

What Is Time?

Numetrics Time is an Advanced Windows® Telephony monitor.

Time records the outbound Telephony Calls occurring on your computer, and allows you to view the recorded information.

A few of the useful things Time can do include:

- Monitor outbound calls by displaying the application used to place the call, destination of the call (if it is available from the service provider), time the call was initiated, length of the call and a running sum of all calls for the selected period in the Calendar pane.
- Print histories of all outbound calls by day, month or year.
- Monitor multiple modems for outbound call activity.
- Provides time specific information on calls.
- By enabling lock mode with a password, parents can monitor the amount of time children access the internet.

Time Features:

- Supports all line telephony devices.
- Capable of monitoring up to 99 telephony devices simultaneously.
- Shows internet or long distance connect time by day, month or year.
- Retains data of removed devices.
- Uses very little memory and processor bandwidth.
- Totally transparent to all other applications on the system.

{button ,AL('properties dialog',1,',' ,`Proc_1')} See Properties Dialog

{button ,AL('caption bar',1,',' ,`Proc_1')} See Windows and Bars

Where to Find Numetrics Time

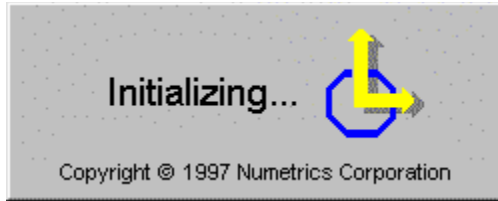
To start Numetrics Time, click Start on the Task Bar 

Go to Programs  Programs 

Go to Numetrics Time  Numetrics Time 


Click on Time  Time

 Initialization Splash Panel



This is the splash panel that will be seen on startup of Numetrics Time.


 **Numetrics on the Web**
▶ **Welcome to Numetrics**


 A direct link that will take you to Numetrics on the Web.

Caption Bar



The Caption Bar provides the following features:

 Time Logo (system menu)

 Product Name.


 Minimize Restore, Maximize Restore and Close Window respectively.





Menu Bar


File Edit View Device Help


The Menu Bar provides the following features:

 File Menu drop down box

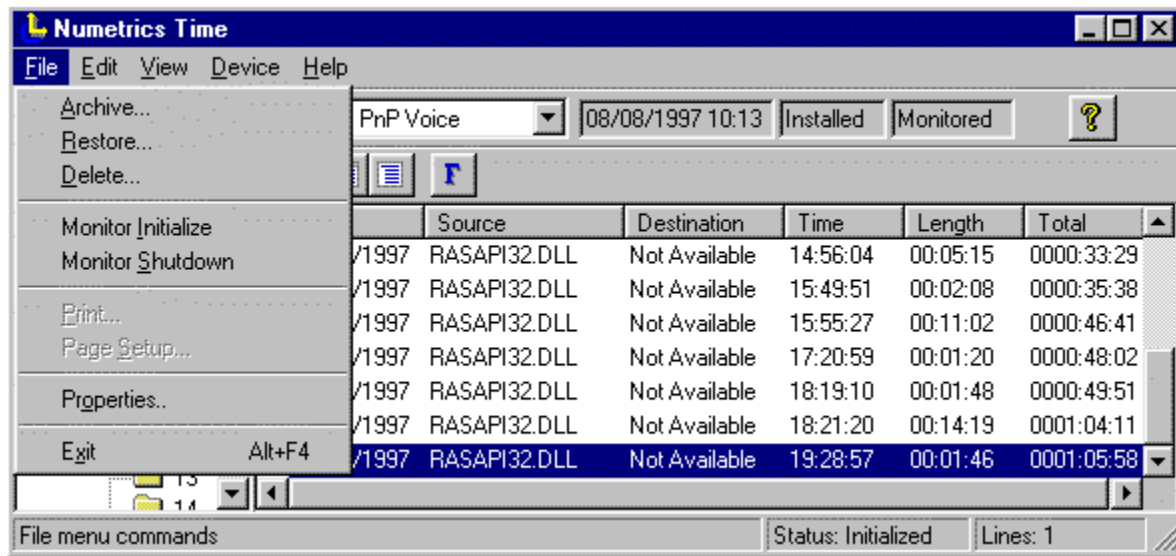
 Edit Menu drop down box

 View Menu drop down box

 Device Menu drop down box

 Help Menu drop down box

File Menu



Archive...

