

MESSAGE

As we enter the new millennium, the telecommunications industry will see sustained high growth in the Internet, e-commerce and other multi-media applications. Rapid advancement of technology will revolutionise traditional modes of telecommunications operations and services.

To seize the opportunities of the Information Age, Hong Kong must become a networked city which enables individuals to access quality broadband communication services at reasonable prices. The challenge for the Government is to provide an open, fair and predictable regulatory framework which is conducive to the development of broadband networks and services by the private sector. We have accordingly made major policy decisions in 1999 to progressively liberalise the telecommunications sector, which will encourage new investments in our local and external telecommunications infrastructure.

We have witnessed robust development in the market for mobile telecommunications in 1999. The advent of the third generation mobile services provides exciting opportunities for this industry. To ensure that Hong Kong takes full advantage of the versatility of the new generation of mobile services, we will make arrangements for their early introduction into Hong Kong.

We are entering into a new era where telecommunications services are being integrated into every aspect of our daily life. The Government will continue to encourage and support the private sector in its efforts to develop telecommunications infrastructure and services which best meet Hong Kong's needs.



(K C Kwong)

Secretary for Information Technology
and Broadcasting

TELECOMMUNICATIONS

Our Policy Objective is to facilitate the development of the telecommunications industry and enhance Hong Kong's position as a telecommunications hub.

Our targets this year in pursuing this Policy Objective are –

- to enable Hong Kong to be recognised as a world-class telecommunications centre for doing business
- to ensure that Hong Kong has available high quality telecommunications services at competitive prices
- to ensure that Hong Kong has high performance in telecommunications as measured against the Organisation for Economic Co-operation and Development (OECD) economies

Progress Made

In the past year, we aimed to deliver results in the four Key Result Areas (KRAs). We have achieved satisfactory results in all these KRAs. These will be further described later in this booklet.

At the policy objective level, we had three targets last year.

Our first target was to enable Hong Kong to be recognised as a world-class telecommunications centre for doing business. To achieve this target, it is vital for us to maintain a fair and transparent regulatory framework. During the year, we have examined in the context of the 1998 Review of Fixed Telecommunications the appropriate regulatory framework for the telecommunications industry in Hong Kong, with particular emphasis on issues of competition safeguards, licensing and network development. We have completed the Review and identified areas of improvements to our regulatory regime. To this end, we introduced the Telecommunication (Amendment) Bill 1999 into the Legislative Council in May 1999.

Our second target was to ensure that Hong Kong has available high quality telecommunications services at competitive prices. We believe that liberalisation of the markets will bring about more effective competition, which in turn will lead to improvements in service quality, as well as better value for the consumers. We have made great strides in liberalising our telecommunications market. Our external telecommunications services market has been fully liberalised with effect from 1 January 1999. Up to now, more than 100 licences have been issued for the operation of such services. Competition has resulted

in a substantial reduction in International Direct Dialling (IDD) call rates and improved quality of services. It is estimated that consumers will save some \$2.5 billion in IDD expenses in the year 1999.

In addition, arising from the 1998 Review of Fixed Telecommunications, we have decided to further facilitate effective competition in both the local and external fixed telecommunications market. Our decisions have taken into account the emergence of innovative wireless technology and the exponential growth in demand for external connectivity due to the development of the Internet. With these decisions, Hong Kong will be amongst the most liberalised regimes in fixed telecommunications. Details of the decisions are set out in the progress in KRA 2.

Our third target is to ensure that Hong Kong has high performance in telecommunications as measured against OECD economies. Last year, Hong Kong's telecommunications industry continued to enjoy robust growth. Our telecommunications sector continued to outperform its counterparts in many developed economies in the world. For instance, our mobile telephone penetration rate rose to 48% in April 1999, compared to 34% in April 1998. This was amongst the highest in the world. Hong Kong has broadband coverage to practically all commercial buildings and some 75% of households.

KEY RESULT AREAS (KRAs)

To ensure that this Policy Objective can be achieved, we must deliver results in a number of key areas, that is, we must –

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1

Provide the necessary regulatory framework and set standards for telecommunications in Hong Kong

As Hong Kong's telecommunications services and facilities are provided by the private sector, a pro-competition and pro-consumer regulatory framework is essential to provide a good investment environment for the telecommunications industry. We aim to adopt international best practices in this regard.

