



Hong Kong Broadband Network Ltd

One network, multiple services for Hong Kong



Executive Summary

Hong Kong Broadband Network Limited (HKBN), a leading Fixed Network Service Provider in Hong Kong, embarked on an aggressive plan to build one of the most advanced broadband IP networks in the region. The vision is to establish a robust and scalable infrastructure that could deliver Internet data, voice and TV over the same network.

After extensive evaluation and customer trials, they decided on the Cisco Metro Ethernet Solution, comprising Cisco Catalyst Switches and Routers. The solution has helped HKBN to cover approximately 1 million Home Passes and capture 100,000 residential subscribers to-date, with a target of 1.2 million Home Passes and 200,000 subscribers by the end of 2002.

Background

Hong Kong Broadband Network Limited, a subsidiary of City Telecom (HK) Limited (CTI), is one of the leading Fixed Network Service Providers in Hong Kong. Its mission is to provide advanced Fixed Network services such as broadband Internet access, local telephony and digital television service to its customers at an affordable price.

The Hong Kong telecommunications market is highly deregulated and competitive in nature, and has been going through a period of major changes. Of special interest is the newly liberalized broadband Internet access market where ISPs are competing to get the lion's share of the pie. With broadband users currently accounting for 20% of Internet connections in Hong Kong – and growing fast – Ricky Wong, Chairman of HKBN & CTI, is convinced that his company had to capture this market swiftly to be successful.

“At a time when our competitors were still chasing after online content provision and system integration businesses two years ago, we decided on a new business strategy where content provision and e-commerce are de-emphasised. Instead, the Group embarked on building a telecommunications infrastructure based on a state-of-the-art Internet Protocol network in Hong Kong.”

In February 2000, HKBN was awarded the Local Wireless Fixed Telecommunications Network Services (WFTNS) Licence and further granted the wireline-based Fixed Telecommunications Network Services in April 2002 by the Office of the Telecommunications Authority (OFTA) of Hong Kong. The Group committed to become the leading fixed network services provider in the Territory.



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“Cisco is the clear leader in IP technology and has demonstrated to us their ability to offer voice, data and TV services on the same IP infrastructure. The Cisco Solution offers advanced and superior technologies and it has a team of experienced business partners to assist with the implementation.”

Mr Ricky Wong, Chairman of CTI and HKBN



The Challenge

HKBN knew that in order to achieve the target and to deliver on its commitment to its customers, it needed a network infrastructure that was technologically advanced, robust and extremely scalable. The infrastructure also had to be features-rich to enable HKBN to offer Internet data, voice and digital TV services – all through the same network.

“We didn’t just want a good-enough telecommunications infrastructure. We wanted it to be the best. And to do this, we knew we had to build the most advanced and reliable broadband network in the Asia Pacific,” said Mr Wong.

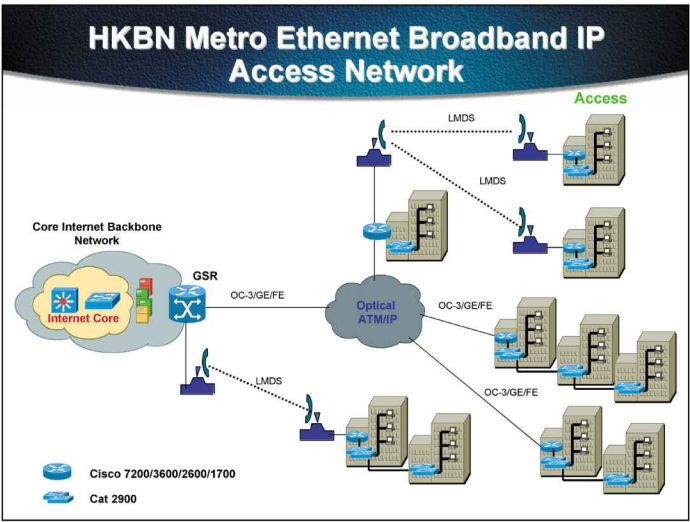
“When we have a project of this magnitude and importance to our company, we needed two things. Firstly, the network had to be based on the best technology available today. Secondly, we needed to find a partner we could absolutely trust to deliver on their promises. Our business success would depend on it.”

