High Growth ISP Launches in Puerto Rico

Free Internet service, free email. That's the business model that Net ZeroPR used to mark their aggressive entry into the Puerto Rico's booming Internet economy.   The island, which boasts a population of 3.8 million, ranks 13th worldwide in e-commerce user purchases made through Yahoo.com. A recent survey estimated that the island's current 300,000 users will grow to 500,000 by the end of the year 2000. Net ZeroPR is headquartered in the bustling capital city of San Juan, population 440,000. Of the island's Internet users, 86% (just over 260,000) are in the greater San Juan metropolitan area. The start-up ISP is targeting a 36% market share of the Puerto Rican users by the end of November 2000.

Net Zero PR, a woman-owned family business, is headed by president Marilyn Gonzales while husband Fernando serves as Vice-President sales and marketing and their children are also active in the start-up. The company offers its users free Internet service and free email at a variety of weekly promotions every Friday in high-traffic locations such as shopping centers. The company offers free service only to residential customers who fill out a questionnaire that includes personal data, interests, hobbies, preferences, etc. when they sign up. The company keeps all data in their user database confidential. The ISP generates revenue by broadcasting banner ads to advertisers that target their users based on their hobby, preferences, and interests.

For the "free" business model to work efficiently, the new ISP sought out high-performance, cost-effective solutions for their network design. After much evaluation, they settled on Ariel's PowerPOP architecture, an open system board level remote access solution for Windows NT.

Initial Launch

The company launched their ISP service operations at a Friday promotion early in June 2000 at a local shopping center. They began the promotion with 2,500 CDs. They passed out all 2,500 of which 1,800 signed up by 7 PM of their first day in business. The ISP purposely has no online download capability. This allows them to maintain some control over who signs up and to control subscriptions so that they don't overwhelm their server capabilities with an unexpected flood of online subscriptions. All free services are only offered to non-commercial residential customers. The company also serves business customers at commercial rates offering a variety of services including web hosting, web design, banner design, email, and dedicated lines.

The company's goal is to have over 90,000 users by the end of November. By rapidly reaching this objective, the company's detailed user database will provide a highly useful targeting tool that will attract advertisers. The company has developed cost-effective plans for advertisers whether the advertiser aims for a broad or an extremely narrow market.

The Advertisers

For their monthly service charges, advertisers receive three ad changes and hundreds of thousands of ad exposures each month at a cost of only a few cents per exposure. The company also offers users ad design services. Banner ads are shown in 10 second exposures and are separate from the user's browser. No matter where the user travels on the Internet, the ads will be visible on the user's screen.

For the advertiser, the company provides 24-hour per day, 7 days a week access to reports and statistics. The easy-to-read report format gives advertisers a simple and effective summary with a wide variety of reports including: Overall advertising campaign results, by day, by banner, by banner by day, reports by zone (NetZero's banner port, email site, or portal site), by zone by day, click through detail report, executive advertising report, and billing summary.

Network Design

The free Internet service model imposes challenging network development demands for Net ZeroPR. The company needs to offer highly efficient, high-performance service to retain current users and attract new users. They also need excellent performance so that they deliver their advertisers' messages. However, without the luxury of monthly service fees, the company had to build a high-performance service network at a cost-effective price.

With the help of their Internet system's vendor, Ion Computer, the company evaluated various service hardware and software options. They considered a system of Cisco routers and then looked at using the Remote Access Service (RAS) solution made by Ariel Corporation (www.ariel.com). The Ariel RS2000, an open systems board level solution for the Windows NT environment, combines 30 V.90-compatible modems and 60 ISDN B channels with dual T1/PRI interfaces. The dialup lines connect directly to the Ariel RS2000 cards.

Mounted in an Intel LB440 NT server, each server including two RS2000 cards (four T1/PRI interfaces and 48 lines per server) cost approximately $10,000.00 each. The company purchased ten servers with two cards per server. The RAS system solution is readily scaleable by simply adding additional servers with multiple RS2000 units. Because the units are stackable building blocks, the system is readily scaleable to handle large volume applications. Stackability also increases reliability and eliminates single points of failure, a key operating advantage. The company also looked at using an alternative router solution for their RAS system, but the overall cost of a Cisco system was $54,000 more for the same system capability.

The company's network connects to the Internet via a DS-3 PSTN (Public Switched Telephone Network) connection, which consists of 28 T1 with 24 lines per T1 for a total of 672 incoming lines by the end of July 2000. A Cisco router (supplied by the San Juan telephone company) in-line with an Intel 9520 Express Router connects the ten servers to

the Internet. The servers and routers are all connected via an Ethernet 100BaseT (100 Mbits per second) network. Five servers act as web hosts using Microsoft 2000 Internet Information Service software. One server is a dedicated banner server and one does all DNS and authentication. The company uses BIND for its DNS software, a new authentication software from Italy called NT Tac Plus, and iMail for their email software.

Installation and Performance

Initially, Net Zero PR engineers, trained for Cisco routers, had concerns about the installation of the servers and RS2000 cards. However, they discovered that it only took them three hours to set up and configure the first server including their hub and routers from Intel. The new ISP has been very pleased with the performance of the installed system. The system flawlessly handles all types of incoming calls, whether analog data, voice over IP, digital fax, fax over IP. The system connects very well with customers' dial-in modems because it automatically detects the type of incoming on a call-by-call basis and routes it to the appropriate modem or ISDN adapter.

The system operators use the RS2000's Java-based remote management tool to monitor an unlimited number of RS2000 ports located anywhere on the LAN or Internet. The tools include event logging that's compatible with third-party databases and system diagnostics reporting.

Summary

Net ZeroPR launched a free Internet service with free email for non-commercial residential users in their home city of San Juan, Puerto Rico. The company's business model is based on gathering detailed information from their residential users in a unique database that allows them to target advertisers' banner ads that meet their user's profiles at an extremely reasonable cost of only a few pennies per exposure.

For their business model to work effectively, the company needed to optimize their investment resources. After careful research, the company selected the PowerPOP open architecture for the Windows NT from Ariel Corporation for their RAS. Initially launching with 10 servers, each with two RS2000 cards, the company offered early stage capability of nearly 700 dial-up lines. Because the system is scaleable, the rapidly growing ISP can flexibly and easily add, install, and configure additional RAS capability.

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