NORTEL NETWORKS
BUSINESS WITHOUT BOUNDARIES

establishing leadership in a highly competitive fixed-line market

Success Story

Hong Kong Broadband Network makes a resounding fixed-line debut with a Nortel Networks Carrier Voice over IP network.

Tackling the competition in one of the world's most competitive fixed-line telecommunications markets requires a clear vision, technology equal to that vision, and a support structure to see it all through. Resolved to rise to this challenge, Hong Kong Broadband Network chose to team with Nortel Networks. Vision, technology, and support—done, done, and done—and the bottom line equals success. In just two years of operation, Hong Kong Broadband Network has captured over 20 percent of the addressable Hong Kong residential voice market.

Customer: Hong Kong Broadband Network Limited, the fastest growing all-IP multi-service provider in Hong Kong.

Challenge: To deploy a next-generation, carrier-grade Voice over IP (VoIP) network in the Hong Kong fixed-line telecommunications network services market.

Solution: Hong Kong Broadband Network selected Nortel Networks Local VoIP Solution—featuring Nortel Networks Communication Server 2000 - Compact softswitch, the Packet Voice Gateway 15000, and premises-based Integrated Access Devices, implemented by Nortel Networks Global Services—to transform their network and accelerate market entry.

Benefits: This turnkey solution, built on a fully featured, highly reliable carrier-grade platform, has enabled Hong Kong Broadband Network to leverage existing infrastructure, move voice and data traffic onto a single infrastructure, and grow services revenue.

A changing environment

In Hong Kong's fully liberalized market, Hong Kong Broadband Network (HKBN) knew they must move quickly to keep ahead of the competition—that it would require an equally effective strategy for local services to that which they had employed to become a market-share leader in Hong Kong's intensely competitive long distance market.

With four major telecommunications providers already entrenched in the market, HKBN mapped a strategy to focus on the mass market for residential and small-to-medium enterprises (SMEs) in densely populated areas. This market was previously a low priority for the existing operators. HKBN's plan was to leverage the advantages of VoIP—including low initial cost, fast service deployment, decreased operational expenses, and utilization of a single IP network for all media. This enables multi-services offerings of international direct dial, voice, broadband, paid TV service, etc. at unprecedented low price points. Owning the network end-to-end meant that HKBN was able to profit handsomely from these value price points, unlike network resellers who were often-times priced out.

The task now was to identify a vendor with a solution equal to this strategy. HKBN was looking for a carrier-grade, end-to-end, packet-based solution delivered by a vendor with the expertise and demonstrated experience to make it happen.