Cisco was a logical choice as it had a relationship with HKBN going back five years. Cisco Solutions have offered effective support for its IDD and Data Network in the past.

“What we especially liked was the fact that Cisco could offer us not only an integrated networking solution, they also showed an in-depth understanding of the market by providing us with market analysis and return-on-investment studies to help us build our business case,” said Mr Wong.



Mr Ricky Wong, Chairman of CTI and HKBN



The Solution

The existing infrastructure HKBN had in place was a two-year-old Cable Solution, which could not deliver a scalable multi-service network for data, voice and video on IP that HKBN required for their business expansion. HKBN also wanted to minimise both capital investment and operating costs in order to maximise profitability. After considering all of HKBN’s requirements, Cisco proposed a Metro Ethernet Switching Solution.

Comprising over 10,000 Cisco Catalyst Switches and over 800 Cisco Routers, the Cisco Metro Ethernet Solution enabled HKBN to deliver profitable, comprehensive Ethernet services by effectively integrating with existing WAN links. The use of Ethernet technology offered flexibly provisioned bandwidth at dramatically reduced service rates. In addition, the Cisco Metro Ethernet Solution was developed to tightly integrate into enterprise environments that require integrated voice, video, and content applications.

Mr Wong said, “We believe that Cisco’s Metro Ethernet Solutions will enable us to achieve our business objective of increasing the average revenue per user, and getting the maximum usage out of our core network infrastructure by providing new services like voice and video over IP to our customers. Upon the above advantages, we decided to be a ‘Cisco Powered Network Service Provider’.”



The Implementation

The Cisco Metro Ethernet Solution consists of installing multiple Catalyst 2900 LAN Switches in the buildings within the target areas. These LAN Switches are housed in a special design cabinet with power redundancy located in the MDF Rooms of the buildings. Cat 5 cables are laid from the cabinet via vertical and horizontal wiring to the door entrance of the targeted home customers.

HKBN, Cisco and Macroview Telecom Ltd, a Cisco ‘Gold’ System Integrator Partner, began major implementation in September 2001 and in less than ten months, had made major progress in wiring up Hong Kong.

“In less than 24 months, we have installed over 240,000 LAN switch ports in over 2,500 buildings Hong Kong. What this means is 1 million Home Passes (households) can access our service if they wish. All they have to do is call us and our technician will lay the last twenty feet to the customer’s premises.”

Mr Wong elaborated, “The implementation was very professionally carried out with no major problems encountered. Any technical issues we had – which are expected for projects of this magnitude – were quickly resolved. We are very impressed with the ease with which we have been able to re-configure to enhance and scale the infrastructure to cater for new services requirements.”

The Results

According to a recent IDC report, the Asia-Pacific market for metro Ethernet services was worth US\$395.34 million in 2001 and is set to almost quadruple to reach about US\$1.5 billion in 2002. And HKBN is leading the way in the Hong Kong market. Mr Wong expressed his delight at the success of the implementation.

“We at HKBN strongly believe that our new network based on the Cisco Metro Ethernet Solution possesses such a sophisticated and advanced design architecture that our services will be of the highest quality and at the same time, be the most cost effective in Hong Kong.

“Through the converged network, we are offering broadband Internet access at rates significantly lower than Hong Kong’s largest ISP. With an average monthly income of HK\$140 from each subscriber as of March 2002, we are able to get a healthy gross margin of 80%.

“Our business is set to take off in a big way in the next six months as our network coverage grows from the current around 1 million households covered today to 1.2 million households by the end of 2002. We are also growing our customer base of 100,000 subscribers at an average monthly rate of 12,000 subscribers – one of the fastest in the industry – and expect to hit 200,000 subscribers within the next six months.”

“We recently released our Interim Report with remarkable results. We managed to reduce our cost of service by 25% and increase our gross profit by 62%. Thanks to the Cisco folks for their great contribution in delivering the cutting edge Metro Ethernet Solution for us. “

The Future

Current HKBN customers are being offered with broadband Internet and local telephone services.

However, live trials are on the way in several districts in Hong Kong for the TV over IP service. This service will allow customers to view broadcast quality TV content via a set-top box or software client running on the PC using MPEG 2 encoding. HKBN is targeting to launch the TV over IP service before the end of 2002.

