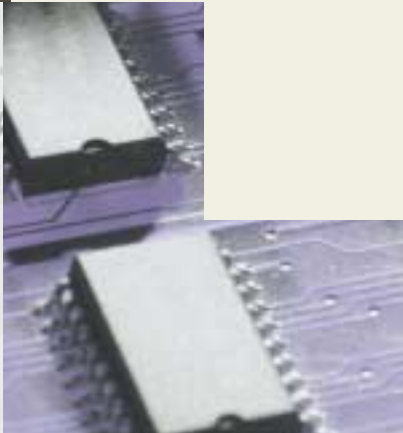




# APEX

BILLING SYSTEMS







APEX Voice Communications is a leading manufacturer of open architecture Enhanced Services platforms for Call Processing, Messaging and Billing. A responsive and innovative company, APEX Voice Communications has concentrated on providing fully featured platforms and scalable solutions for the telecom industry that are easy to use and maintain. Founders Ben Levy and Elhum Vahdat  started with an idea for open standards-based call processing systems in 1989 and have consistently expanded the vision to encompass the three primary areas that APEX sells into today. APEX supports customers worldwide, from large-scale service providers to growing companies in niche markets. With over 50% of their clients  internationally based, APEX is sensitive to the requirements of the international marketplace. In 1995, APEX opened its European office in Munich, Germany and in 1996, its Latin American office in Boca Raton, Florida. In 1998 APEX opened its Asian office in Hong Kong. 

your billing  
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## The All-In-One Accounting and Administrative Billing System

Today's telecommunications environment is characterized by enormous and profound changes affecting every aspect of our industry. Deregulation and new rulings, data and cable networks, mergers and acquisitions, as well as new companies and new products are changing the way we offer services. APEX Billing products are helping businesses keep up with these changes as they relate to pre- and post-billing requirements.

Your billing system is your lifeblood—you can't get paid for what you can't bill. More companies are finding that they need full control over this aspect of their business and are bringing it in-house.

The APEX Billing System is a comprehensive all-in-one billing platform with hardware scalability, modular software, customization services, training and 24 x 7 support. The APEX Billing System is designed to bill traditional services (long distance, carrier, travel card, wireless and callback) and Enhanced Services such as IP, voice/fax mail, prepaid and information services, to name a few.

### Enhanced Services Products

#### APEX Billing System

A complete turnkey all-in-one billing solution for traditional and Enhanced Services (long distance, travel card, carrier, wireless, callback, IP, voice/fax mail and prepaid).

#### APEX Prepaid System

A prepaid calling solution with complete call processing and debit accounting capability, unlimited expandability, distributed switching architecture and a Windows®-based interface.

#### OmniVox® Intelligent Call Processor (ICP)

A high-density platform supporting Enhanced Services including IVR, fax, switching, conferencing and messaging.

#### OmniView® Service Creation Environment

An award winning object-oriented application development and maintenance environment integrated with OmniVox.

#### OmniNet® Network Services Manager

An SNMP-based network services manager accessed via any Java-enabled browser for controlling and administering large LAN/WAN-based ICPs from a single location.

#### APEX Switch Manager

A Cisco-based switching platform and control processor for TDM and Next Generation IP networks.

#### APEX Media Gateway

An IP-based media platform for interactive applications on the Next Generation IP network.

#### APEX Wireless E-Mail


A solution that combines the Cellular/PCS network and the Internet, allowing subscribers to send, receive and reply to e-mail messages by mobile phone without using a computer.

#### APEX Messaging System

A voice, fax and e-mail messaging solution for large network messaging system operators (wireline/wireless).

APEX Billing System is a comprehensive all-in-one billing platform with hardware scalability, modular software, customization services, training and 24 x 7 support.





with APEX,  
you'll find a  
complete  
range of  
services that  
expand to  
meet the  
needs of your  
business.

