



# Product Description

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## **MIND CTI Ltd.**

Founded in 1995, MIND CTI Ltd. is a public company (NASDAQ: MNDO), a leading global provider of Call Management solutions to the enterprise market, and Billing and Customer Care solutions to the xSP market. MIND provides sales and support to its worldwide customers from offices in the United States, UK, Romania and Israel. With 300 employees and an experienced management team, MIND has a strong balance sheet and profitable operations.

With over 20,000 installations in more than 40 countries, MIND has rapidly become the solution of choice to major companies such as: Coca-Cola, Renault, Merck, NATO, European Parliament, Total, HSBC, Fidelity Investments, Sheraton, Urssaf, ACSA, Shinsei Bank, Intel, PwC (Pricewaterhouse Coopers) and many more. MIND sells its products through distributors and leading SI partners and is maintaining strategic relationships with blue chip technology partners such as Cisco, Avaya, Alcatel-Lucent and others.

MIND has a proven record in call management and accounting solutions since 1995. Through continuous research and development, MIND delivers state-of-the-art technology and advanced solutions that enable enterprises to manage, control, track, alert, budget and analyze their total telecommunication expenses and productivity. For companies that are aware of the importance and benefits of advanced call accounting and network management systems, MIND Call Management Solutions offer the most comprehensive, relevant and up-to-date solution.

## **MIND's Call Management Solution - PhonEX ONE**

PhonEX ONE is a comprehensive, flexible and fully web-based solution for call accounting management and control. It provides an intelligent tracking of all the traditional and VoIP calls, cellular activity, and data traffic. PhonEX ONE is scalable from a single site to monitoring call traffic in multinational organizations, as it can easily be adjusted to local languages and currencies. PhonEX ONE offers powerful reports in a system that runs itself, ensuring a quick return on investment and long-term usage. PhonEX ONE helps enterprises to reduce operational costs, improve employee productivity, monitor network activity, report usage trends and statistics, and optimize network resources.

PhonEX ONE's unsurpassed powerful query generator provides up-to-the-minute customized reports and graphs giving a total, centralized view of communication networks, allowing a comparative call and data analysis, strategic planning, auditing and reconciliation of the communication resources.

PhonEX ONE is a PBX independent platform, integrating with various network communications equipment, including IP PBXs, hybrid systems and traditional PBXs. It is capable of working with numerous other system elements such as Gateways, Gatekeepers and Routers. PhonEX ONE is certified against the latest versions of PBXs as Cisco UCM, Avaya CM, 3COM VCX, Siemens HiPath and BT ITS.

Based on advanced ASP.NET technology and the standard MS-SQL database, PhonEX ONE is designed with a modular architecture, residing in one or several servers, according to the enterprise size and environment. Customized for specific organization needs, the system can collect data from multiple sites simultaneously, thus creating information in very short periods of time.

PhonEX ONE allows users to independently generate and access reports automatically or at specific designated times. Reports can be sent automatically to a printer, file, or as electronic mail to the desired destination. PhonEX ONE also enables automated directory synchronization via LDAP (Lightweight Directory Access Protocol).

From the moment PhonEX ONE is installed, organizations are able to set budgets for different departments and projects, define taxes for special calls or differential tariffs for special days or periods, reduce telephone and bandwidth expenses, prevent telephone misuse by increasing employee awareness of efficient telephone use, and ensure that IP network resources are managed effectively.

## Benefit from PhonEX ONE

Due to increased communication usage, enterprises have experienced an increase in communication expenses to reach the top 5 items in the overall budget. By using PhonEX ONE's reports, network resources can be optimized and communication costs can be reduced by as much as 30%.

On average, 20% of the outgoing calls from businesses are non-business related. Implementing PhonEX ONE Call Management system helps enterprises to improve productivity and reduce the costs associated with employee business and private phone usage.

PhonEX ONE Alerter module will produce alerts whenever an abnormal behavior is identified. Early detection of network abuse or fraud will eliminate unnecessary costs.

In a convergent network supporting voice, video and data, PhonEX ONE is able to manage multi-service networks and allows an efficient control of budgets across the enterprise, its business units and users.

Unlike traditional PSTN calls, VoIP calls may present poor call quality. PhonEX ONE QoS feature enables identification of unacceptable performance and helps in negotiations with network providers.

PhonEX ONE is a powerful system which runs itself ensuring long-term usage and fast ROI.

## PhonEX ONE Features - Summary

- Fully web-based solution for easy access from anywhere and at any time
- User-centric application, allows a complete view of user's communication usage
- Modular architecture, supporting an unlimited number of sites and extensions
- Easy to install, fast to generate and drill down reports, and a user friendly interface enables exporting to various types of files
- Graphical representation of reports data providing the possibility to observe comparisons, patterns and trends
- Converged reporting of nearly all legacy and IP PBXs, and other communication sources including mobile operators data and information
- Query generator enabling the creation of unlimited number of custom reports
- Completely customizable dashboard monitors (designed using the Silverlight technology) that offer the flexibility to analyze and interpret the most important elements in the system in order to improve business analysis and decision-making
- Basic reporting functionalities (Dashboard monitors) available on Smartphones
- Traffic reports to monitor peak loads and bandwidth utilization
- Matrix charts offering the possibility to visualize multiple data series in a single chart and allows for quick comparisons between several entities
- Advanced Report Scheduler, automatically sends reports to a printer, file or email
- Near real-time monitoring and alerting and full visualization anywhere, anytime
- Multi P&L units, multilingual, multicurrency and multi CDR capability
- Dynamic hierarchy structure with an unlimited number of hierarchy levels
- Easily adjusts to organization hierarchies
- Automatically synchronizes with organizations Active Directory, LDAP, ODBC, File and Cisco AXL
- Supports business and personal call definitions
- Scheduled import available (hourly, daily, weekly and monthly)
- Bill Verification tool to identify hidden costs or problematic billing areas in telephony environments
- Monitors call Quality of Service (QoS)
- Real-time fraud alert

- ASP.NET technology to conform to company security policies
- Silverlight platform for developing an interactive Dashboard tool
- Enhanced security: access limitation on a user and group basis and enhanced protection from unauthorized users based on SSL encryption
- Supports server virtualization technology, which allows consolidating servers and using hardware more efficiently
- The most important processes (data collection and processing, fraud prevention, monitoring and alerting, reports generation and distribution) are executed as PhonEX ONE - specific Windows services
- Database structure based on Microsoft SQL database
- Event log for auditing and tracking system behavior including system violation logs
- Automatic alarms for 911, 411/112 and malicious calls

## PhonEX ONE Architecture

### Fully Web-based Solution

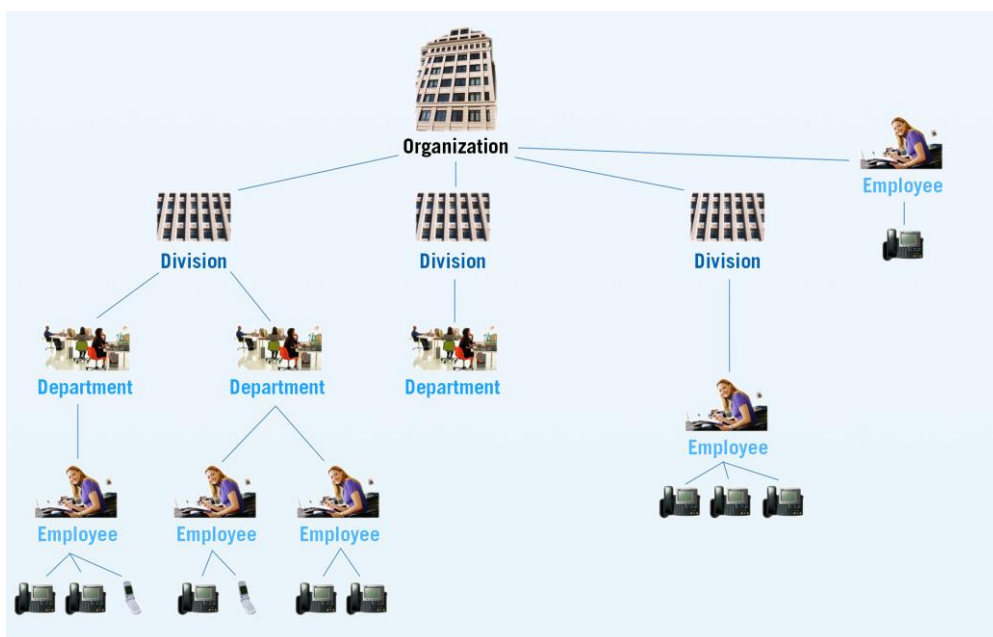
PhonEX ONE is a true web-based call management solution that enables managers and users to conveniently configure, administer, rate and access their telecommunication system at anytime and from anywhere. PhonEX ONE is designed using the Microsoft .Net technology and has extensive configuration capabilities using XML files with Server - Client interaction. The SSL encryption pro WHFWV WKH VHFUXULW\ RI DOO VHVVLQRQV¶ SDVVZRUG RI WKH DGPLQLVWUDWRUV¶ DQG XVHU¶V LQIRUPDWLRQ

### User-Centric

PhonEX ONE user-centered architecture provides a consolidated solution for collection, analysis, reporting and managing of all telecommunication and data traffic expenses. This provides a single point of reporting (employee based) for different telecommunication and data devices and services, such as office extension, home extension, soft phone, mobile phone gateways, SIP devices, routers and data traffic service. The user-centric and cross billing reports capabilities provide consolidated telephony and tracking of network traffic expenses for the various device types assigned to employees. As an enhancement, PhonEX ONE also supports DATA collection from different network elements that provide additional dimensions to the employee.

