

global **telecoms**

www.globaltelecomsbusiness.com

BUSINESS

March/April 2005 Number 79 A Euromoney Institutional Investor Publication

Ricky Wong builds Hong Kong's 21st century network

**Plus: special report on BT's
21st century network project**

**NTT DoCoMo's Takeshi Natsuno
on i-mode in Europe**

**Special supplement:
The CEO and CFO
Guide to OSS
Page 45**

In the dense apartment blocks of Hong Kong, it has cost \$130 a home to build a broadband ethernet network capable of offering triple-play IP services to 1.2 million homes — at monthly rates that can only be dreamed of in Europe or North America. City Telecom is expanding its coverage, funded by a \$120 million bond issue. By Alan Burkitt-Gray

Hong Kong's 21st century network



Ricky Wong: City Telecom operates a pure IP-based network, carrying home telephone services, cable TV and internet

So how do you fancy 10 megabits, symmetrical, direct to your home. Cost? Just \$12 a month. Or, if that's not enough, 100 megabits at \$30 a month. Want more? Soon, you'll be able to get a gigabit, and the price won't be outrageous.

Oh, and bundled into the price is, of course, VoIP telephone service plus several dozen TV channels. And you can download music and games.

Where is this home of digital delights? Hong Kong, where City Telecom is already running the sort of 21st century network many incumbents would be proud of. It's a Cisco-powered all-IP network which is already available to 1.2 million of the Chinese special administrative region's 2.2 million homes. And "available" means category 5 ethernet cable to the door, says Wong Wai Kay, the co-founder and chairman of the company. City Telecom has half a million customers for its broadband services, he says.

Now the company is planning to expand its network to cover a total of 1.8 million homes, says Wong, who is known in English as Ricky Wong. A 10-year bond of \$120 million will finance the expansion, which should be complete by 2007-08, he says. The offering, led by Citigroup, was completed in January.

Nasdaq listing

City Telecom was set up in 1992 to deliver international reseller services out of Hong Kong, competing with the incumbent. It became the second largest IDD operator in the Hong Kong, and listed on the Hong Kong Stock Exchange in August 1997, with a Nasdaq listing in New York in November 1999.

The move to broadband began with a licence in 2000, and services began in 2002, competing with PCCW, Hutchison and Wharf.

"We have a pure IP-based network," says Wong. "We carry everything — home telephone services, cable TV and internet — on a single IP network."

The conversion from VoIP to regular analogue phone service takes place in the basement of buildings. Customers get a normal phone socket — and might not even know they have VoIP. The company is installing uninterruptible power supplies in each building to ensure service during power cuts.

Television is delivered via a set-top box: City Telecom uses a design from a UK company, Amino Technologies.

There are, of course, special circumstances in Hong Kong. Most of it is extremely densely populated. "It means we have been able to build a corporate-type network in a residential environment," says Wong.

Capital expenditure

But that's meant the capital cost has been extremely low. NiQ Lai, a former banker — he was head of telecoms research at CSFB but is now director of corporate development at City Telecom — puts the capital expenditure at \$130 per home passed. All dollars in this article are US, not Hong Kong.

He compares figures from the European Fibre to the Home Council, a recently set up lobby group: "They're still talking in thousands of dollars a home." However in Hong Kong, he admits, "there are 1.2 million households in 3,000 buildings" and that's where City Telecom sees its market.

The original plan was to connect buildings with more than 300 apartments each. The expansion will reach into "less dense but still manageable" districts with 100 or more apartments per building: IP TV and VoIP are the services that will make it more viable to build in those areas. The expansion is fully funded by the recent bond issue, says Lai.

Reverse digital gap

"We've created a reverse digital gap," he says. The company offers huge bandwidths in the poorest areas of Hong Kong — with the move to one gigabit expected in the middle of this year — but no coverage in the less dense, richer areas.

"Rich people are loss leaders," says Lai. "They cost too much to serve and they're too demanding. Rich people in Hong Kong can only get six megabits from DSL." There are some people in London who'd be overjoyed with that. BT's current standard rate of about half a megabit downstream "wouldn't be a commercial proposition in Hong Kong", he says — though BT has recently promised to double it.

City Telecom uses carrier-grade equipment, "and we are achieving a reliability of 99.99%", says Wong, agreeing that "this is not as good as five nines, but most of our customers are very happy with the reliability".

Services are also available in 600 commercial buildings, a number that will increase to 1,500 with the expansion plan over the next three years. But it's a consumer-oriented company, with about 75% of the revenues coming from residential customers. Wong puts the ARPU at \$12-\$15 a month.

The IP TV service was launched about a year ago, and is now seen in 40,000 homes. Wong is reluctant to forecast how this will grow: it is "sensitive" in Hong Kong's highly competitive market, he says.

City Telecom, which brands its broadband service as HKBN, is offering something that the established cable operators in Hong Kong do not deliver, he says: Chinese channels.

"We have very strong cable operations in Hong Kong, but they concentrate on the premium market, with English-language channels such as CNN and Bloomberg, and sports channels offering English soccer," says Wong.

Chinese channels

The majority population in Hong Kong has only two free-to-air channels in Chinese, he notes — and that's why HKBN is offering a package of 48 Chinese channels to its customers. It pulls in services

from mainland China, from Taiwan and Macau, and from Singapore.

City Telecom markets its services from a call centre across the Chinese border in Guangdong. The operators there do not speak English: another reason the company is reluctant to offer services in middle class areas of Hong Kong.

There are some services available off net, says Wong. After all, IP is IP and data can reach through the internet — including to those less dense areas where only moderate broadband is available. "I'm one of those," says Wong. "I'm still using PCCW broadband."

This means that City Telecom has been able to sign up 20,000 VoIP customers who connect via different internet services. "I use off net VoIP to provide telephone service to my home," says Wong. And Hong Kong's IP infrastructure is allowing City Telecom to sign up customers in advance of its network build-out. "I can watch my own pay-TV services that way," he adds. "Before we build the network we can provide services."

City Telecom has become a star example, even for the advanced Asia Pacific region, of what can be done. "We're a global showcase for Cisco," says Lai. "We have been visited by delegations from Singapore, Taiwan, the Philippines, Vietnam and Malaysia. Carriers are looking at the whole ecosystem, asking questions about topics such as rent and access rights. Countries see broadband as a way of supporting economic growth."

These international relationships could be taken further, hints Wong. "We are looking for all kinds of cooperation opportunities. People want to know how they can copy our expertise and technology around the world." What sort of collaboration is he thinking of? "It's a little bit sensitive," he says. "We can't talk about anything."

But it is possible to take City Telecom's model of delivering residential ethernet services, he says, and replicate it in cities in the Asia Pacific region — suggesting Tokyo, Taipei, Singapore and Kuala Lumpur as examples, as well as cities in mainland China. "You could even do it in Manhattan."

The model might not work at City Telecom's basic rate of \$12 a month, depending on density of the population. "You might need to charge more."

Internet foundation

But he's certain that the offer, of 10 megabits and potentially of 100 megabits or a gigabit, is viable. As a result of what City Telecom has done, "kids in Hong Kong now have a much stronger foundation in the internet world", he says.

Financially the next two years "will not be good", says Wong, who is a major shareholder in the company. He and Cheung Chi Kin, or Paul Cheung, the managing director, own 56% between them.

The challenges will be caused because "we will be very aggressive in acquiring new subscribers", he says. "We spent \$25 million last year in new subscriber acquisition. I think the turnaround time will be in two years. Right now we have half a million subscribers. If we can get to one million we will be a very profitable business." ■