## Controlling Your Business

It is essential that you have access and control over the information needed to run your business. APEX Billing is an accounting-oriented database that provides the flexibility to set things up the way you work. With APEX Billing, you'll find customizable features such as the use of groups and projects, which allow you to set up similarly-treated customers or unique operations. Our billing system provides transaction and general ledger codes for posting to your financial system, along with import and export of critical data.

For added security, our system includes a partitioned database so you can provide restricted access for systems serving multiple companies. In addition, our security features identify the individuals who make adjustments. Finally, APEX Billing features multi-level control, allowing transactions to be billed at different rates to multiple cost centers.

The APEX Billing System is a transaction-based call rating and billing system with full journaling capabilities. With APEX, you'll find a complete range of services that expand to meet the needs of your business. APEX Billing offers:

- **Product Based Rating**
- **A Management System**
- **Customer Service**
- **Modular Application Software**



## 1 Product Based Rating

'Products' contain all the information pertaining to the rating or billing of calls. Each product is a service offering that defines the variables associated with the rating and pricing of that service. You may create an unlimited number of products.

A product is defined by:

### Rating Schemes

The APEX Billing System contains a rating engine that allows for numerous rating schemes. Each rating scheme may have rates that are time of day sensitive.

**Flat** - Fixed rates for given locations.

**Zone** - User-grouped destinations. For example, Mexico zones, US Lata, etc:

**Zone Region Compare** - Compares regions and zones to determine the rate. Typical use is US-style rating with IntraLata, InterLata and InterState zones.

**Zone Region Compare With Mileage** - Same as above, but mileage-sensitive.

**Point To Point** - Origination to destination (Matrix).

### Timers

Tables can be defined to allow for the manipulation of the billable duration of a call.

### Info Digit Charges

One-time charges can be assessed to a call based on the incoming information digit.

### Fees

Allows for a fee to be charged against a billable entry (ANI, PIN, authorization code, etc.) on a recurring basis.

### Bong Charge

Parameters include start time in seconds from the beginning of the call, interval duration (how many seconds between charges), number of times to charge and amount to charge.

### Translations

Provides a means of assigning multiple destinations to a single destination code.

\*Examples for US: Rating by NPA, LATA, Mileage InterLata, IntraLata, Interstate, or user-defined zones. Examples for International: Rating by Country Code, City Code, User Defined Zones, Point to Point.

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secure partitioning  
maintains  
confidentiality  
among different  
service providers  
who share the  
same system.



## 2 Management System

Control, flexibility and ease of use allow network service providers to configure APEX Billing to precisely match their requirements—whether that be the management of multiple locations, prepaid card distribution and activation schemes, facility management and reporting or carrier reconciliation.

### Security Features

The APEX Billing System is scalable to handle the access requirements of your administrator and CSR on a local area network (LAN) or wide area network (WAN). Remote switches or service centers can be linked to the billing platform over the WAN.

The administrator sets up user access privileges so that certain types of data cannot be viewed or changed without permission. Secure partitioning maintains confidentiality among different service providers who share the same system. The prepaid modules support real-time verification of usage patterns for fraud detection.

APEX Billing utilizes a multiple-step commitment process for lot and batch management for prepaid card generation. This gives you the control needed for managing different distribution models and card activation schemes.

### Statement Information Generation and Printing

All necessary transactions to appropriately bill the customer, such as number roll-up and groupings, are included. APEX works with you to design appropriate invoices and statements.

### Reporting

Timely reports are essential in managing current activities and making informed decisions for future growth. The sophisticated Report Control System contains pre-defined reports for each licensed module and logs the date, time and user that last generated a report. The user simply selects a report, defines its output type and indicates the number of copies. Output may be sent directly to a printer or screen, or may be reformatted for Dbase, DIF, Excel, Lotus, MS Multiplan, Powersoft (PRS) or Windows MetaFile. It may also be viewed on the clipboard, in comma delimited and tab separated formats or in HTML. Third party reporting tools such as Crystal Reports may also be used to address custom reporting requirements.