### Dynamic Hierarchy

PhonEX ONE features a dynamic hierarchy structure supporting an unlimited number of sites, hierarchies and extensions. Any complex hierarchy can be implemented in the PhonEX ONE hierarchy tables, while employees can be associated to any complex hierarchy level, including the Organization level, as described below:



**PhonEX ONE Hierarchy Layout**

## SQL Database

The PhonEX ONE database benefits from the power of the standard and open database architecture. The SQL database allows several users to have simultaneous access to the PhonEX ONE database and to query it using their own tools. The dual databases architecture - detailed and summary - is also part of the SQL product. This architecture increases the report production speed and makes the integration with other systems simpler.

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**Note:** The PhonEX ONE database should not be restricted in size.

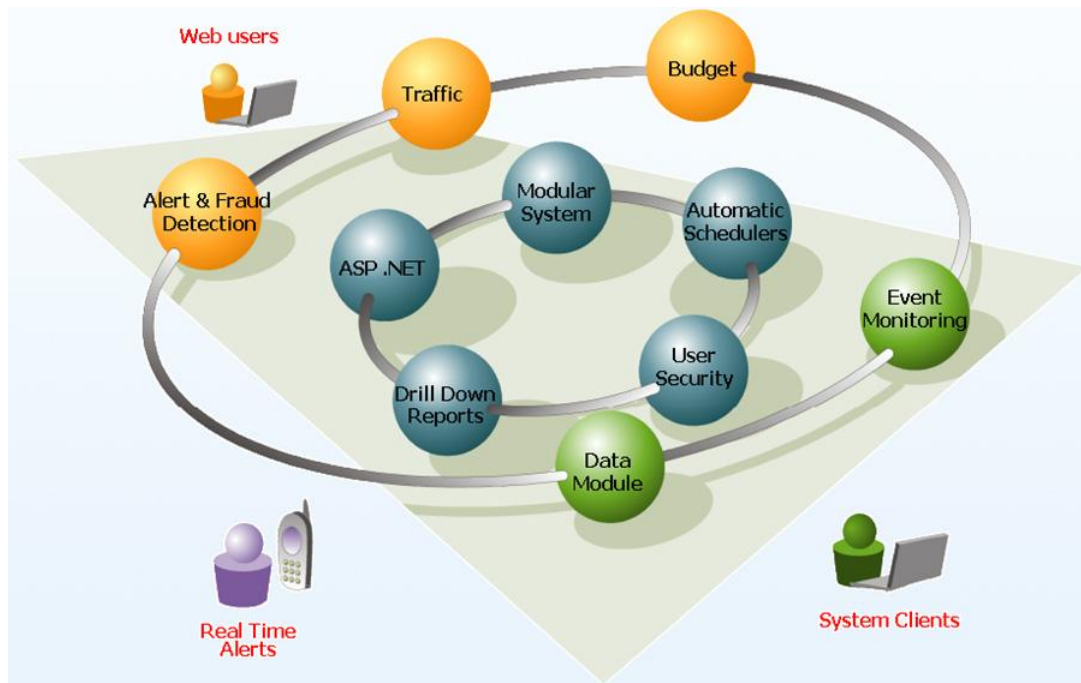
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## MS SQL Express Database

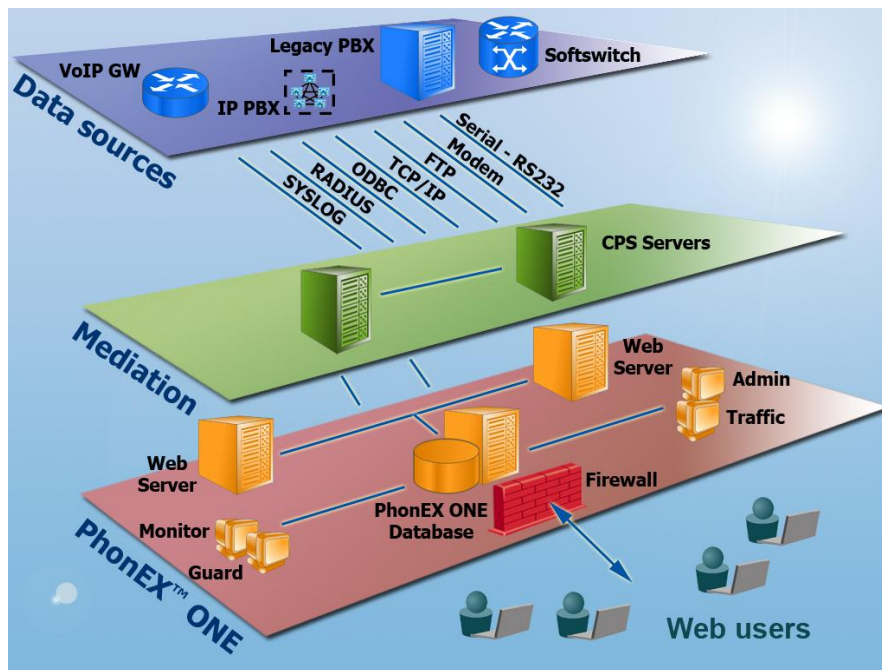
The PhonEX ONE system supports the MS SQL Express database, which is a free Microsoft SQL edition, a lightweight and embeddable version and the recommended solution for small enterprises. This database provides powerful and reliable data management tools, along with rich features, data protection and fast performance.

## Modular Architecture

3KRQ(; 21(1V VFDODEOH DQG R Configuration and Forwarding Platform H options allow completely customized solution which can be adapted to the unique needs of any customer. Modularity enables further configuration even while the system is running, without interrupting traffic.



**PhonEX ONE Architecture**



**PhonEX ONE Architecture**

The PhonEX ONE system consists of three key servers: a Database server, an Applications server and a Web server. The entire PhonEX ONE system can be installed on a single server or on separate servers. The following sections briefly describe several common hardware configuration options:

### Single Server

The Single Server configuration integrates all three PhonEX ONE servers in one server. This is a typical basic installation which is suitable for small to medium-size organizations.

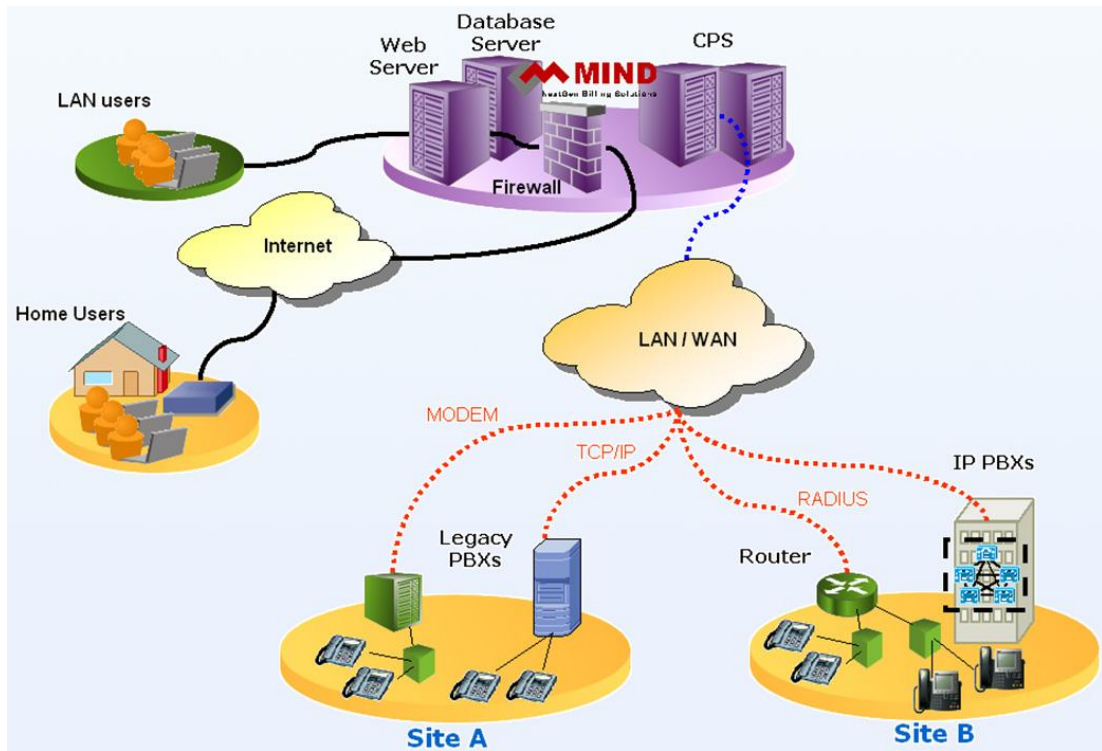
### Multiple Servers

The Multiple Servers configuration consists of three servers: a Web Server, an Application Server and a Database Server. This configuration is most suitable for large enterprises, as it allows for a large storage capacity and an increase of the processing power. This configuration also solves performance and scalability issues that occur when using a single physical server, even if equipped with additional memory and/or increased processor speed.