Saves all Calls of the current dataset to a Time Archive. The archive name provided by Time represents the first and last days of the calls contained in the current dataset. You may use a name of your choice. A Time archive may be used on another system that has a compatible version of Time installed.



Restore...

Restores an existing Time Archive. The archive you restore must have been created using a compatible version of Time.



Delete...

Deletes the current dataset.



Monitor Initialize

Monitors all telephony devices on the system. The Status Bar will show active with the number of lines or phones being monitored and the icon in the task notification bar will not be circled in red.



Monitor Shutdown

Stops monitoring all telephony devices on the system. The status bar will show idle with no lines or phones being monitored and the icon in the task notification bar will be circled in red.



Print...

Displays the Print dialog. This item is enabled when the Text View is active.



Page Setup...

Displays the Page Setup dialog. This item is enabled when the Text View is active.



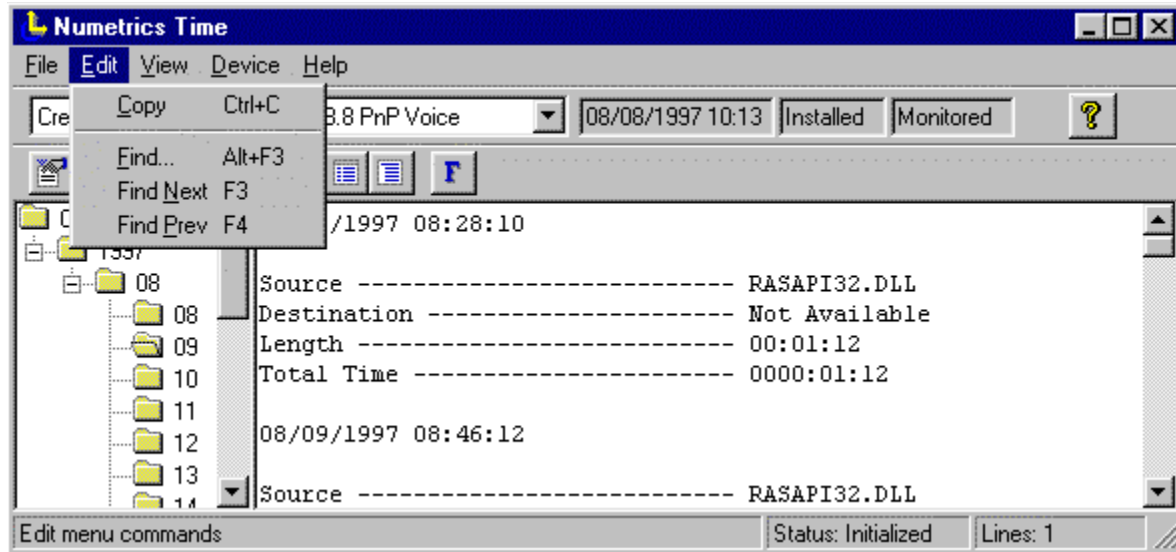
Properties...

Displays the Time Properties Dialog

Exit

Exits Time. This releases all system resources used by Time and terminates the program.

Edit Menu

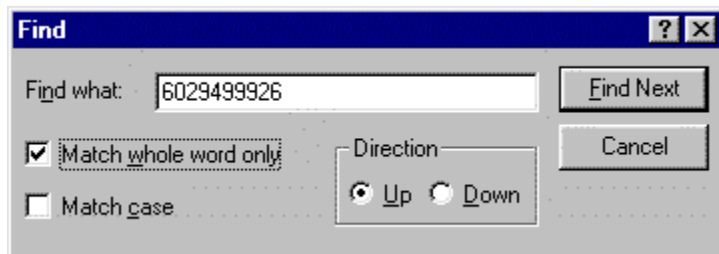


Copy (Ctrl+C)

Copies selected text to the clipboard. This item is enabled when the Text View is active.

