Cdpd In Latin America Essay, Research Paper

MOBILE WIRELESS DATA:

A key success factor for business development in Latin American

Seven years ago cell phones technologies arrived to the Latin American countries and brought wireless voice communications, with that the develop of a new value-added service like CDPD emerge bringing wireless data transfer. Due to this technology business communities around Latin America had started to perform their productive activities more efficiently. Who does companies work with this technology?

Mobile wireless data is the transmission of digital information, through a wireless network, to radios that typically move throughout a geographic area. The success of mobile wireless data system had been limited, until the mid 1990?s, due to the high cost of service and equipment, and limited geographic coverage areas. In the mid 1990?s, service usage and equipment cost dropped due to competition and availability of applications and end user devices. Many wireless date systems are now available globally.

The Comprehensive Guide to Wireless Technologies tells as that there are several wireless technologies that are used for mobile wireless data. These technologies allow data rates to vary from a few kilobytes per second to several hundred kilobytes per second. Wireless data technology is commonly divided into two types of transmission: circuit switched data and packet switch data. Circuit switch data is characterized by the continuos connection between two points. Packet data is identified by the dividing of data into small packets that may take different routs between points.

Cellular Digital Packet Data (CDPD) is a wireless data transmission technology developed for use on cellular phone frequencies (824 ? 894 MHz). CDPD systems started service in the United States in 1994 and are deployed in several other countries in the Latin American countries and China.

CDPD uses cellular radio channels to transmit data in packets when the channels are not being used for voice communication. The CDPD system is a shared voice and data system. This technology offers data transfer rates of up to 19.2 Kbps, better error correction and quicker call set up than using modems on an analog cellular channel.

The user?s ?packet-data? ready laptop or other devices are called a Mobile End Station (MES). An antenna site, ?Base Station?, is called a Mobile Data Base Station (MDBS). The data switch or router is called a Mobile Data Intermediate System (MD-IS).

TECHNOLOGY DEPLOYMENT IN LATIN AMERICA

BISMARK International, Ltd. (?the Company?) is a leading telecommunications provider of packet data services for wireless data transmission, integration services, data capturing terminals, wireless Internet services, and wireless modem products in Latin America.

BISMARK provides access to local area networks, vehicle positioning systems, points of sale, ATMs, residential home alarms, mobile data capturing, remote sensors, telemetry, air e-mail and mobile Internet access.

The BISMARK team had successfully developed and provided solutions using CDPD (Cellular Digital Packet Data) technology. BISMARK?s value-added services are firmly grounded on a clear understanding and identification of its client?s telecommunications needs, especially in transactional settings, which demand security, speed, availability and mobility over different platforms and operating systems.

The wireless packet data technology uses a part of the cellular spectrum, based on data SWITCH infrastructure and data radio bases. These parts integrate into the MTX (voice SWITCH) and other cellular operator installed equipment.

Frequency use requires no concession. As it uses part of an existing cellular spectrum, this technology is referred to as a ?value-added service.? The regulatory bodies and cellular carriers in each country may and often do limit the number of value added service providers, in certain instances on an exclusive basis.

In the BISMARK?s Business Portfolio says that BISMARK?s problem of solving capability as well as the quality of the services it provides have captured the imagination of many important companies in Ecuador, Colombia and Venezuela many of which have become clients.

As of this date, BISMARK had sold more than 8,700 CDPD subscriptions, of which more than 2,200 had been activated, that is, dispatching CDPD traffic in Ecuador, Colombia y Venezuela.

Charts from the

BISMARK Business Portfolio

From the beginning of its operations, BISMARK has developed a great variety of products and services. BISMARK has developed and integrated more than fourteen vertical applications for CDPD.

A brief description of the main products and services of BISMARK?s products and services follows.

ATM

ATMs (Automatic Teller Machines) is currently the safest equipment designed to dispense cash to users. This equipment has given the financial sector the capacity to provide multiple electronic services such as deposits, money wiring, and phone card sales. The standard for packaged data telecommunications, CDPD, is the key factor of success for ATM connection.

Benefits

? Better coverage for Off-premise services (outside the financial institution)

? Mobile ATMs

? Low cost of transactions

? Low cost of installation

Remote access to LAN networks

This application enables management, sales force, and administrative personnel to have access to the company?s information from their homes, customer?s businesses, airports, and other distant places.

Costs associated with sales, distribution, and administration decreases with the utilization of the CDPD standard. This flexibility added to the easiness of installment, security, speed, and great availability has allowed companies to improve the quality and coverage of their services.

Benefits

? Access to information anytime and from anywhere

? Decrease in the cost of operational processes

? Increased efficiency in management decision making

? Working time efficiency, since the application allows a person to work from any place.

AVL

Vehicle location evolves around a positioning device that allows a computer to tell where a vehicle is located. Transmission towers are needed to locate the vehicle, and the information needs to be sent to a server which can tell the exact place in the map where the vehicle could be located. It is CDPD the technology that allows this information to travel through the network to a computer with a digitized map of the area, which enables the goal to be achieved.