the Web simultaneously, while inquiring the Database and requiring reports. In this situation the Web Server, Application Server and Database Server may be installed on separate hardware servers so that data collection and call costing jobs, which run on the Application Server, are not affected by a large number of Web users.

### Multiple Application Servers

The Multiple Application Servers configuration is useful for increasing the scalability of the collection and costing processes of PhonEX ONE. For example, data can be collected and rated simultaneously from several Sites.



**PhonEX ONE Solution Architecture**

**Note:** PhonEX ONE supports server virtualization technology, which allows the user to consolidate servers and use hardware more efficiently.

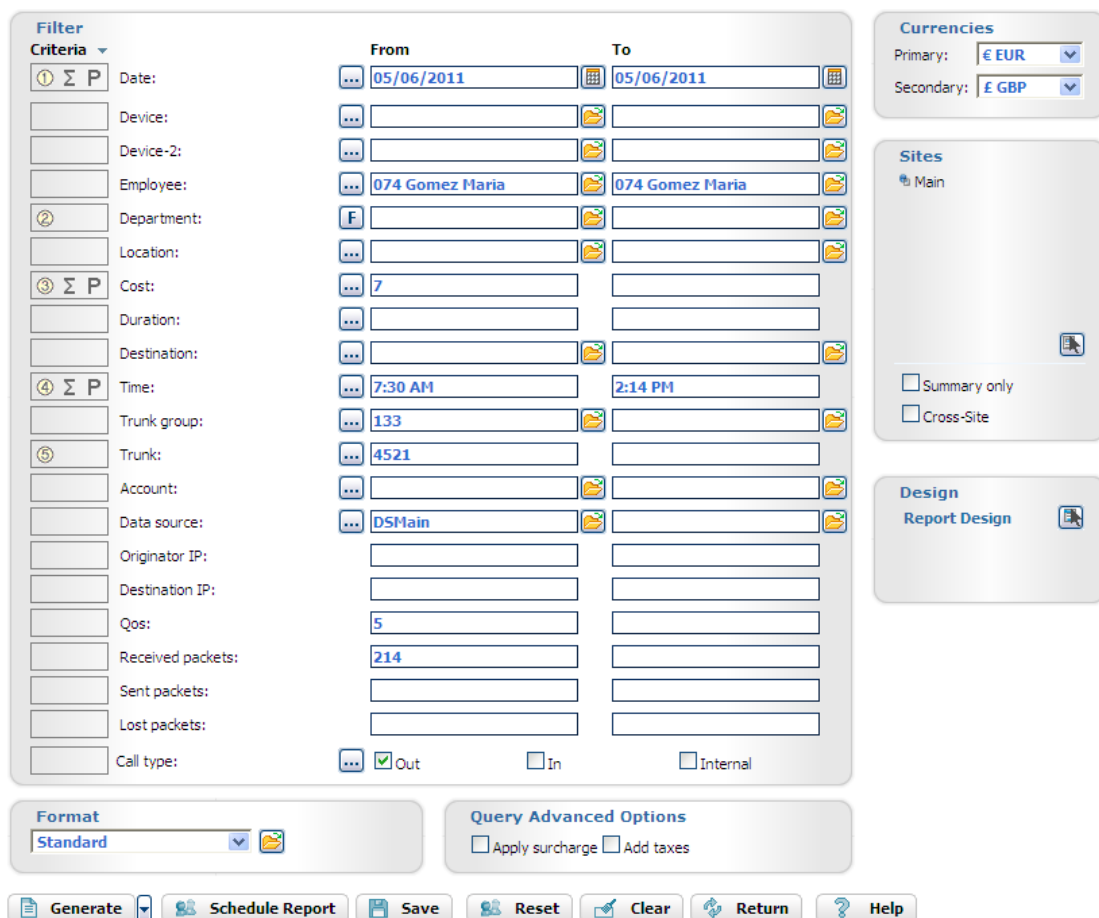
## PhonEX ONE Reports

PhonEX ONE offers a series of advanced features that facilitate report production and viewing. PhonEX ONE produces quick and clear reports on almost every aspect of the communications system and time resolution, tailored to suit individual needs. PhonEX ONE provides full or partial monitoring capability of telephone, fax and modem usage for the entire enterprise. Whether minute-by-minute updates, monthly reports or data on long-term usage patterns are required, PhonEX ONE supplies with this information. Reports can be produced for any hierarchical level of the enterprise and can be presented in detailed tabular form with summary and graphical options.

PhonEX ONE includes eleven predefined standard query reports meant to help the users handle the query definition process more easily.

### Query Generator

The PhonEX ONE system's query is a fast and powerful feature that enables unlimited number of custom reports with exactly the information required. A query form helps users select, sort and summarize data and also format reports. PhonEX ONE allows users to store and re-use their own custom queries, to define customized report layouts and to export information to various external systems in many possible formats.



The screenshot displays the 'Standard Query' form in PhonEX ONE. It is organized into several sections:

- Filter Criteria:** A vertical list of fields for filtering data, including Date, Device, Employee, Department, Location, Cost, Duration, Destination, Time, Trunk group, Trunk, Account, Data source, Originator IP, Destination IP, Qos, Received packets, Sent packets, Lost packets, and Call type. Each field has a dropdown menu and a search icon.
- From/To Fields:** A central area with two columns, 'From' and 'To', for specifying date ranges and other parameters. The 'Date' row is populated with '05/06/2011' in both columns. Other rows include 'Employee' (074 Gomez Maria), 'Department' (F), 'Time' (7:30 AM to 2:14 PM), 'Trunk group' (133), 'Trunk' (4521), and 'Data source' (DSMain).
- Currencies:** A section on the right with 'Primary' set to '€ EUR' and 'Secondary' set to '£ GBP'.
- Sites:** A section on the right with 'Main' selected.
- Design:** A section on the right with 'Report Design' selected.
- Format:** A dropdown menu at the bottom left set to 'Standard'.
- Query Advanced Options:** Checkboxes for 'Apply surcharge' and 'Add taxes'.
- Buttons:** A row of action buttons at the bottom: Generate, Schedule Report, Save, Reset, Clear, Return, and Help.

### PhonEX ONE - Standard Query

## Dashboard

PhonEX ONE Dashboard is a management and reporting tool that provides business users with an at-a-glance and relevant perspective on the current status of their business. The Dashboard is an interactive and feature-rich graphical representation of system data that offers users the flexibility to analyze and interpret the most important elements in their system in order to improve business analysis and decision-making.



**PhonEX ONE Dashboard**

The **Outgoing Calls, Incoming Calls, Incoming Call Analysis, Device Summaries, QoS Distribution, Device Type Statistics, Top Carriers, Carrier Statistics, Unified Traffic, Call Volumes, Top Destinations, Comparative Trunk Group Volumes and Top Calls** dashboard monitors are completely customizable in order to meet the specific requirements of each user and provide the quick answers to key questions with one simple glance.

## Reports Layout

The PhonEX ONE standard and query reports are generated in the Crystal Reports format. Crystal Reports allow users to examine all report information online, select graphical representations of the data, print the report, or send it by email.