Find... (Alt+F3)

To specify what word to search for, enter text in the Find What box. Click Find Next to continue searching. This item is enabled when the Text View is active.



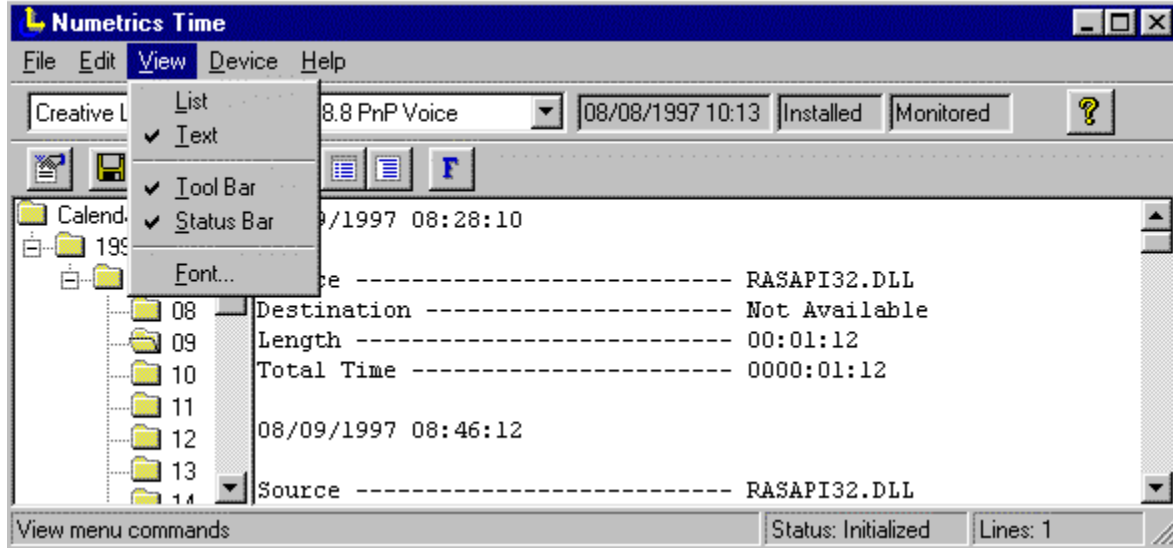
Find Next (F3)

ID searches for the next instance of the text.

Find Prev (F4)

ID searches for the previous instance of the text.

View Menu



List View

Activates Time List View.



Text View

Activates Time Text View.



Tool Bar

Toggles the Tool Bar on and off.