The sophisticated Report Control System contains pre-defined reports for each licensed module and logs the date, time and user that last generated a report.



### 3 Customer Service

Customer service is on the front line with your customers. All of the services (modules) share a common database so the customer service representative can quickly and easily access any service record.

#### News and Announcements

Each day at log on, the CSR is presented with any news or announcement information you may wish to communicate. It is a convenient way to inform your personnel about any changes in policy or procedures, or to provide incentive or motivational programs.



#### Quick Query™

The CSR may use the Quick Query to select an account based on the full or partial information

available from the caller. Other fields may be selected using the Advanced Query portion of the Quick Query. This will allow the CSR to easily perform complex SQL queries with 'and/or' combinations and wildcarding.

#### Adjustments and Credits

All adjustments and credits generate a transaction record that can be reviewed by the administrator.

#### Trouble Ticket

A trouble ticket subsystem is available to issue trouble tickets for early notification of a problem. Service interruptions, outages or other types of problems can be tracked and resolved by the appropriate personnel.

#### Remarks

The remarks feature is used to place miscellaneous information about an account that should be read prior to talking to a customer.

### 4 Modular Application Software

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customer  
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A close-up, angled photograph of a mobile phone keypad. The focus is on a large, light blue rectangular button labeled 'SEND' in bold black capital letters. Above it are two smaller, oval-shaped buttons: one labeled 'CLR' and another partially visible one labeled 'PWR'. Below the 'SEND' button are several standard numeric keypad buttons: '1', '2 ABC', '3', '4', and '5 JKL'. The background is a soft, out-of-focus blue and purple gradient. The overall lighting is cool and modern.

flexible rating  
schemes and  
special reporting  
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services.



The APEX Billing System has a modular software design that enables you to purchase only the service modules you are interested in. You may add additional services at any time. All service modules have the same look and feel and are very simple to use.

### Long Distance

The Long Distance module is used for long distance toll billing. The pricing server calculates the amount of the call and sends the new amount to the specific ANI, CLI or authorization code of the call. This module also provides for project codes to aid the customer in analyzing the bill.

### Carrier

The Carrier module allows the transaction pricing server to process calls and price them based on trunk information or by carrier codes. Extensive traffic reports are available to help reconcile billed amounts with actual usage.

### Travel Card

The Travel Card module is used to bill the traditional travel

card service. Cards may have credit limits and may be refreshed at pre-defined intervals. The travel card may also take advantage of our Destination Control facility that allows for control of the



destinations that may be called or for the charging of rates to specific locales.

### Wireless

The Wireless module provides you with the information needed to track and control mobile phones. The ESN, SID and MIN are all available to the customer service personnel. MIN pools management and reporting is available. Flexible rating schemes and special reporting allow for the control and management of your wireless services.

### Prepaid Wireless

The Prepaid Wireless module contains all of the same features as the Wireless module with added information to control

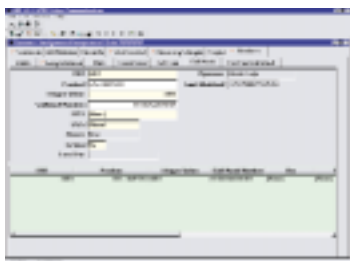
The Long Distance module is used for long distance toll billing. The pricing server calculates the amount of the call and sends the new amount to the specific ANI, CLI or authorization code of the call. The module provides for project codes to aid the customer in analyzing the bill.



the prepaid environment. Starting balances, adjustments, recharges and available funds are all available to the customer service personnel. A Destination Control facility can limit the destinations called or can change the rate to specific locales. Specialized reports designed for this module help you maintain and manage your prepaid wireless services.

### Callback

The Callback module allows you to set up the necessary information to provide callback services. This service allows for different triggering events to initiate a call. Callbacks may be triggered with DID, internet or any number of out-of-band triggers. Roaming features can be customized to fit the needs of your customer base.