Benefits

? Immediate location on a digitized map

? Anti-theft actions initiated automatically or from a remote location

? Option for a ?panic button? strategically located so that only the driver can have access to it

? Control and statistics of the vehicle?s gas consumption and other resources

Magic Box

This application lets television and radio programs conduct sales, contests and surveys, measure ratings and measure a host of other events using a remote device as the program is on air. The Magic Box system has a data base with information about the families affiliated to the service. Opinion sources can be identified precisely and public information can be greatly improved.

Benefits

? Televoto

? Auctions

? Purchase/Sale

? Education/Culture

? Rating measurement

? Opinion contests

? Runs over the free Linux operating system

Mobile data retrieval

CDPD technology is the key to successful mobile data retrieval. This technology enables a person to have on-line access to a company?s database while travelling from one place to another, gather production information, execute sales, and optimize inventories. Moreover, data can be captured through bar code readers and sent on-line to the administrative offices located in another city. The flexibility, security and high speed of the application has allowed private and public companies to improve the quality and coverage of their services.

Benefits

? On-line presale and autosale

? Distribution information

? For delivery companies such as DHL, Federal Express, and Servi-Entrega, packages can be located anytime

? Inventory and storage systems are being updated permanently

POS

POS (Point of Sale) are amongst the devices that currently dominate the e-commerce segment. Phone lines traditionally have been used for POS access. However, conventional phone lines have been designed for voice transmission only and not for data transmission. As a result, they face operational disadvantages such as installation time, maintenance, and poor service support and response times given rise CDPD POS access is a reliable alternative. POS provides opportunities to create new business. However, in order to achieve success, this technology requires a wireless communication network that can support all needs. CDPD technology has proven very effective for POS connections.

Benefits

? Immediate installation

? Availability of the communication network

? Decrease in the transaction process

? Increase in the amount per transaction (on-line authorization)

Electronic security

Of the many security applications developed by BISMARK, Alarm Link is the most promising. This technology connects alarm panels located in homes or businesses to access the CDPD network.

Benefits

? Wireless communication to control headquarters

? Quick delivery of alarm messages

? Control headquarters do not need PBX or substantial communications equipment

? High quality of data transmission

Remote wireless access control (CORDEI)

CORDEI was developed to allow remote personnel access and exit control on high security environments.

Benefits

? Centralized access control

? User data base

? Personnel activity, times, dates and other reports

Telemetry

Companies that produce devices and software for automatic industrial processes, data retrieval, control, and operations supervision use ?survey selection? protocols. These protocols use a great amount of control data in limited transmissions. BISMARK has integrated several solutions for the industrial sector for data acquisition, supervision, control, and invoicing that optimize the use of ?survey selection? protocols.

Benefits

? Control and integration reading to the SCADA system

? On-line invoice reading (electricity companies, water companies, and gas distributors)

Financial service counters

In order to expand their activities and supply a variety of low cost services, financial institutions and banks install bank branches in their client?s offices. These branches are referred to as financial service counters. On-premise services in places like factories, shopping malls, airports, hotels, offer huge advantages to both banks and their customers. Connection to the bank?s central processing systems requires only a computer and a CDPD modem.

Benefits

? Low initial investment cost

? Low fixed monthly cost for data transmission

? Immediate access to the bank?s communications network

? Easy and quick to install

Conavitel

Conavitel is a Home Banking system that allows a client to manage his bank transactions safely, comfortably and easily. The system comes with high-security software and new generation hardware that ensure secure transactions.

Benefits to the financial institution

? Convenience, speed, and security

? Decreased operation costs

? Personalized programming

? Remote updates from the bank

Wireless Host

With the BWH system, information can be captured, received and transmitted in real time, using wireless technology and a mobile CDPD from a handheld computer to any database.

Benefits

? Mobility

? Data base access in real time

? On-line access to client information

? Outrun competitors to client sites

In order to provide quality service, BISMARK invests heavily in research and development. Even though the cellular operators invest in infrastructure, BISMARK invests in the applications development and service support (Gateways and Help Desk) platforms. This provides access to the wireless network, software, support, modems and terminals, and customer integration, installation, and Help Desk services.

The industry standard for computer convergence, telecommunications, and content is Internet Protocol (IP) which in turn is the basis for 3G (Third Generation) applications. 3G will replace all voice and data platforms as of the year 2005. The current specifications for data transmission of CDPD technologies on TDMA networks will merge into the new 3G standards.

Some operators have decided to wait until 2002 to begin the implementation of a strategy to capture Wireless Data users. BISMARK, however, has concentrated all its efforts in developing the infrastructure and the software needed to penetrate the Wireless Data user market, in the knowledge that operators that focus on the wireless data market using IP platforms will dominate the industry.

Due to the poor quality of digital telecommunications in the Latin American countries, technologies such as CDPD allow the business community to perform their activities efficiently by the feedback of information through CDPD, within a totally secure and fast network connection of mobile wireless data transfer.

Bibliography

1) The Comprehensive Guide to Wireless Technologies by Lawrence Harte, Steven Kellogg, Richard Dreher and Tom Schaffnit.

2) The BISMARK?s Business Portfolio

3) Related web pages:

- www.bismark.net

- www.sierrawirelss.com

- www.novatel.com