Hong Kong's open operating environment and the adoption of a technology-neutral approach has assured us access to the most modern technology. This has benefited telecommunications service operators, equipment manufacturers and consumers. We aim to develop and implement standards appropriate to Hong Kong, in conjunction with regional and international bodies. Hong Kong has joined the Asia-Pacific Economic Co-operation (APEC)'s multilateral arrangement for mutual recognition of conformity assessment for telecommunications equipment. This will facilitate our manufacturers' access to markets in other economies and ensure our access to advanced telecommunications equipment.

Progress Made

In 1998, we aimed to introduce the Telecommunication (Amendment) Bill into the Legislative Council in 1999 with a view to strengthening the pro-competition powers of the Telecommunications Authority (TA). The Bill was introduced into the Legislative Council in May 1999. We have proposed in the Bill ways to strengthen competition safeguards for the industry by consolidating the TA's pro-competition powers now provided in the licence conditions and incorporating them into the Telecommunication Ordinance. We have also proposed to increase the penalties which may be imposed on breaches of licence conditions or directions of the TA.

We have made satisfactory progress in the development of new standards in multilateral fora, such as the initiative taken forward in APEC in establishing a Mutual Recognition Arrangement for telecommunications equipment in 1999.

To achieve results in this area, various initiatives have been undertaken in the past years. Details are set out below –

Initiative *	Target #	Present Position +
<p>To complete the consultation on the Telecommunication (Amendment) Bill to strengthen pro-competition powers of the Telecommunications Authority</p> <p><i>(Information Technology and Broadcasting Bureau)</i></p>	<p>To introduce the Telecommunication (Amendment) Bill into the Legislative Council in 1999</p> <p><i>(1998)</i></p>	<p>The Telecommunication (Amendment) Bill 1999 was introduced into the Legislative Council in May 1999.</p> <p><i>(Action Completed)</i></p>
<p>To develop and implement standards appropriate to Hong Kong so that the industry can adopt the most modern technology to improve services</p> <p><i>(Office of the Telecommunications Authority (OFTA))</i></p>	<p>To take an active part in the development of new standards in multilateral fora in 1999, with Hong Kong's requirements in mind</p> <p><i>(1998)</i></p>	<p>OFTA has actively participated in the standardisation activities of various fora, including meetings on the standards for third generation mobile services held by the International Telecommunication Union, and discussions on the implementation of a Mutual Recognition Arrangement for telecommunications equipment held by the APEC.</p> <p><i>(Action in Progress: On Schedule)</i></p>

* the bracketed information denotes the agency with lead responsibility for the initiative

the bracketed information denotes the year in which the target was set

+ the bracketed information denotes the status of the target

Looking Forward

In the next 12 months, we will assess our performance in respect of this KRA against the following indicators –

Indicator	1999 Target
The issuance of codes of practice and guidelines which adopt international best practices	To ensure that the codes of practice and guidelines to be issued will adopt international best practices
The timely revision and implementation of new or revised regulations and standards	To anticipate market development and provide a timely response

We will undertake the following initiatives to deliver results in this area –

Initiative	1999 Target
To develop and implement the appropriate regulatory framework subsequent to the decisions to progressively liberalise the external telecommunications facilities market from 1 January 2000 and to license operation of non-wireline-based local fixed telecommunications networks (OFTA)	To issue licences for the provision of external telecommunications facilities and the operation of non-wireline-based local fixed telecommunications network in 1999-2000
To develop and implement standards appropriate to Hong Kong so that the industry can adopt the most modern technology to improve services (OFTA)	To implement the APEC Mutual Recognition Arrangement for telecommunications equipment by 2000
To establish a licensing framework for third generation mobile communication services (OFTA)	To establish a regulatory framework and invite licence applications in 2000, after consultation with the industry
To review the regulatory framework for universal services in the light of development of an information society (OFTA)	To conduct public consultation and complete the review in 2000

Hong Kong's telecommunications market is one of the most open in the world. Our telecommunications services and facilities are not subject to foreign ownership restrictions and we are committed to a level playing field in telecommunications. Greater and more effective competition gives consumers greater choice and increases market efficiency. Telecommunications services also underpin all other business and commercial services. The provision of quality telecommunications services at competitive prices will enhance Hong Kong's overall competitiveness.