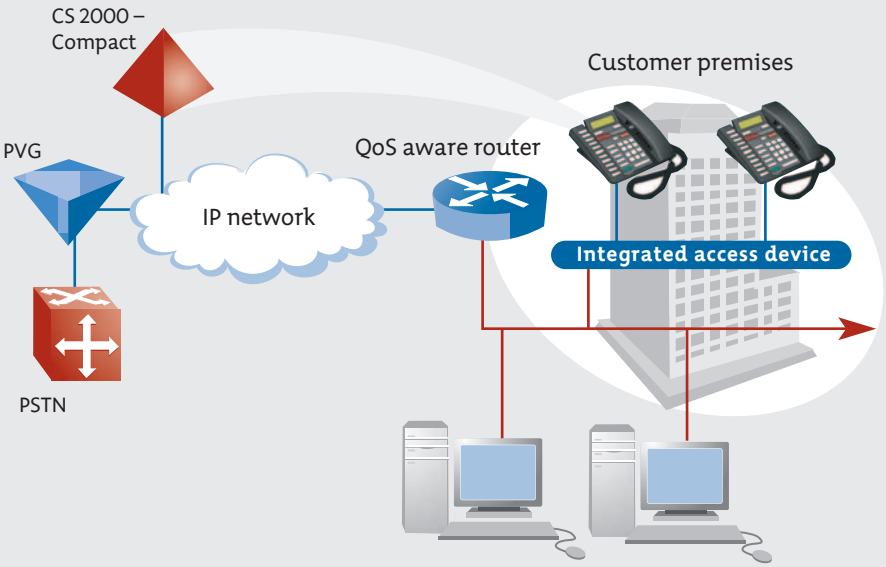
Nortel Networks Local VoIP Solution

Nortel Networks Local VoIP Solution enables faster time to market; facilitates geographic expansion; and provides a foundation for delivery of new, value-rich multimedia services. The heart of HKBN's VoIP network includes the Nortel Networks Communication Server 2000 – Compact softswitch and the Nortel Networks Packet Voice Gateway (PVG) 15000. In addition, Nortel Networks supplied 4-port, 12-port, 30-port, and 32-port IADs.

The Nortel Networks Communication Server 2000 – Compact is a Superclass softswitch enabling service providers to economically offer business, residential, and transit markets a comprehensive package of services that opens the door to new revenue-generating opportunities. A Superclass softswitch is one that provides true service provider circuit-to-packet migration, including local, tandem, and long distance capability on a single platform; full business and residential telephony service sets; regulatory features such as lawful intercept and number portability; third-party interoperability; and carrier-grade reliability and scalability.

The Nortel Networks Packet Voice Gateway 15000 bridges packet data networks with traditional public switched telephone networks to enable greater network flexibility at lower costs. The PVG is a high-density voice services processor delivering extensive voice-processing power, reliability, and versatility in a small footprint.

Nortel Networks is a leader in the implementation of VoIP industry-standard protocols, including H.248, MGCP, H.323, and SIP. It has active memberships in over 30 VoIP standards bodies and participates in key industry forums and interoperability events.



HKBN mapped a strategy to focus its energies on densely populated areas. Its plan was to leverage the advantages of VoIP to offer a bundled service of international direct dial (IDD), voice, and broadband at an attractive price.

"There were a number of vendors vying for our VoIP business," says HKBN chairman Ricky Wong, "but Nortel Networks was the company that could provide the most complete end-to-end solution."

Objectives. Solutions.

In selecting a network solution, HKBN grappled with several high-priority objectives. The extremely high cost of real estate in Hong Kong necessitated a high-density access solution, traffic consolidation, and a centralized network. A compact and cost-effective network solution making optimal use of network resources was required, as was a scalable solution that would allow capital and operational investment to be based on market acceptance. HKBN also required a solution that could efficiently target Hong Kong's high-density housing market. And, they wanted to maximize their investment by laying a foundation for the delivery of forthcoming value-rich multimedia services, including video applications, that have revenue-generating potential. Given this intensely competitive marketplace, an accelerated time to market for fixed-line services was of the essence.

For each of the above objectives, Nortel Networks had a solution.

In terms of addressing real estate cost concerns, the Nortel Networks Local VoIP Solution provides the infrastructure for a full-featured greenfield network with reduced footprint, and enables HKBN to avoid overlay networks by reducing the number of network nodes and increasing trunking efficiency. This solution provides proven data-network performance across a managed IP network capable of carrying real-time sensitive traffic with carrier-grade quality of service, network security, reliability, performance, and availability.

The Nortel Networks packetized infrastructure takes full advantage of all network resources. This allows for

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—Ricky Wong, Chairman, HKBN

more efficient use of network capacities and facilitates the delivery of new and evolving revenue-generating services.

The Nortel Networks Local VoIP Solution—which allows HKBN to deploy distributed Integrated Access Devices (IADs) directly into the target building—effectively and efficiently addresses the high-density housing market. These Nortel Networks IADs—customer premises devices that deliver telephone services over an IP connection—are well suited for deployment in the small equipment rooms commonly found in Hong Kong residential buildings.

HKBN has laid the foundation for the delivery of future multimedia services. The Nortel Networks Local VoIP Solution provides full-feature functionality, such that HKBN's end-users receive all the telephony services (i.e., call waiting, call forwarding, and caller ID) they currently receive from their TDM network while setting the stage for the delivery of new, enhanced services. For end-users, the transition from traditional TDM to Nortel Networks VoIP solution was completely seamless, with users retaining their existing handsets and phone numbers. With this foundation in place, HKBN is erasing the boundaries between traditional wireline networks, wireless networks, and the Internet, and thus rendering these multimedia services much more accessible.