### Prepaid Callback

The Prepaid Callback module contains all the Callback module capabilities but also adds the prepaid

requirements. Initial starting balances, adjustments, recharges and the remaining balance are available to the customer service

personnel.

### Paging

The Paging module is designed to maintain your pager database. This module contains all the pertinent information about the pager and billing information. Recurring charges and one-time fees may be applied as well as usage-sensitive billing.

### Prepaid Calling Cards

The Prepaid Calling Cards module provides the controls necessary to monitor and manage prepaid calling cards. Starting balances, adjustments, recharge amount and the amount available for use are all maintained so you always know the status of a customer's account. Cards may have pre-defined expiration dates or may be defined by the day of first use or last use.

### IP

Usage-based billing for the internet is a relatively new area in billing. APEX is well positioned to offer flexible and creative ways to bill packaged services on the internet. APEX Billing utilizes information from the softswitch or gatekeeper to turn Voice-Over-IP (VoIP) traffic into billable records. APEX Media

Gateways in combination with a softswitch add interactive services such as prepaid calling, IVR and messaging to your VoIP service. APEX Billing can bill for all these services.



**APEX billing  
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## System Architecture

The APEX Billing System may be used as a: 1) standalone post-billing system, utilizing billing tickets or call detail records (CDRs); 2) real-time billing when used with interactive call processing equipment or 3) a combination of both. The primary components of the system are:

### Billing Database Server

The APEX Billing database server is the primary repository for all billing data. It utilizes an Informix-based transaction processing relational database. It is designed for reliable and auditable transaction logging and security, comprehensive reporting and query, and has configuration options for high availability, database mirroring and scalability.

### Transaction Pricing Server (optional)

Calls may be received from multiple media sources and offloaded to a pricing server in high transaction processing environments. A call transaction parser analyzes the data and determines if the call is billable. Billable transactions are placed in the call transaction table. The pricing server will rate the calls and apply the charges to the appropriate account in the database server.

### Cisco Switching

APEX offers highly scalable switching systems based on Cisco's

VCO/4K open programmable switch. APEX's Switch Manager is integrated with the Cisco switch and, optionally, APEX's ICPs to provide intelligent call control and resource sharing within the switched environment. Both voice and data networks can be integrated and billed according to your requirements. APEX is a voice applications partner within the Cisco New World Ecosystem, supporting a range of Cisco products for your voice and data network requirements.


### OmniVox Intelligent Call Processor (ICP) and Media Platform

APEX utilizes a Dialogic-based PC switching platform for distributed call processing and real-time call control.

The APEX Billing System integrates the award-winning OmniView Service Creation tool for developing Enhanced Services. OmniVox supports automatic speech recognition, voice dialing, fax services, text-to-speech and IVR functions such as point-of-sale activation, recharge and information query.

### Interface to Other Switching Platforms

APEX Billing is a ticket-oriented transaction processing system and can process any type of CDR or billing ticket from any switch. APEX



The APEX Billing System integrates the award-winning OmniView Service Creation tool for developing Enhanced Services. OmniVox supports automatic speech recognition, voice dialing, fax services, text-to-speech and IVR functions such as point-of-sale activation, recharge and information query.