Action  Printer

Find... 24 of 92

06/15/2011

Site: Main

### Query Calls Sorted By Employees 01/01/2008 - 12/31/2009 Call direction Out

Device	Employee	Organizatio	Date	Day	Time	Duration	Cost (€)	Dialed number	
014	1008 Stinson Craig	14 Eastern	01/13/2009	Tue	1:19 PM	0:27:47	4.45	0034515303130	
014	1008 Stinson Craig	14 Eastern	01/13/2009	Tue	3:02 PM	0:10:48	7.91	0060259129281	
014	1008 Stinson Craig	14 Eastern	01/13/2009	Tue	3:11 PM	0:10:31	8.95	0051231544310	
014	1008 Stinson Craig	14 Eastern	01/13/2009	Tue	3:36 PM	0:18:51	0.00	2860973	
014	1008 Stinson Craig	14 Eastern	01/13/2009	Tue	3:48 PM	0:09:44	1.00	064381608	
014	1008 Stinson Craig	14 Eastern	01/13/2009	Tue	5:03 PM	0:05:56	0.00	9530464	
014	1008 Stinson Craig	14 Eastern	01/13/2009	Tue	7:45 PM	0:27:33	0.78	068640834	
014	1008 Stinson Craig	14 Eastern	01/13/2009	Tue	9:34 PM	0:17:39	0.00	3560319	
014	1008 Stinson Craig	14 Eastern	01/13/2009	Tue	10:28 PM	0:26:43	0.00	8443419	
014	1008 Stinson Craig	14 Eastern	01/13/2009	Tue	11:30 PM	0:09:37	0.31	050960422	
014	1008 Stinson Craig	14 Eastern	01/13/2009	Tue	11:36 PM	0:20:08	3.30	0015577327143	
Total 81 calls for Employee 1008 Stinson Craig:							<b>21:37:46</b>	<b>425.81</b>	
015	1019 Neuhaus Trudy	11 Europe	01/16/2009	Fri	1:57 AM	0:17:10	14.44	0051722804888	
015	1019 Neuhaus Trudy	11 Europe	01/16/2009	Fri	6:50 AM	0:08:42	0.29	091948301	
015	1019 Neuhaus Trudy	11 Europe	01/16/2009	Fri	7:24 AM	0:11:06	4.88	0037064123753	
015	1019 Neuhaus Trudy	11 Europe	01/16/2009	Fri	7:47 AM	0:04:30	0.00	6209829	
015	1019 Neuhaus Trudy	11 Europe	01/16/2009	Fri	9:38 AM	0:22:14	0.00	2002745	
015	1019 Neuhaus Trudy	11 Europe	01/16/2009	Fri	9:39 AM	0:00:40	0.36	0011666166353	
015	1019 Neuhaus Trudy	11 Europe	01/16/2009	Fri	10:15 AM	0:27:58	0.00	1770221874	

**Sample Portion of a PhonEX ONE Report**

### Drill-down Reports

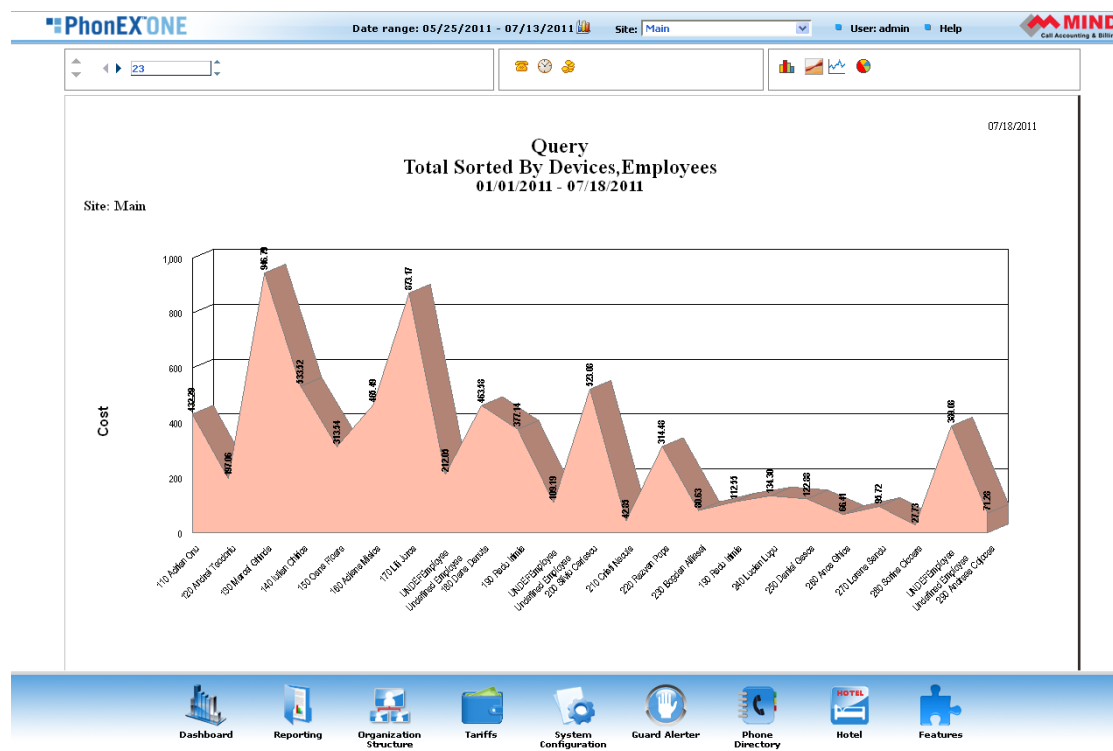
PhonEX ONE web-based drill-down reporting features give users easy, flexible and faster access to database information. The extensive reporting drill-down capabilities help users to better monitor their summary report information. Once a report is produced, administrators can drill into different hierarchies without having to reproduce the same report over and over again.

### “Cross-Site” Option

Some reports support cross-site summaries that are displayed on the last page for all the selected sites together. This information is very important for those users who need to see the summary information across their organization.

### “View Chart” Option

All the reports in summary format and most of the standard reports (*Summary, Location Summary, Account Summary, Cost Distribution by Employee, Cost Distribution by Department, Top Employees, Top Destinations, Monthly Activity and Organizational Monthly Activity*) can be presented graphically. Each chart can be displayed in one of the four styles: vertical bar chart, area chart, line chart and pie chart.



Sample of Report Graph

### “What if ...” Report

3:KDW LI´ UHSRUW DOORZV XVHUV WR FRPSDUH WKH UHDO FRVW R same calls as if they were made using an alternative carrier, or an alternative origin of call. The user can see at a glance if it is cheaper to use a different carrier for certain calls to a specific destination. The report displays the difference between the real cost and the calculated cost for the selected carrier as a percentage. It lists the real cost of the call next to the cost according to the alternate carrier. PhonEX ONE can create a summary report showing the call cost information for up to six different carriers simultaneously.

### Advanced Report Scheduler

The PhonEX ONE Scheduler allows queries and reports to be programmed to run at specific times. The Scheduler can perform a task on a one-time basis, or schedule it to run at regular intervals. The output of the task can be sent automatically to a printer, file or electronic mail.

### Pre-Defined Reports

PhonEX ONE includes several pre-defined standard report formats often required by a telecommunications manager. These reports were designed following a close consultation with customers. Additionally, a user-friendly interface allows report formats to be created according to specific user needs.

PhonEX ONE provides the following built-in, predefined reports to easily track inappropriate telephone use. These reports are especially designed for accelerated reports generation using the system's intelligent database:

- Summary
- Location Summary
- Account Summary
- Monthly Activity
- Organizational Monthly Activity
- Employee Details
- Account Details
- Cost Distribution by Employee
- Cost Distribution by Department
- Overrun Calls
- Top Employees
- Top Destinations
- Unused Devices
- Undefined Devices
- Undefined Accounts
- Trunk Group Trends

## Summary Reports

PhonEX ONE provides the user with a built-in tool for the easy generation of summary reports. The user can generate a full summary in a few of seconds for the entire enterprise or fixed monthly costs for extensions and taxes as defined by the user. The summary reports can be automatically distributed via e-mail. A stacked column chart is available for all Summary reports.

### Location Summary

This report includes all telephone calls for a selected location and all the calls that are associated with employees linked to a location. The user can generate a general report for the entire enterprise or specify a certain location. The chart feature is available for the *Location Summary* report when either the *Organization* or the *Locations* report level is selected in the report configuration page.

### Account Summary

This report produces a summary of the activity of all the defined accounts and includes a graphical representation of the report data as a bar chart.

### Monthly Activity

The Monthly Activity report details the call activity (cost, calls and hours) per month, beginning

with the last month in the report and going back a designated number of months. An average of the months is also listed.

### **Organizational Monthly Activity**

The report details the call activity per month, beginning with the last month in report and going back a designated number of months for each of the designated levels of the report.

### **Employee Details**

This report provides a detailed listing of all the outgoing and incoming calls for a specified employee. The report has two formats: Call details and Totals. The Call details report is an extended report that displays all call details, while the Totals report is a summary report that displays one item per page.

### **Account Details**

This report provides details of all the defined accounts, the calls placed on every account and a report about the budget of each account.

