

WIRELESS INTERNET SERVICE PROVIDER

PACIFIC CSI

SERVING THE BUSINESS COMMUNITY IN METROPOLITAN SEOUL, SOUTH KOREA

New Service Opportunities in Broadband Haven?

With the broadband penetration reaching over 50% of the households, the broadband Internet market in South Korea has become the envy of the world. The ADSL and cable modem deployment in the last few years has numbered over 10 million, allowing the service providers grow at an accelerated pace. Broadband services to residential customers are available throughout most cities and are operational within a few days of request. Given the size of the market, the competition heated up quickly among the service providers during the early stages, quickly leading to a marketing frenzy and price wars. After the dust settled, all that was left were a handful of well-organized, well-financed players who dominate the market today. Indeed, the market seems to be maturing a bit now as the deployment of services becomes more like a “cookie-cutter”, similar to provisioning a dial-up service. Thus, for a service-minded entrepreneur entering the market, some difficult questions must be answered: is it too late to enter the broadband service market when established ISPs are executing well-established business models with already completed infrastructure? Against this backdrop, how do you start a new broadband service business? The answer for PCSI was to serve a different, high-end market segment with an alternative technology.



An example of Pacific CSI's coverage area:
Base stations are located on top of the tall building on the lower right.

Pitch to a different crowd

From the start, Pacific CSI recognized that they needed to be different from more established service providers in two aspects:

- (a) market segment that has not been hit with competitive pricing or performance
- (b) the technology that will make their service unique and competitive both in performance and pricing.

The market they identified was small to medium size businesses (SME), most of whom had a pent-up demand for better dedicated line services. The incumbent carriers were still charging high rates for fractional T1's or T1 lines at more than \$1,000 per month. With relatively few carriers that were supplying the last-mile dedicated line services, customers have few choices but to sign up with one of the incumbent T1 carriers. To effectively compete in this market, Pacific CSI needed a solution that can beat the incumbent providers in terms of both price and performance. The infrastructure setup that they found that met their needs was Solectek Skyway 2.4GHz fixed wireless systems. Armed with this technology, Pacific CSI was able to offer a “Super T1”, a multi-Mbps service at less than standard rates for T1.

SOLECTEK

Network Deployment

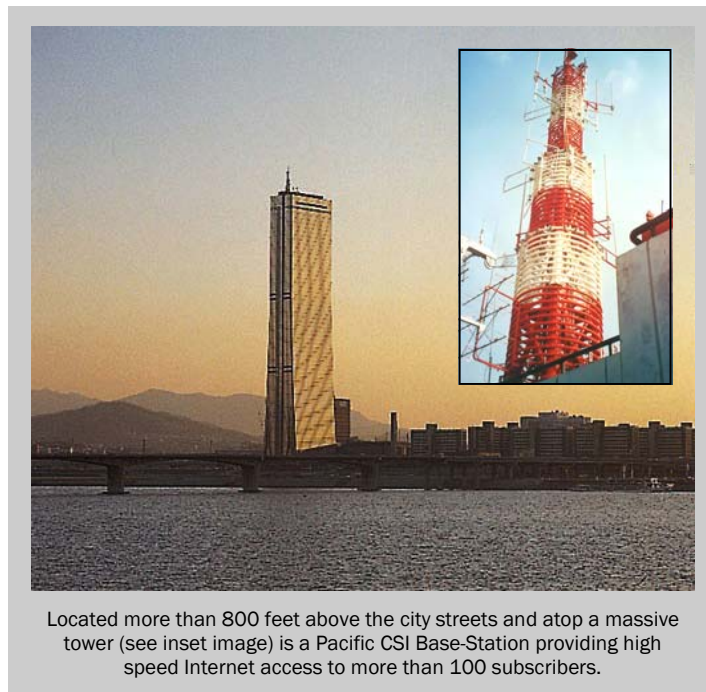
The first order of business was to secure the long-term agreement on some of the tallest buildings in downtown Seoul. Full of tall buildings that would hinder LOS to many parts of the city, it was important to pick strategic sites that tower over most buildings and are not surrounded by other tall buildings. Soon, rooftop rights were secured at (a) 63-story building, the tallest in town, (b) 43-story world trade center and (c) 34-story building located in a non-financial district for good LOS in all directions. These three sites formed a triangular coverage centers and a bunch of other relay stations in the middle to facilitate LOS and installation.

In order to handle Super T1 services, T3 (45Mbps) Internet backbone lines were purchased at bulk rate and were brought into each tower location. As many as 7 SkyWay base stations are deployed on each rooftop to fully take advantage of backbone capacity available on each rooftop location. Also utilizing the bandwidth management feature of the Skyway base station, Pacific CSI offers a flexible service plan from 128Kbps to 10Mbps. The base stations were approximately 6-8 miles apart from each other in a way to give each a sizable service area. In order to minimize the dark spots, a number of smaller building rooftops were secured to put in relay stations as necessary.



Installation of a SkyWay base station on a 34-story rooftop with a clear LOS in all directions

With initial investment limited to relatively cost-effective infrastructure set-up in backbone routers/servers and wireless base stations, Pacific CSI was able to devote money and attention on marketing their services to their target customer base.



Located more than 800 feet above the city streets and atop a massive tower (see inset image) is a Pacific CSI Base-Station providing high speed Internet access to more than 100 subscribers.

Customer Base

SME customers were indeed quick to sign up for the service. Pacific CSI currently has a wide range of customers from venture start-ups, Internet cafes, manufacturing companies, software companies, multi-national branch offices, banks, multi-tenant office buildings to TV broadcasting companies. Reliability of service was identified as a key ingredient of success. J. Y. Huh, President of Pacific CSI said, "We are extremely pleased with Solectek outdoor equipment's durability. We subjected the base stations to harsh, snowy winters and monsoon-prone, humid summers. The concern was that the base stations were mounted on some of the highest points in the city where the temperature is expected to be 10C degrees higher during the summer due to building heat exhaust and 10 degrees colder during winter. Service was not affected in those extreme weather conditions."



53-story COEX World Trade Center: a good base site for serving the venture companies heavily concentrated in buildings within the 5 mile radius.

Future

Pacific CSI is planning additional sites to expand its footprint beyond downtown Seoul where they have a coverage area of more than 900 square miles. "We have found our niche in one of the most competitive broadband service environments. With this proven formula, we expect to duplicate it in other cities in Korea." Their plan also includes overlaying the existing 2.4GHz system with Solectek's upcoming 5GHz systems to increase capacity in heavy-traffic areas. Says Huh, "we have superior performance and service with the lowest price points in the dedicated-line market today. It is an argument hard to ignore, and we have the customer base now to prove that our idea has worked."

Solectek Corporation, headquartered in San Diego, California, designs, manufactures and markets a full line of wireless interconnectivity products. Through technical innovation and steady revenue growth, Solectek has become a recognized leader in the wireless LAN/WAN connectivity market and the industry market leader in wireless bridges. Founded in 1989, Solectek has over 15,000 installations worldwide. The Solectek product line of wireless bridges and routers is the most flexible, reliable and secure in the industry. For more information visit www.solectek.com.

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