As for meeting their objective of an accelerated time to market, having chosen the Nortel Networks solution, HKBN hit the ground running. The company laid out an aggressive implementation schedule, and asked Nortel Networks to help see it through.

Enter Nortel Networks in-region Global Services team, extending to HKBN its expertise in designing, engineering, commissioning, and supporting VoIP networks.

Implementation objectives were met, and HKBN went live with their local voice services network in August 2002. Having initially purchased two Communication Server 2000 – Compact (CS 2000 – Compacts) softswitches, HKBN's network grew so fast that they ordered two additional CS 2000 – Compacts, requesting that Nortel Networks install, commission, and turn them up in less than three weeks.

Again, the Global Services team rose to the challenge, working around the clock, from installation right through to operational readiness.

A successfully cooperative effort.

Teamwork was the clarion call throughout this VoIP network deployment, and fundamental to its success.

Equally fundamental was the training involved. The Nortel Networks Global Services team passed along their expertise to the HKBN network operations team at every step. Hands-on as well as classroom training allowed the HKBN team to more quickly take control of essential network resources.

Nortel Networks unyielding commitment to a successful deployment substantiated HKBN's confidence in having selected the proper vendor. Says Wong: "We feel that we are dealing with a business partner rather than a third-party vendor. During the implementation phase, the Nortel Networks team worked as if their own business was at stake."

Nortel Networks Global Services

Nortel Networks Global Services works with network operators from initial planning to full commercial operation of their wireline, wireless, and enterprise networks. As a leader in transforming networks with end-to-end solutions like Voice over IP, Nortel Networks Global Services provides the critical enabling support to plan, build, operate, and maintain these next-generation networks.

With more than 300 Carrier VoIP installations since 2003, Nortel Networks Global Services also has the depth and breadth of experience to enable service providers to quickly, successfully, and cost- effectively reap the benefits of network transformation. The portfolio of professional services for VoIP networks are utilized by over 90 percent of Nortel Networks VoIP customers.

Underscoring Nortel Networks longstanding commitment to its customers, the company has employees around the globe dedicated to speeding service providers' time to revenue, driving higher network performance, and lowering capital and operating costs.

A testament to the right choice.

The HKBN deployment has reached a phenomenal level of success in a very short time. Within only a few months, the number of deployed HKBN subscriber lines rose from zero to 20,000, and the growth rate has since averaged between 8,000 and 12,000 new subscribers each month. By HKBN's second anniversary in August 2004, they had over 240,000 subscriber lines in service, representing 20 percent of their addressable residential market.

"The installation of this network was seamless," says Wong, "enabling our customers to continue using their existing phones while receiving the full benefits of a fully-featured packetized infrastructure. This allowed us to focus our marketing efforts on service and value, instead of requiring us to use our resources to educate users about VoIP."

Vying for market share with long-established competitors, Hong Kong Broadband Network has made their presence known. Nortel Networks Local VoIP Solution has positioned HKBN as one of the largest and fastest-growing carrier VoIP networks in the world.

"We have made Hong Kong telecommunications history," says Wong. "Deploying a next-generation packetized network from Nortel Networks has allowed us to provide converged voice and data services at a substantially lower capital investment and with reduced operational costs.

"Passing on the cost savings to our customers has positioned us as one of the most competitive players in the Hong Kong market. The fast uptake of subscribers and our continued growth are a testament to our stature in the market."

Nortel Networks is an industry leader and innovator focused on transforming how the world communicates and exchanges information. The company is supplying its service provider and enterprise customers with communications technology and infrastructure to enable value-added IP data, voice and multimedia services spanning Wireless Networks, Wireline Networks, Enterprise Networks, and Optical Networks. As a global company, Nortel Networks does business in more than 150 countries. More information about Nortel Networks can be found on the Web at:

www.nortelnetworks.com

For more information, contact your Nortel Networks representative, or call 1-800-4 NORTEL or 1-800-466-7835 from anywhere in North America.

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