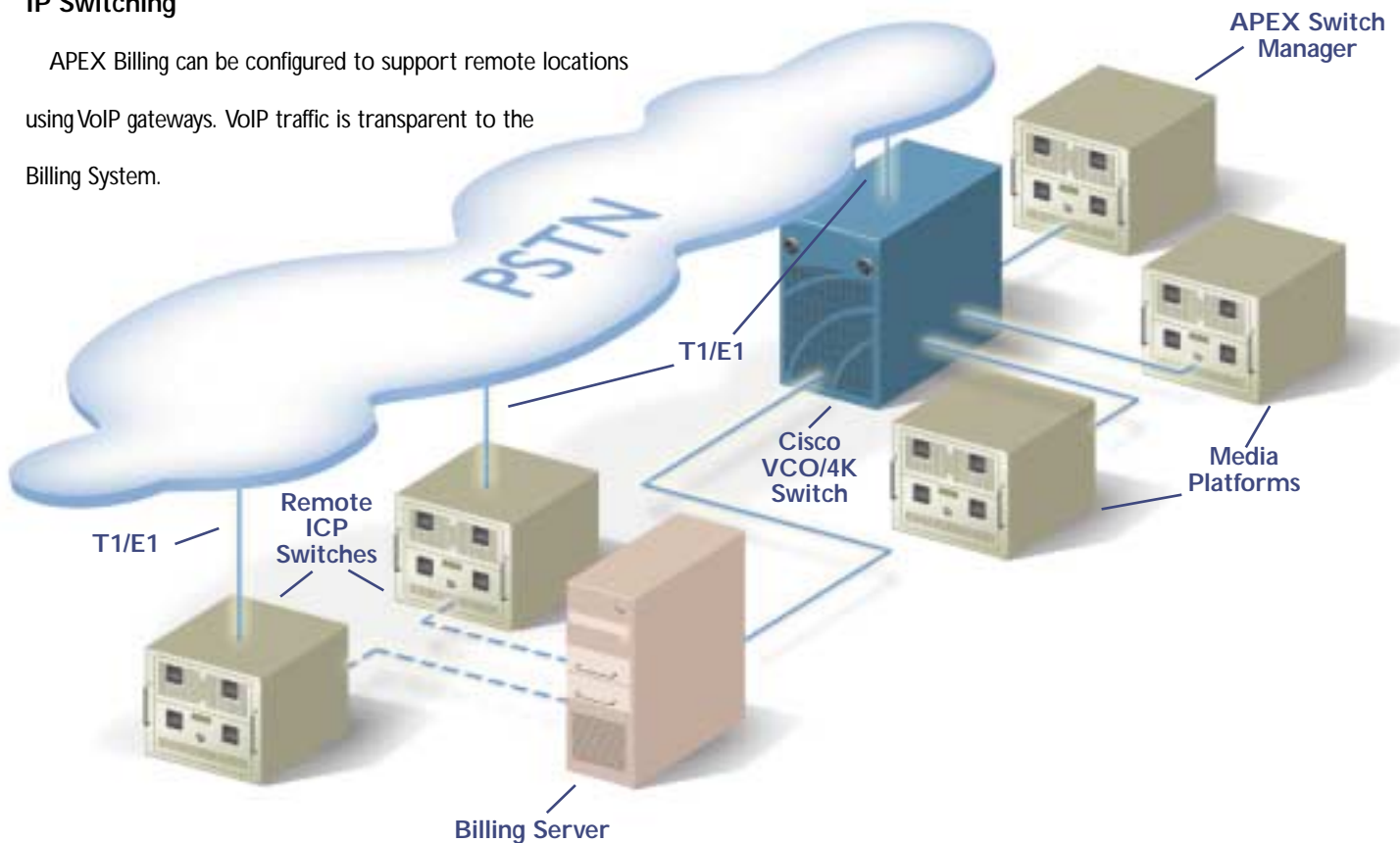


offers several standard formats as well as customization services for special interface requirements. APEX Billing has a Release Link Trunking (RLT) module that allows OmniVox Intelligent Call Processors to pass calls back (release) to the switch after call set up. This allows the billing system to utilize your existing switch and reduce the overall number of ports needed.

### IP Switching

APEX Billing can be configured to support remote locations using VoIP gateways. VoIP traffic is transparent to the Billing System.