### **Cost Distribution by Employee/ Device**

This report shows the percentage of the total call cost as distributed among the employees/devices within a department. It also shows the percentage of the total call cost as distributed among destination types for a single employee/device. The report can be visualized as a pie chart that includes one organization unit per page and displays all the destination type entries from the report.

### **Cost Distribution by Department**

This report shows the percentage of the total call cost as distributed among the different levels of an enterprise, sorted by division and department. The *Cost Distribution By Department* report includes a graphical representation of the data as a bar chart.

### **Overrun Calls**

The Overrun Calls report provides up-to-the-minute information on the specific employees that exceed the established user-defined limits.

### **Top Employees/ Devices**

The Top Employees report displays the most widely used devices in an enterprise (in terms of duration, number of calls) or the most expensive ones. The report functionality allows generating either a top employees or a top devices report. The calls are sorted by duration, cost and number of calls and grouped by device, employee, employee-device, employee-unit or by employee-device-unit. A bar chart is available for all Top Employees/Devices reports.

### **Top Destinations**

This report includes the destinations most extensively called in an enterprise or the most expensive ones. The report offers the possibility to choose the entity that will be regarded as destination - *Dialed Numbers*, *Destinations (Phones)*, *Destination Groups (Phone Groups)* or

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*Destination Types.* Calls are sorted by duration, cost and number of calls.

The drill-down reports take into consideration the assignments that can exist between an employee (device) and various devices (employees), organization units or both devices and organization units for the drill-down destination number. The report is also filtered and sorted by the same options as the previous report. The report includes a graphical representation of the data as a bar chart.

### **Unused Devices**

The Unused Devices report displays the devices that were only used for certain call types. The main information displayed in the report is device and employee. The report also displays the devices that were not used on a given time period. No other standard report provides information about these devices. The report offers the possibility to easily see all the devices, along with the employees they belonged to, that are not used (that is, that have no calls at all) or that were only used for certain call types.

### **Undefined Devices**

This report provides users with a summary of calls on all the devices within the system that have not been assigned to any department. This report is useful to find new devices installed on the IP PBX which have not been defined in PhonEX ONE yet.

### **Undefined Accounts**

This report allows the user to access a summary of the calls made on accounts that have not been defined in the system.

### **Trunk Group Trends**

The *Trunk Group Trends* standard traffic report and chart include the possibility to highlight peak values that exceed certain threshold ranges defined by each user, in order to provide more relevant information that allows them to create analysis and take decisions. Three threshold ranges that must not overlap can be defined and employed in order to highlight peak values using three pre-defined colors.

## **Traffic Reports**

Traffic reports are used to monitor and analyze loads, utilize and optimize bandwidth and make decisions on required or redundant network resources using four different types of reports: Daily, Peak, Average and Sizing.

### **Traffic Reports - Sites**

In multisite configurations, the user can generate traffic reports that cover several sites. These traffic reports summarize all the departments for each selected site, and also provide a summary page for the common departments. Traffic reports are applicable when all the sites share the same hierarchical structure and when common departments spread over several sites have the same code defined.

## Traffic Reports – Currencies

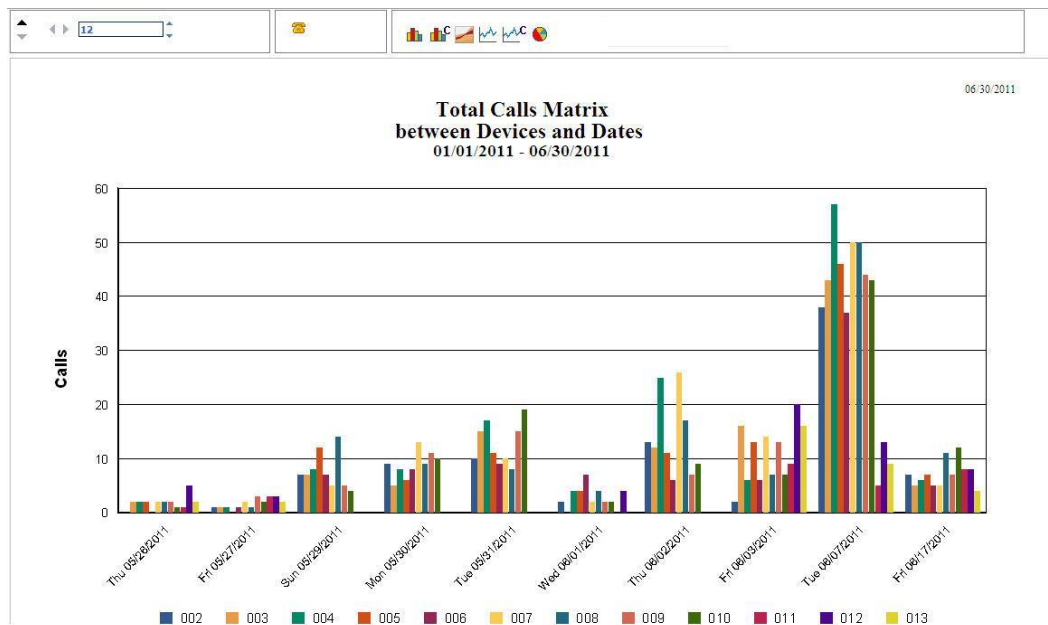
PhonEX ONE Traffic can configure each site and tariff company with local currency parameters.

## Matrix Queries

A **Matrix Query Report** represents a matrix between two (X; Y) or three (X; Y; Z) selected categories. **Matrix Query** reports offer users the possibility to get a different view of the data already existing in the database, displayed in a different format. Matrix Queries can be used in order to generate table-like reports, with summarized information for different combinations of the system entities.

## Matrix Queries - Chart Types

Each chart can be displayed in one of the six styles: vertical bar chart, bars comparison chart (multiple series), area chart, line chart, lines comparison chart (multiple series) and pie chart.



**'Total Calls Matrix Report' - Bars Comparison chart**

The **Bars Comparison** and **Lines Comparison** charts allow for comparisons between several specified entities. These types of charts can be used to show multiple series and to provide comparison capabilities in matrix charts.

## Other Report Features

PhonEX ONE offers a series of advanced features that facilitate report production and viewing.

## Relative Dates

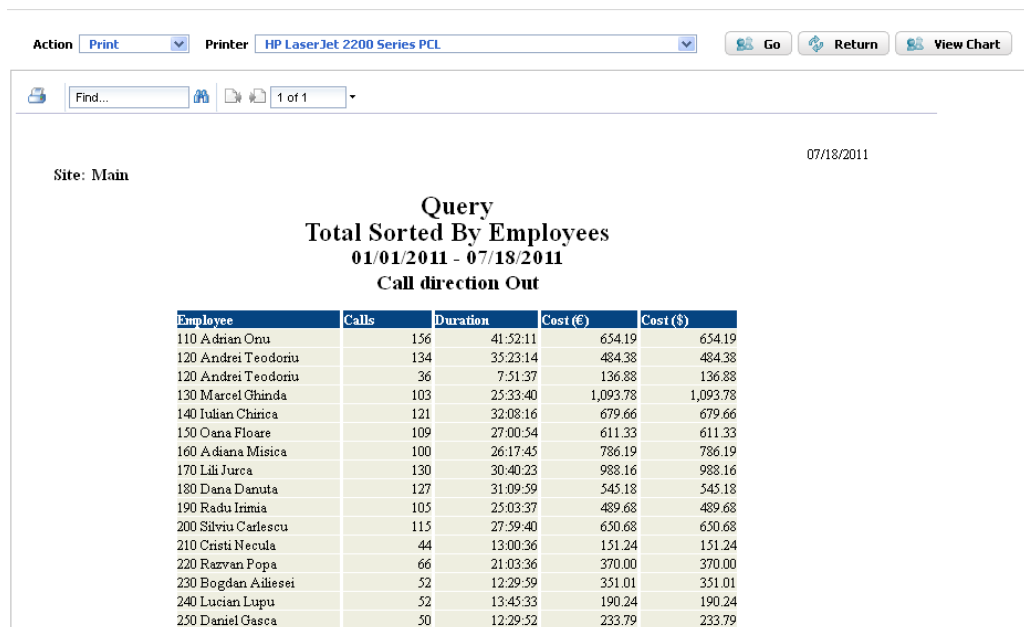
For user convenience, PhonEX ONE offers the option to use date codes in Standard Reports and Queries options.

## Report Output Options

All the reports have the option to be saved, printed or e-mailed as a Text file (\*.TXT), Word document (\*.DOC), Excel document (\*.XLS), Acrobat Document (\*.PDF), Crystal Report (\*.RPT). Web page (\*.HTML), Export delimited (\*.CSV) and as a Rich Text Format document (\*.RTF). In addition, a user-friendly interface allows report formats to be created according to the requirements of various accounting applications.