Hong Kong is committed to the progressive liberalisation of the telecommunications sector. In 1995, three new operators were licensed to provide local fixed telecommunications network services. The Framework Agreement reached with Hong Kong Telecom International in 1998 enables the introduction of services-based competition in external telecommunications from 1 January 1999 and facilities-based competition from 1 January 2000.

Mobile telecommunications within Hong Kong have always been unrestricted, subject only to spectrum availability. Mobile number portability (MNP) has been implemented since 1 March 1999. With MNP, mobile phone customers are able to retain their phone numbers when changing networks. This removes the final significant barrier to freedom of consumer choice and encourages more effective competition in the mobile phone market.

Progress Made

Last year, we aimed to complete a review on fixed telecommunications.

Progress towards this target was satisfactory. Two rounds of public consultation were conducted in 1998. Having carefully considered the views received during the consultation, we announced our policy decisions which would facilitate further development of the local and external telecommunications markets.

Government decided to fully liberalise the external telecommunications services market from 1 January 1999. Licences for external services-based telecommunications operators are issued freely on the basis of market demand. The liberalisation of the external services market has brought about lower prices and better quality for IDD services. Consumers now have a wide choice of service providers in the market to suit their needs and budget.

On external telecommunications facilities, we have decided to progressively liberalise the market starting from 1 January 2000. In addition to Cable & Wireless HKT, the other three fixed telecommunications network services (FTNS) licensees can also provide external telecommunications facilities from 1 January 2000. To encourage investment in additional external cable capacity and innovative uses of satellites and other wireless transmission means

for external connectivity, we will issue licences for the operation from 1 January 2000 of external telecommunications facilities using non-cable-based technology and/or bringing new physical cables into Hong Kong. We have also decided to permit Hong Kong-licensed broadcasters to utilise the spare capacity in their own satellite facilities to carry telecommunications services and other companies' broadcasting programmes. External facilities licences will be issued for operation from 1 January 2003 to those who only purchase the indefeasible rights of use of cables.

On the local fixed telecommunications market, our key consideration is how to achieve effective competition within the shortest possible time. We have concluded that this could best be done by obtaining further commitments from the three existing new FTNS licensees in return for an extension of the moratorium on the issue of new wireline-based FTNS licences till the end of 2002. We have also decided to permit the existing subscription television licensee to offer telecommunications services over its hybrid fibre coaxial cable network, subject to satisfactory commitments on network roll-out and the return of its Microwave Multipoint Distribution System frequencies. Moreover, in view of the development of innovative wireless technology, we have decided that the moratorium should not cover fixed wireless networks. We have invited applications for licences for the operation of non-wireline-based local fixed networks.

To achieve results in this area, various initiatives have been undertaken in the past years. Details are set out below –

Initiative	Target	Present Position
<p>To implement a regulatory framework for fair and effective competition to facilitate further development in the local and external fixed telecommunications services market</p> <p><i>(Information Technology and Broadcasting Bureau (ITBB))</i></p>	<p>To complete a review of the regulatory framework for fixed telecommunications by end-1998</p> <p><i>(1998 and 1997)</i></p>	<p>The review had been completed. The policy decisions on improvements to the regulatory framework and the progressive liberalisation of the local fixed and external telecommunications services markets were announced in stages between October 1998 and May 1999.</p> <p><i>(Action Completed)</i></p>
<p>To improve the efficiency of telecommunications licensing and offer a customer-friendly service by making use of the Internet for licence applications</p> <p><i>(Office of the Telecommunications Authority (OFTA))</i></p>	<p>To implement a pilot project on licence applications via the Internet in 1999</p> <p><i>(1998 and 1997)</i></p>	<p>The pilot Internet-based licensing system was installed in December 1998 and the last phase of implementation of the pilot project would be completed before end-1999.</p> <p><i>(Action in Progress: On Schedule)</i></p>

