.5G/3G/4G mobile user. This represents a growth of 1.18 times in the mobile data usage over the same period in 2015 and 1.58 times over the same period in 2014.

In addition to 3G services, all four mobile network operators have deployed 4G services utilising Long Term Evolution (LTE) technology. This has enabled mobile service subscribers to enjoy data downlink speeds of up to 375 Mbps. With a wide range of high-speed mobile data services available in the market, subscribers are able to download and upload large files via the Internet and enjoy faster and better quality video-streaming and web-browsing on mobile devices.

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

**Office of the Communications Authority
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