## Multicurrency and Multilanguage Capabilities

PhonEX ONE can be used in multinational, global organizations since it easily adapts to local currencies and languages. There are nine international languages available in PhonEX ONE and additional languages can be added if specifically required. PhonEX ONE can configure each site and tariff company with local currency parameters, and can generate reports in two currencies simultaneously (i.e. Euro and USD), fulfilling the multisite environment in different countries.



Site: Main 07/18/2011

**Query  
Total Sorted By Employees  
01/01/2011 - 07/18/2011  
Call direction Out**

Employee	Calls	Duration	Cost (€)	Cost (\$)
110 Adrian Onu	156	41:52:11	654.19	654.19
120 Andrei Teodoriu	134	35:23:14	484.38	484.38
120 Andrei Teodoriu	36	7:51:37	136.88	136.88
130 Marcel Ghinda	103	25:33:40	1,093.78	1,093.78
140 Iulian Chirica	121	32:08:16	679.66	679.66
150 Oana Floare	109	27:00:54	611.33	611.33
160 Adriana Mistică	100	26:17:45	786.19	786.19
170 Lili Jurca	130	30:40:23	988.16	988.16
180 Dana Damuta	127	31:09:59	545.18	545.18
190 Radu Irimia	105	25:03:37	489.68	489.68
200 Silviu Carlescu	115	27:59:40	650.68	650.68
210 Cristi Necula	44	13:00:36	151.24	151.24
220 Razvan Popa	66	21:03:36	370.00	370.00
230 Bogdan Ailisei	52	12:29:59	351.01	351.01
240 Lucian Lupu	52	13:45:33	190.24	190.24
250 Daniel Gasca	50	12:29:52	233.79	233.79

*Sample of report showing multicurrency abilities*

## Multi CDR

PhonEX ONE system is independent of communication systems platform (Legacy, VoIP) and resilient to capture DQG UHSRUW RQ DFWLYLW\ RI PXOWLSOH VRXUFHV V X routers, gateways, phone cards, sip devices, conferencing and more.

## Mediation

### PBX Data Collection

PhonEX ONE is easily integrated with most PBXs through the CDR/SMDR port or via a network connection. The exclusive system architecture allows for fast and easy installation and configuration for each Call Detail Record (CDR) format provided by most PBX's, including multiple line call data records.

PhonEX ONE has a flexible interface to interconnect to PBXs. PhonEX ONE supports an unlimited number of CDR formats, includes several common default interfaces and uses a flexible user interface for easy definition or editing of CDR formats. PhonEX ONE is capable of collecting call records from an unlimited number of data sources, using various connection methods, such as MODEM, Scannex NetBuffer, Microsoft OCS DB, Cisco UCM version 5.1/6.x/7.x, 3COMNBX, Alcatel OmniPCX Enterprise, ODBC and more. The modular architecture gives the system the required flexibility, adjusted to large enterprises with high Voice and VoIP traffic.

Major PBX vendors are supported, including 3Com, Alcatel, AVAYA, BT, Bosch, Cisco, Ericsson, Lucent, Matra, Mitel, NEC, Nortel, Panasonic, Phillips, SDX, Siemens and others.

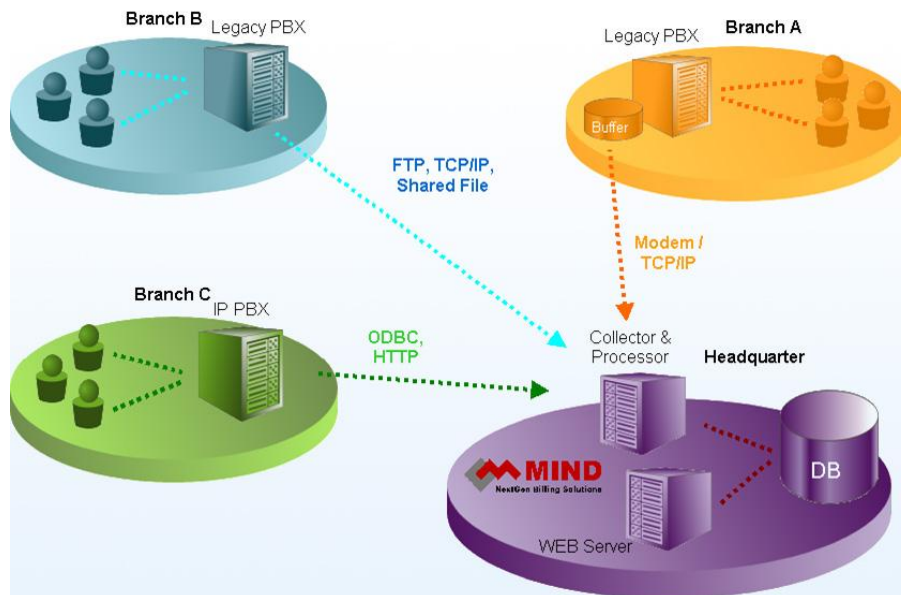
### Cellular Data Collection

PhonEX ONE has the capability of collecting and processing cellular based carrier network (mobile operators) data. Usually, mobile operators provide .csv files daily, weekly or monthly. The system contains generic/universal drivers that can be adjusted to understand the call data as provided by mobile operators (or by other systems) in this format, after making the appropriate mapping configurations.

### PhonEX ONE Collector

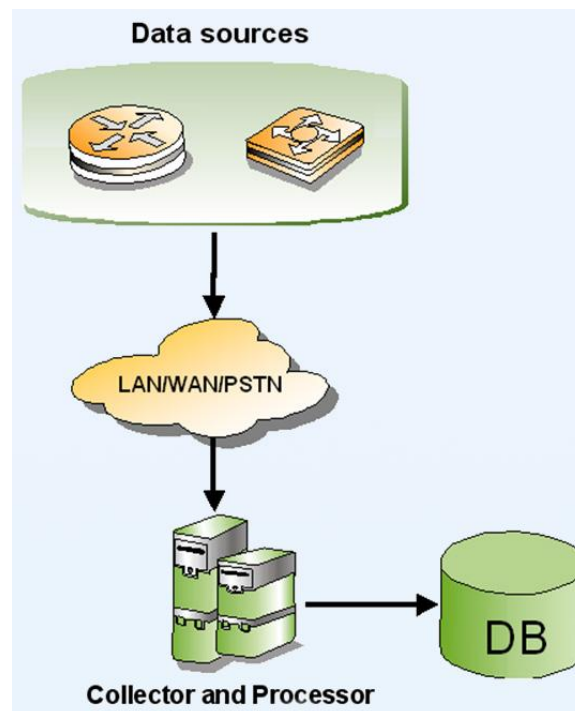
The PhonEX ONE Collector is part of the CPS (Collect and Process Server) and responsible  
I R U F R Q I L J X U L Q J W K H V \ V W H P ¶ V V L W H V D Q G G D W D V R X U F H V ' 6  
integrate the PhonEX ONE Collector on a separate server. The PhonEX ONE collector, working in the background, is capable of transferring the usage records files by using a FTP or TCP/IP protocol, Modem, Shared file, ODBC, HTTP, Syslog and Radius. The key features of the PhonEX ONE collector are:

- Password protected connection
- File transfer recovery mechanism
- Fully safe data transfer
- Backup of transferred data
- Comprehensive logging of the transfer sessions



**General Multisite Environment**

The Collector allows the configuration of several data sources within a single site; this option enables a special system configuration and many flexible options with sites management.



**PhonEX ONE Collector**

## Buffers

The common way of collecting the call detail record from a remote PABX site is by using a local buffer; this buffer collects and stores all information until the collector initiates a collection session and pulls down the records. MIND CTI recommends using a 3rd party vendor buffer - the Scannex Buffers (<http://www.scannex.co.uk>) are considered to be very reliable and with good resilience capabilities. As an alternative solution, there is the option to

## PhonEX ONE Network Receiver

3KRQ(; 21(¶V 1HWZRUN 5HFHLYHU PHGLDWLRQ FRPSRQHQQW LV DE  
calls data for each session and data source, aggregate and filtrate the different events related to the same session from different sources and transform them into valuable and billable records. PhonEX ONE is able to collect call records from different vendors and sources, based on UDP, TCP/IP, Syslog and RADIUS, within a single billing and accounting system. Currently, PhonEX ONE supports the AVAYA Reliable Session Protocol (RSP), Cisco Syslog and RADIUS, and AudioCodes Syslog.

## Data Processing

PhonEX ONE processes the call records retrieved from the PBX and stores them in its Microsoft SQL database. Each call record received is stored in its raw format in case further investigation is required.