Initiative	Target	Present Position
To conduct a feasibility study on “number portability” (OFTA)	To conduct a feasibility study in late 1997 on “number portability” with a view to introducing a new service which will enable mobile telephone customers to change service providers without the need to change telephone numbers (1997)	The feasibility study was completed on schedule. Following industry consultation, the Telecommunications Authority decided in principle in June 1998 to introduce mobile number portability. Number portability was eventually introduced in March 1999 after resolution of all technical issues. <i>(Action Completed)</i>
To consider operating the Cordless Access Services (OFTA)	To grant licences to operate the new Cordless Access Services (1995)	With rapid advancement in technology, cellular mobile phone services and Public Communications Services have become much more cost-effective wireless telecommunications services than Cordless Access Services. The Telecommunications Authority therefore decided that there was no market need to issue licences specifically for the operation of the Cordless Access Services. <i>(Action Completed)</i>

Looking Forward

In the next 12 months, we will assess our performance in respect of this KRA against the following indicators –

Indicator	1999 Target
The number of local fixed telecommunications networks service (FTNS) licensees	To maintain the existing number of local FTNS licensees until end-2002

Indicator	1999 Target
The number of external telecommunications services licensees	To maintain a level playing field so as to ensure that the market determines the optimal number of licensees
The number of external fixed telecommunications networks service licensees	To maintain a level playing field so as to ensure that the market determines the optimal number of licensees, subject to any physical constraint
The number of mobile phone licensees	To maintain a level playing field so as to ensure that the market determines the optimal number of licensees, subject to any spectrum constraint
The number of paging services licensees	To maintain a level playing field so as to ensure that the market determines the optimal number of licensees, subject to any spectrum constraint
The number of Internet Service Providers	To maintain a level playing field so as to ensure that the market determines the optimal number of providers

We will undertake the following initiative to deliver results in this area –

Initiative	1999 Target
To enhance the regulatory framework for fair and effective competition to facilitate further development in the local and external fixed telecommunications market (ITBB)	To bring into effect in 2000 the enhanced competition safeguards and the streamlined licensing framework under the Telecommunication (Amendment) Bill 1999, subject to the passage of the Bill by the Legislative Council

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Facilitate the development of an open, integrated broadband telecommunications network

An important consideration in designing the regulatory framework is that it should encourage the provision of broadband services which are widely available at reasonable cost to the consumer. This will facilitate the development of an open information infrastructure, accessible throughout Hong Kong, through which Government, businesses and individuals can exchange information and conduct transactions easily. The availability of such broadband services at reasonable prices will enhance our overall competitiveness, promote electronic business and improve the social and personal life of individuals.

We aim to improve access for telecommunications services so as to facilitate the development of an open, integrated broadband network to provide the necessary infrastructural support for information technology and broadcasting development and upgrading.

Progress Made

There was substantial improvement in the coverage of the broadband telecommunications networks. At present, about 75% of the households are covered by broadband telecommunications networks, as compared to below 50% in mid-1998. This rate is expected to increase to 80% in end-1999. Practically all commercial buildings are already covered by broadband telecommunications networks.

We aimed to introduce legislative amendments into the Legislative Council to improve access for telecommunications services in 1999. Progress towards this target was satisfactory. The Telecommunication (Amendment) Bill 1999 was introduced into the Legislative Council in May 1999. One major area of the proposals is to improve access of mobile telecommunications operators to shielded areas like shopping malls and tunnels for extension of their network services to these areas. The Bill also proposes to improve the interconnection arrangement between telecommunications networks.

To achieve results in this area, the following initiative has been undertaken in the past year –

Initiative	Target	Present Position
<p>To consult the public on how to improve access for telecommunications services, in particular –</p> <ul style="list-style-type: none"> ● measures to improve access to tunnels, shopping malls and the like for mobile telecommunications services ● measures to encourage roll-out and interconnection to the workplace and homes for broadband services <p><i>(Information Technology and Broadcasting Bureau (ITBB))</i></p>	<p>To complete public consultation by end-1998 and introduce necessary legislative amendments into the Legislative Council in 1999</p> <p><i>(1998)</i></p>	<p>The public consultation had been completed and the Telecommunication (Amendment) Bill 1999 with provisions to address the questions of access and interconnection was introduced into the Legislative Council in May 1999.</p> <p><i>(Action Completed)</i></p>