## APEX Billing System Components



## Supporting Our Customers

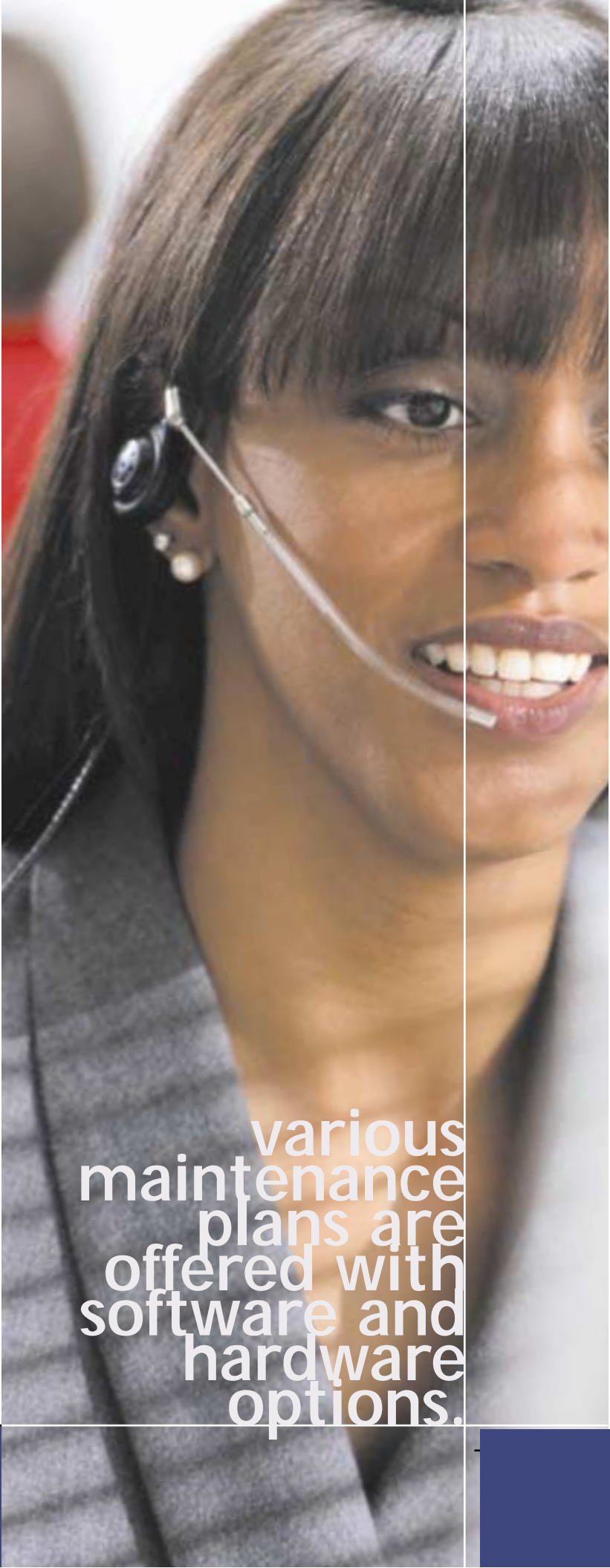
APEX Billing is serviced and supported worldwide by APEX's trained staff in regional offices in the eastern and western US, Europe, Asia and Latin America. APEX maintains a database and trouble report system to track problems and escalation procedures to the appropriate personnel.

A project manager is assigned to every new customer to guide you through the installation and training process. The project manager will review the requirements and coordinate APEX's resources for your project. Training is offered at our Corporate Training Center.

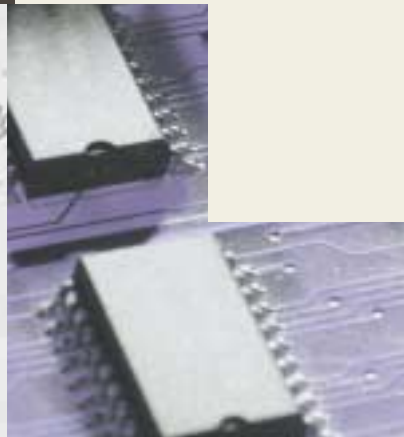
In addition to project planning, training and installation services, APEX offers customization services and custom application development.

Various maintenance plans are offered with software and hardware options. 24 x 7 service is available, along with plans geared to providing the necessary support at an affordable cost.

APEX Billing may be used with other APEX companion products such as APEX Messaging or OmniNet.



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