- The system saves data on calls that do not pass user-defined threshold requirements. It is easy to change the threshold parameter and repeat the sorting.
- Undefined lines (the result of different communication problems) are stored in a separate file on a daily basis. This file is used to identify problems and is erased automatically after several days (the amount of days is defined by the user).
- The statistics, the percentage of calls that are below defined thresholds, as well as bad calls are stored on data collection.
- All these tools allow for absolute reliability and avoid data loss.

The option to increase the number of independent collector units enables PhonEX ONE to collect and process a high volume of call records into the centralized database. Each CPS (Collecting and Processing Server) is capable of handling (that is, both collect and process) ~30 - 50 data sources, depending on the total number of employees and the call records load. The average time for processing the call records is ~100 records/sec, meaning ~4,320,000 records/day.

## Rating

PhonEX ONE offers a flexible and powerful rating engine that allows enterprises an unlimited number of rating schemes and billing plans. Administrators can set different tariffs for individual trunks or trunk groups and update the system with future tariff changes and updates. The Charges feature enables the Administrator to define and maintain the dialing prefixes for the system, define all the telephone companies (carriers) that work with the organization, define a daily profile for each telephone company, specifying the telephone operation schedule (working days, non-working days and holidays), define various day types that differ in charges, specify various tariffs (i.e. inexpensive, standard, peak, international) for each telephone company, create a call destination list according to various tariffs and call destinations and define prefixes that are charged identically.

The Costs feature allows different types of taxes to be defined. Taxes are charges added to the cost of the call, based on the calculated cost of the call.

PhonEX ONE supports different methods of call cost calculation:

Charge Method	Description
Charge by Duration	Charge By Duration is used to describe Charge Rates that have graduated fees based on the duration of the call. Additionally, the duration of the call can be based on pulses or on length (number of seconds).
Fixed Charge	Tariff is based on a flat fee.
Charge by Destination	Charge by destination code received from the Carrier, supports the employee mobility feature.

## System Security

### Management, Control and Security

PhonEX ONE is designed to enable a smooth and easy management and control over the

V\ VWHP 3KRQ(; 21(¶V FRQWUROOLQJ HQWLW\ LV WKH \$GPLQLVWU  
 DQG FRQWUROV DOO WKH V\ VWHP¶V XVHUV WKURXJKRXW WKH HQW  
 the following abilities:

- 7KH V\ VWHP¶V UXOHV PD\ EH FRQILJXUHG RQO\ E\ WKH  
 view/edit/delete permissions.
- The Administrator may manage and restrict users from having certain privileges.
- Users have their own privileges and security groups. Sensitive features can be disabled for selected users.
- The Administrator is provided with full control for managing users easily. Using an RQOLQH YLHZ RI HDFK RI WKH XVHUV¶ VWDWXV HDFK FKDQ  
 (add, remove, import) is immediately written into the system log event and generates a detailed audit trail.
- Support for unlimited levels of web users accounts to accommodate complex organizational and business models. This ability makes it easier to define and manage accounts or P&L (Profit and Loss) units by allowing an unlimited hierarchy ZLWKLQ WKH RUJDQL]DWLRQ¶V VWUXFWXUH DQG DQ XQOLPLW  
 to users or user groups. This ability suits not only large enterprises, but also SMEs with a complex hierarchy of web users.

### Security Groups

The PhonEX ONE application provides security features that limit all or part of the program to authorized personnel only. The security features can be used to deny access of non-

authorized personnel to the PhonEX ONE system parameters, to PhonEX ON (¶V GDWDEDVH  
 and to specific reporting and query capabilities. Seven default policies are available:

- Administrator
- Employee
- No rights
- Operator
- PhonEX ONE IM
- Reports Only
- Unit Manager

In addition, PhonEX ONE has a tool that allows defining custom policies through a wizard that scans all the system entities (reports, hierarchical levels and units, employees, extensions, system tools, etc.) upon which the access can be granted or denied.

### Directory authentication

PhonEX ONE provides two ways of managing the directory authentication. The users list can be managed and maintained in PhonEX ONE by the administrator users. This system authentication option is recommended when small number of users is used. In addition, PhonEX ONE provides the option of authenticating users against the organizational directory as **Active Directory, Lotus notes, Netscape directory** or any other LDAP directory. In this case users are authenticated and authorized against the organizational directory while policy rights groups binding is done in the background, so that users are automatically logged in with their rights. This option is preferred as a manner of work when large number of users has to be maintained.

### Web Security

The enhanced user security features make PhonEX ONE a perfect solution for the enterprise environment. PhonEX ONE allows online users to access the system from a Web browser anywhere. To maximize the access security, PhonEX ONE uses a Secured Socket Layer protocol (SSL) that provides data encryption, server authentication and message integrity for a TCP/IP connection between the Microsoft Internet Information Server service protocols (SHTTP) and the browsers. The scope of this technology includes key exchange, encryption, message integrity and messaging support for authenticating a remote party using a security model that is based on digital certificates and certificate authorities. Certificate Authorities (CA) can either be a third-party such as **Verisign** or **Thawte**, or exist internally.

Whether the CA exists internally or externally, its function is to serve as a trusted authority that issues and checks the validity of the digital certificate. The SSL on the IIS web server platform provides secure end-to-end encrypted communications between the PhonEX ONE and the browser.

In addition to the protocol level security, there are some more features that support the security of the Web applications, such as:

- Tiered security interface, which allows complete control over access rights;
- Encrypted passwords that consist of a minimum of 6 alphanumeric characters;
- Passwords are disabled after x consecutive attempts; detailed log events are generated, allowing the Administrator to easily track such attempts;
- PhonEX ONE supports system segregation and security administration.

## Database Security

All the sensitive information and restricted data (such as customer passwords) are stored encrypted in the database, since the Database security is one of the most vital components of the overall security requirements. PhonEX ONE uses the Microsoft Frameworks security functionality. The static password authentication information is protected by cryptographic hash algorithms, safe from hacking or removal.

## System Management

### System Logs

The PhonEX ONE system stores the most recent actions regarding the system use. It shows when the system was used and who used it. The Event Log viewer is an effective management tool based on the Microsoft Event Viewer, a system administrator that can HDVLO\ RE VHUYH DQG WUDFN WKH V\ VWHP ¶ V VXVSLFLRXV EHKDYLR \$OO WKH LPSRUWDQW RSHUDWLRQV SHUIRUPHG E\ WKH XVHU RSHUDWLRQV´ LQFOXGHV DOO ORJLQV ORRNLQJ Passwords. It can lead to account suspending and operations dealing with the database (insert/update/delete). The information in the log file includes the date/time, the IP and the message about the operation performed.

The default log level is considered to be WARNING. The Administrator can change this level.

### Status Monitor

8 VHUV DQG V\ VWHP DGPLQLVWUDWRUV DUH DETE The Monitor displays the real time status of different system elements, providing information on disconnections, errors, processes and all other changes in the system. Whenever a problem occurs, it is immediately shown on the monitor.

7KH 0RQLWRU LV DQ HVVHQWLDO WRRO WR DXGLW DQG FRQWURO V\ VWHP ¶ V IDXOWV. Some of the status shown are: Data sources, Data process, Scheduler, New Trunk Groups etc.

### Maintenance Tools

The Maintenance tool is essential for debugging and working with the PhonEX ONE database. This feature is thought to be of great help for the system administrators who PDLQWDLQ WKH GDWDEDVH \$QRWKHU IHDWXUH LV WKH DXWRPDV scheduler. All the actions performed with the Maintenance tools are enabled for the Administrator user rights only. The **Maintenance** module will allow the administrator to perform several actions such as: Backup all, Delete items, Delete records and Restore.

### Redundancy

PhonEX ONE **Redundancy** feature provides *Web Server Redundancy*, *SQL Server Redundancy* and *Data Source Redundancy*, and is meant to offer increased reliability of the system in case of failure. Data Source redundancy implies the existence of a master/slave configuration so that when the active CPS goes down, the passive one can be activated in order to grant continuous system functionality.

## PhonEX ONE Modules

### PhonEX ONE Traffic

The Traffic Module is a call accounting application designed to track daily call loads, maximum call loads, and average call loads in your organization over a designated period of time. The Traffic Module is a stand-alone program that works in conjunction with the PhonEX ONE Call Management System. In the Traffic Module, it is possible to obtain detailed information on the traffic and load of calls in the telephone system.

When you use the Traffic Module, you can produce the-minute reports on \RXU RUJDQLJDWLRQ\WHOHSKRQH XVH 5HJDUGOHVV RI WKH SDU choose, you will get a report that analyses call traffic according to any specified time segment. The Traffic Module allows you to pinpoint and eliminate problem areas that may be needlessly costing you money.

For each time segment in a designated time resolution, the Traffic Module reports contain information on the number of calls begun, number of calls completed, average call duration, average call load, and peak call load on the system. Whether you need minute-by-minute updates, monthly reports, or data on long-term use patterns, the Traffic Module allows you to tailor reports to suit your needs.