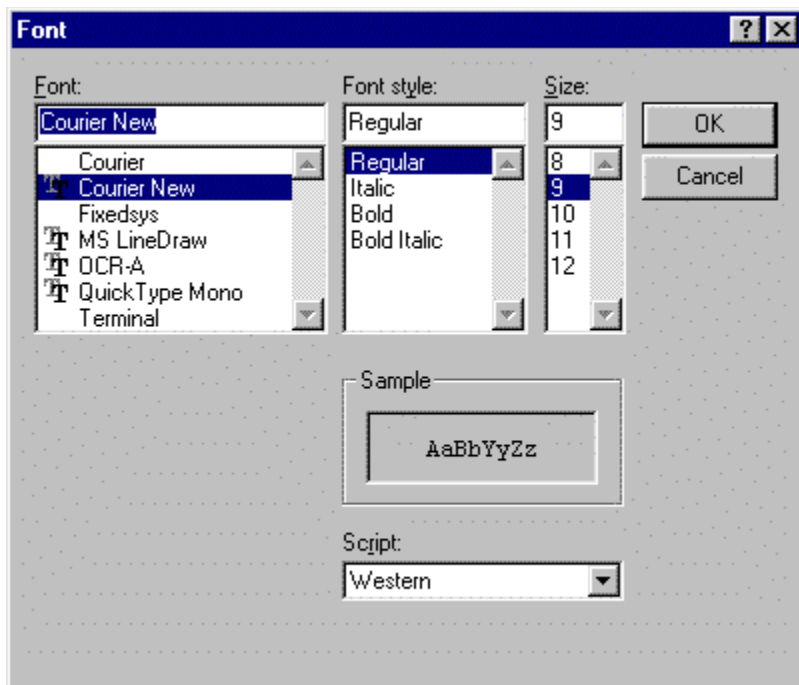
Status Bar

Toggles the Status Bar on and off.

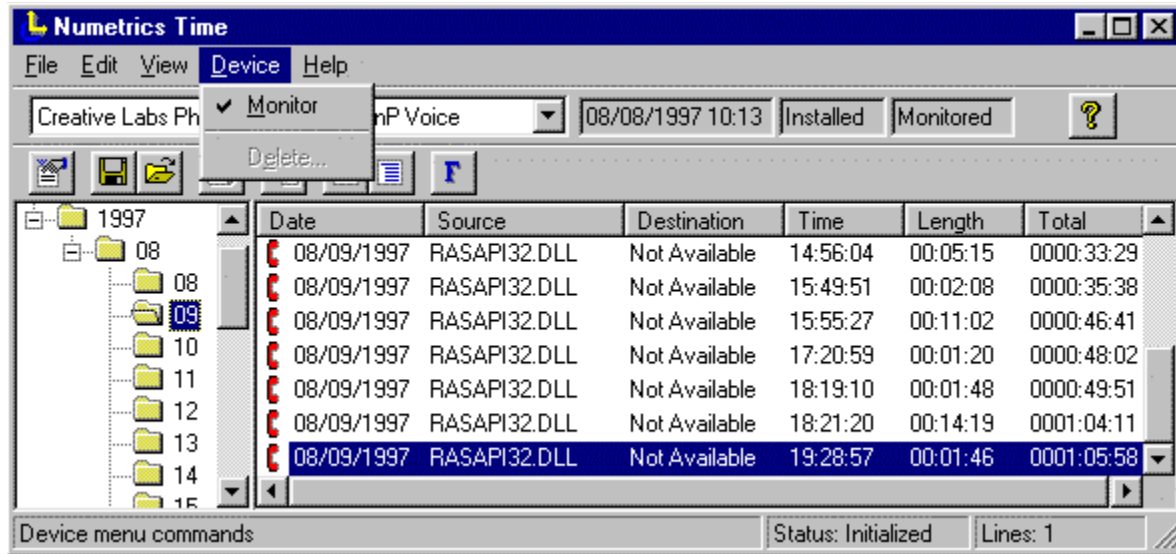


Font...

Displays Font Select dialog.