Looking Forward

In the next 12 months, we will assess our performance in respect of this KRA against the following indicators –

Indicator	1999 Target
The coverage of households or businesses by broadband telecommunications networks	To facilitate the private sector's continued network roll-out in 1999-2000
Prices for broadband services	To promote effective competition for broadband services in order to bring about more competitive prices

We will undertake the following initiatives to deliver results in this area –

Initiative	1999 Target
<p>To improve access to land and buildings for mobile telecommunications network operators to extend their network coverage, with a view to ensuring that there is as wide a coverage of mobile networks as practicable in Hong Kong <i>(ITBB)</i></p>	<ul style="list-style-type: none"> ● To bring into effect in 2000 measures to improve access to shielded areas by mobile telecommunications services, subject to the passage of the Telecommunication (Amendment) Bill 1999 by the Legislative Council ● To implement measures to facilitate the mobile network operators' installation of telecommunications equipment on Government land and buildings for extension of coverage of their networks in 2000
<p>To improve access for telecommunications services by making the provision of in-building access facilities for fixed telecommunications networks a mandatory requirement for new buildings <i>(Planning, Environment and Lands Bureau/ITBB)</i></p>	<p>To complete the consultation and introduce necessary legislative amendments in 2000</p>
<p>To develop principles and costing standards for the interconnection of broadband networks <i>(Office of the Telecommunications Authority)</i></p>	<p>To complete industry consultation and announce decisions in 2000</p>

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Establish Hong Kong as a world-class telecommunications centre

Hong Kong is already a key regional telecommunications hub. The capacity of our submarine cable and satellite communications links is amongst the largest in the region. Through maintaining an open and competitive telecommunications market, we will encourage private sector investment and innovation necessary for Hong Kong to maintain its position as a world-class telecommunications centre.

We aim to strengthen our position by establishing Hong Kong as the Internet hub for the Asia-Pacific Region. We shall, in addition, develop a world-class teleport for external telecommunications and broadcasting services, which will enable external facilities providers and broadcasters to provide sufficient capacity for satellite links to and from Hong Kong to cope with demand in the coming years.

Progress Made

Last year, we aimed to make the teleport site ready for use by operators to enable external facilities competition to commence from 2000. Progress towards this target has been satisfactory. The first tender exercise to dispose of five lots in the teleport was closed in September 1999. We expect to award the lots to the successful applicants by early 2000 to build their external telecommunications facilities.

To achieve results in this area, the following initiative has been undertaken in the past year –

Initiative	Target	Present Position
To develop a world-class teleport at Chung Hum Kok to facilitate the installation of external telecommunications links <i>(Information Technology and Broadcasting Bureau (ITBB))</i>	To make the teleport site ready for use by operators to enable external facilities competition to commence from 2000 <i>(1998)</i>	Tendering for the first five sites at the teleport was closed in September 1999. We expect that tenders will be awarded by early 2000. <i>(Action in Progress: On Schedule)</i>

Looking Forward

In the next 12 months, we will assess our performance in respect of this KRA against the following indicators –

Indicator	1999 Target
The timely development of a world-class teleport	To closely monitor the demand for sites for building external telecommunications facilities
The level of fixed line penetration, mobile telephone penetration and access to broadband telecommunications networks	<ul style="list-style-type: none"> ● To facilitate the market to determine the optimal level of fixed line and mobile telephone penetration ● To facilitate access to broadband telecommunications networks
The capacity of external telecommunications connectivity	To facilitate expansion of external telecommunications connectivity by the private sector in 1999-2000 by licensing all satisfactory applications for external telecommunications facilities

We will undertake the following initiatives to deliver results in this area –

Initiative	1999 Target
To host an international telecommunications exhibition cum conference “ITU TELECOM Asia 2000” organised by the International Telecommunication Union <i>(ITBB)</i>	To facilitate the staging of “ITU TELECOM Asia 2000” to be held from 4-9 December 2000
To enhance Hong Kong’s position as a centre for satellite communications <i>(Office of the Telecommunications Authority)</i>	To facilitate the launching of a new satellite in 2000 and to help promote the wider use of satellite services provided by Hong Kong-based operators