The Traffic Query functions can be used to produce four different types of reports:

- Daily Traffic Reports
- Peak Traffic Reports
- Average Traffic Reports
- Sizing Traffic Reports

In the Traffic reports module the users can construct customized traffic reports for tracking down usage information, and save their custom traffic queries for frequent and convenient use. The data is presented in tabular form, and some of the report options allow analyzing the information graphically, as well.

### PhonEX ONE Bill Verification

PhonEX ONE Bill Verification Module helps you identify hidden costs or problematic billing areas in a telephony environment, in order to achieve immediate cost savings. Use PhonEX ONE Bill Verification to compare vendor bills with the actual usage calculated by PhonEX ONE and to verify the accuracy of the bill you receive from your carriers. This is accomplished E\ FRPSDULQJ WKH WRWDOV IRU HDFK HQWU\ LQ WKH SURYLGHU corresponding set of calls that exists in the internal application database and generating reports that include the bill comparison details.

## PhonEX ONE Budget

The Budget Module is a stand-alone program that controls the budget allocation within an organization. Usage thresholds can be set and alarmed if and when exceeded. Users can also be notified as to percent of allocated budget used, for example, 50%, 75% 100% of the EXGJHW 2Q VRPH 3%; ¶V H[FHHGLQJ WKH EXGJHW ZLOO SUHYHQW for 911, 411/112 calls).

Four Budget Reports are available in the PhonEX ONE system:

- Monthly Budget Summary
- Device Budget Usage
- Device Budget Exceptions
- Letters for Device Budget

### Monthly Budget Summary

This report gives a general picture of the budget usage split by months.

### Device Budget Usage

The report displays information about the current budget for specific devices. The information is a basic one, including total current budget and usage (value and percentage).

### Device Budget Exceptions

This report displays information regarding the exceptions within the current budget. According WR XVHU ¶V VHOHFWLRQ WKH UHSRUW FRQWDLQV WKH GHYLFHV W budget and/or the devices that have no usage.

### Letters for Device Budget

The report displays basic budget information for the devices in the filters, for the past period selected; the current month may or may not be included. Depending on the report format, some columns may or may not be displayed. This report includes only the months on which there is no budget defined for the current device.

## PhonEX ONE Guard and Alerter

Using the help of Guard/Alerter, organizations will be aware of everything that occurs in the system, providing them the ability to accurately monitor, optimize performance and keep high serviceability of their system.

Real time monitoring of the network usage is critical if you want to eliminate the costs incurred from fraudulent network usage. PhonEX ONE Guard/Alerter is a powerful fraud detection tool that enables the detection of the most sophisticated misuse, abuse or fraud in the network. The PhonEX ONE Guard/Alerter module can be installed on the CPS or on the Web Server.

PhonEX ONE Alerter module is designed to track and respond to pre-defined events and problems that occur in the network. Alerter ensures that system administrators and users

always know of the problems and events in real-time, so appropriate actions can be taken.

**Key features**

- Flexibility - The Guard provides flexibility in defining rules by using the powerful query generator.
- Various rules - Missing call r HFRUGV UHWULHYDO IURP WKH GLIIHUHQW V week International calls for department X. Less than 1,000 calls / day for a site.
- Option for creating several alert levels per rule.
- Performance - The Guard/Alerter is completely integrated within the PhonEX ONE V\WHP DQG WDNHV IXOO DGYDQWDJH RI WKH V\WHP¶V capabilities.
- Ability to send alerts via e-mail or a build-in Instant Messaging.
- Alerts are activated immediately - Once the defined rules are activated, they send signals to the Guard/Alerter module.
- \$SSOLHV WKH V\WHP¶V XVHU VHFUXLW\ UXOHV

**PhonEX ONE Hotel**

The **Hotel** module is a standalone call accounting application (that works in conjunction with the PhonEX ONE Call Management Solution) designed to keep track of phone usage in hospitality environments (hotels) where the PMS software is either not used or used, but without the ability to communicate with the PBX. The PhonEX ONE system acts either as a PMS or as a mediator between the PBX and PMS, exchanging information and data with both sides, in order to provide a complete picture of the system activity inside the hotel and to allow almost complete control to the managers over the devices in all rooms.

PhonEX ONE Hotel allows defining multiple hotel rates per CDRs (in addition to the existing rates), generating easy-to-read reports for billing phone usage, blocking/unblocking devices RQ WKH 3% ; VLGH DXWRPDWLFDOO\ WUDQVPLWWLQJ FDOO XVDJH L profit/loss reports or operating with check-in/check-out dates for rooms and displaying relevant reports for each hotel guest.

The Hotel Module provides five standard hotel reports:

- Daily Activity
- Profit And Loss
- Device Calls
- Room Calls
- Guest Bill

**Daily Activity Report**

This report produces a daily summary for each device and can be used to summarize phone

usage over any designated period of time.

### **Profit and Loss Report**

This report summarizes each destination type (local, long distance, etc.) and their respective charges and costs. The amount of profit and percent of profit are displayed for each type of call.

### **Device Calls Report**

The Device Calls report produces a detailed report of phone usage and charges for a designated device over a given period of time.

### **Room Calls Report**

This report produces a detailed report of phone usage and charges for a designated room over a given period of time.

### **Guest Bill Report**

This report produces an accurate bill for the guests that occupied different hotel rooms.

## Minimum Hardware and Software Requirements of the PhonEX ONE System

### Server Hardware Requirements - Multiple Servers

The following are the system requirements for the PhonEX ONE installation on multiple servers that use separate Application, Database and Web Servers.

#### Database Server

The following are the system requirements for the Database Server:

- Dual/Quad Core Processor 2.4GHz or greater processor
- 2GB of RAM minimum. More RAM will substantially increase system performance
- 100GB hard disk (Depends on the call records volume)
- Ethernet connectivity to the internet/intranet
- Available parallel or USB ports
- Windows Server 2003 SP2/ 2008
- MS SQL Server 2005/2008 Standard Edition (Enterprise Edition recommended)

#### Web Server

The following are the system requirements for the Web Server:

- Dual Core with minimum 2.4 GHz processor speed
- 2GB of RAM minimum. More RAM will substantially increase system performance
- 50 GB disk space
- Ethernet connectivity to the internet/intranet
- Windows Server 2003 SP2/ 2008
- Microsoft Internet Information Server (IIS) 6.0 / 7.0
- Microsoft Internet Explorer 8.0
- IIS and ASP.NET installed
- MS SQL 2005/2008 Standard/Enterprise edition

#### CPS Servers

- Pentium IV with minimum 2.0 GHz processor speed
- 1 GB of RAM.
- 100GB disk space

## Operating Systems

PhonEX ONE works under the following operating systems:

- Windows XP SP2
- Windows Server 2003 SP2/ 2008

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Note: The PhonEX ONE requires Microsoft Internet Explorer 8.0 and 1024x768 or higher screen resolution to view certain PhonEX ONE forms properly within your web browser.

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## Client Software Requirements

The following software items are needed to run the client portion of PhonEX ONE system effectively. They are not provided as part of the licensing of PhonEX ONE or as a part of the service contract with MIND CTI.

- Windows XP Professional or later versions
- Internet Explorer 8.0 or higher/ Firefox/Chrome/Safari/Opera
- Optional Microsoft Office 2000/XP/2003 or later versions
- Optional Adobe Acrobat Reader

## Server Hardware Requirements – Single Server

The Single Server configuration integrates all three PhonEX ONE servers in one server. This is a typical basic installation which is suitable for small to medium-size organizations. The following are the system requirements for the PhonEX ONE installation when a common server is used:

- Dual CPU with 3.66 GHz Intel processor
- 2GB RAM minimum
- Windows Server 2003 SP2 or Windows 2008
- IIS and ASP.NET installed
- Microsoft SQL 2005/2008 Standard/Enterprise edition (or MS SQL Express in case of less than 500 users)
- 80GB HDD Ultra SCSI
- CD ROM or DVD
- 10/100/1000 Ethernet cards

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**Note:** PhonEX ONE supports server virtualization technology, which allows the user to consolidate servers and use hardware more efficiently.

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## About MIND

MIND CTI (NASDAQ: MNDO) is a leading global provider of true web based call management and call accounting solutions. As one of the first call accounting application developers in 1995, MIND is recognized as a world leader in this field, with over 16,000 installations. A pioneer in call accounting and management solutions, MIND uses its innovative technologies to keep you at pace with the world's changing networks and requirements. MIND CTI operates from offices in the United States, UK, Romania, with headquarters in Israel. MIND offers an easy to use call accounting solution for you to manage, control and measure your telecommunications expenses and resources.

For information about MIND and its products visit the company's web site:

<http://www.mindcti.com/enterprise>.

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