Device Menu



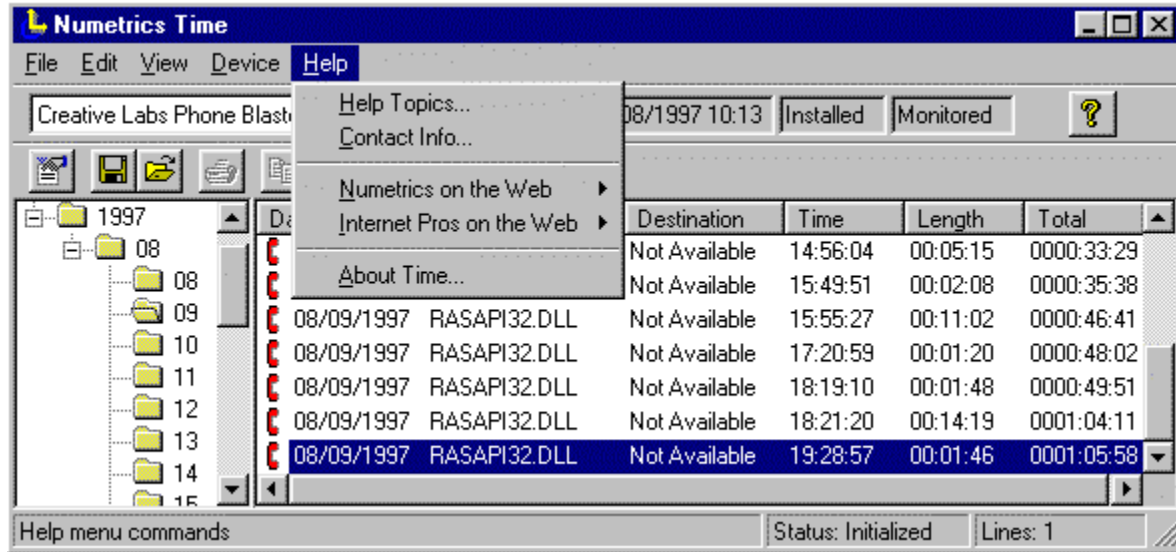
Monitor

Allows Time to monitor the current device. This item is checked by default. You may want to deselect this item if you have multiple devices and need to monitor a specific line or phone.

Delete

Deletes the current device. This item is enabled when the current Device has been removed from the computer system.

Help Menu



Help Topics...

Displays the Help Topics dialog.

Contact Info...

Displays Numetrics Corporation Contact Information help.

Purchase Info... (Evaluation Edition ONLY)

Displays Numetrics Corporation Purchase Information. If you have been using the Evaluation Edition (displayed on the Caption Bar) longer than 30 days, you really should purchase a Registered Edition.

Numetrics on the Web

Welcome to Numetrics

A direct link that will take you to Numetrics on the Web.

Internet Pros on the Web

Visit the Virtual Mall

A direct link that will take you to Internet Pros on the Web.


About Time...


Displays Version information about Time.


Device Bar




The Device Bar provides the following features:

 The Device List Box. The Device List Box allows you to selected a Line Device on your local computer.

 The Device Detect Time. If you remove and later reinstall the same modem, you will have two devices in the device list box with two different detect times.

 The Device Installed Box. The Device Installed Box specifies whether the selected device is currently installed or removed from the local computer.

 The Device Monitored Box. This will reflect “monitored” or “released.”


Help Icon


When clicked, displays the Help Topics dialog.


Tool Bar



The Tool Bar provides the following features:

 The Tool Bar Buttons. The Tool Bar Buttons are short cuts to the menu items. Place the cursor over any button to display a Tool Tip.


 Set Application Properties


 Archive Current Dataset

 Restore an Existing Dataset

 Print Current Text View

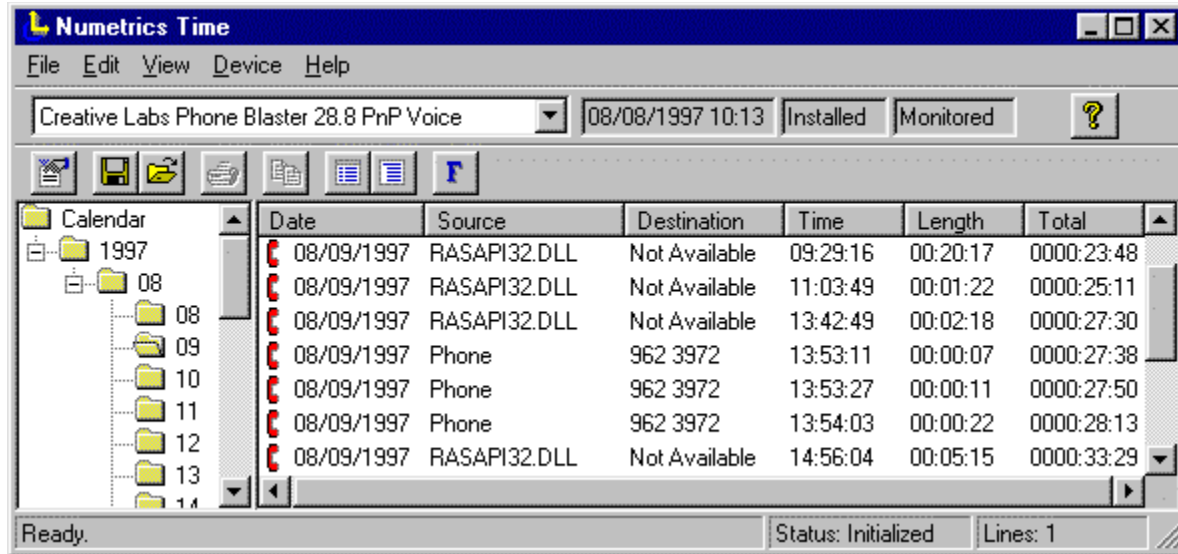
 Copy Current Text View Selection

 Select List View

 Select Text View

 Set Font of Current View

List View



The List View is the default view for Time.

The List View is composed of the Calendar pane and List pane.

The Calendar pane displays the years, months, and days of the Calls contained in the current dataset.

The List pane displays the calls of the selected period which includes:

Date

The month, day and year the call was placed.

Source

The source used to place the call. This may be another telephony application or a DLL on your system (for example RASAPI32.DLL is used by Windows 95® for Dialup Networking).

Destination

The destination of the call (if available from the service provider).

Time

The time call was initiated.

Length

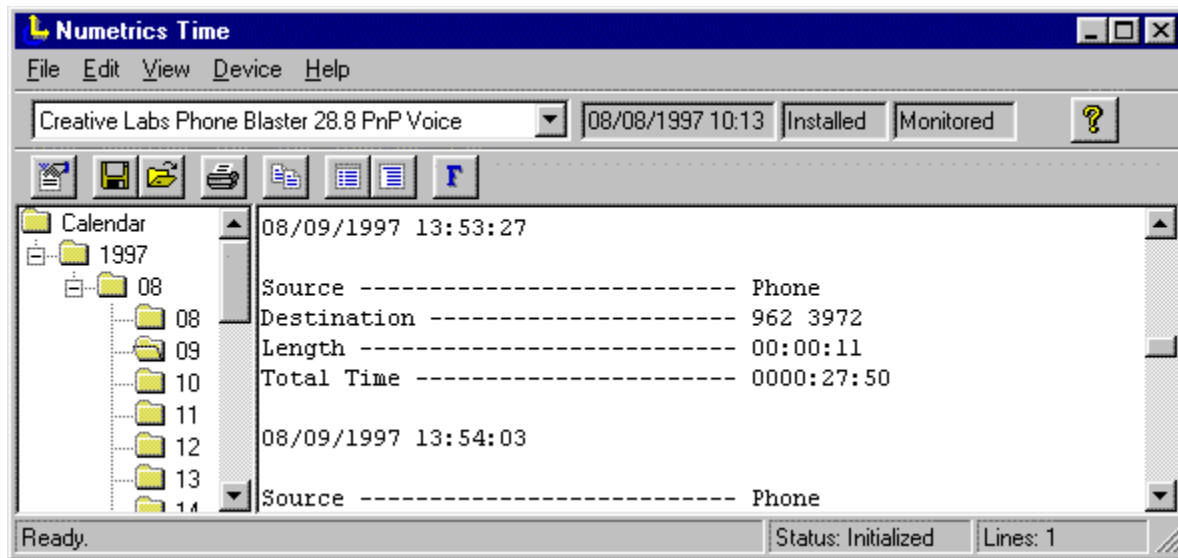
The length of the call.

Total

The total column is updated to reflect a running sum of all calls for the selected period in the Calendar pane.

{button ,AL('text view',0,'', 'Proc_1')} Related Topics

Text View



The Text view is the alternate view for Time.

The Text View is composed of the Calendar pane and Text pane.

The Calendar pane displays the years, months, and days of the Calls contained in the current dataset.

Select a day, month, or year in the Calendar pane to display the calls of a specified period in the Text pane.

The Text pane displays the calls of the selected period which includes:

Date

The month, day and year the call was placed.

Time

The time call was initiated.

Source

The source used to place the call. This may be another telephony application or a DLL on your system (for example RASAPI32.DLL is used by Windows 95® for Dialup Networking).

Destination

The destination of the call (if available from the service provider).

Length

The length of the call.

Total Time

The total time is updated to reflect a running sum of all calls for the selected period in the Calendar pane.


{button ,AL('list view',0,'','Proc_1')} Related Topics


Status Bar



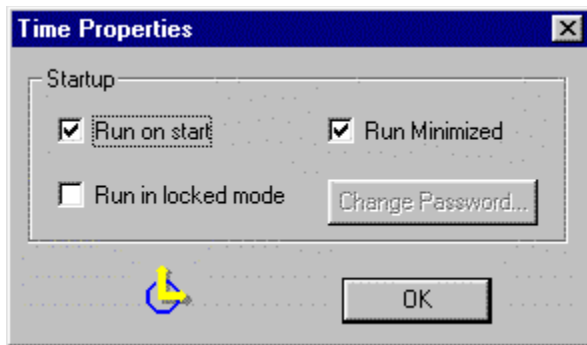
The Status Bar provides the following features:

 A brief description of menu items.


 The current status of Time. Initialized indicates devices are being monitored. Shutdown indicates no devices are being monitored.

 The number of Lines being monitored by Time.


Properties Dialog



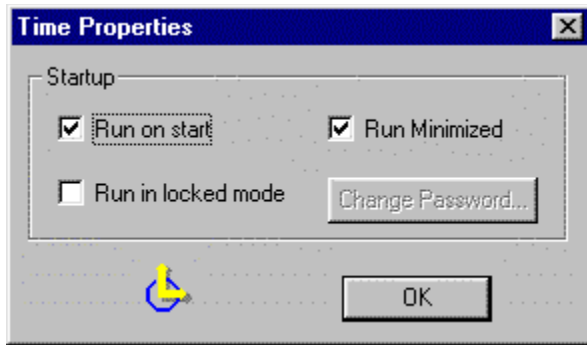
The Time Properties Dialog allows you to:

 Configure general application settings.

For Help on specific items:

 Use the Browse buttons at the top of this window.

 Run on Start



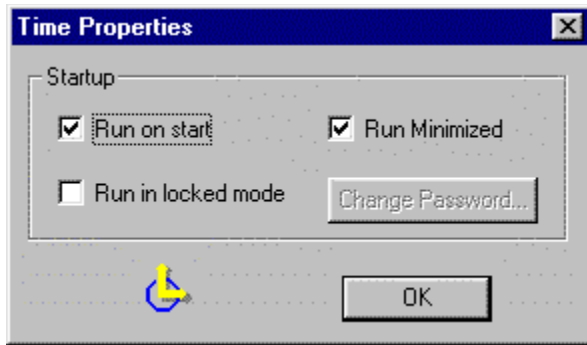
If checked, Time will run on system start.

 **Run Minimized**



If checked, Time will start in a minimized state.

Run In Locked Mode



If checked, Time will display a dialog to enter new password and confirm password. By enabling this feature, Time will start and exit with a password.



 **Change Password...**



The dialog box has a blue title bar with the text "Change Password" and a close button (X) in the top right corner. The main area is light gray and contains three text input fields. The first field is preceded by the label "Enter current password:". The second field is preceded by "Enter new password:". The third field is preceded by "Confirm new password:". At the bottom left of the dialog is a yellow padlock icon. At the bottom right are two buttons: "OK" and "Cancel".

In locked mode, Time will display a dialog for current password, new password and confirm password for the change.

Analog

Analog transmission (such as POTS signals) consists of sound traveling over lines as variations in an electrical current. Analog signals are very vulnerable to interference and noise on the line. They are also limited to the bandwidth of amplifiers, analog-to-digital converters, and other network equipment.

Analog Line

A standard phone line. Signals on an analog line use a set of standard in-band tones for call progress and DTMF signaling.

B Channel

A 64 Kbps channel on an ISDN line that can carry voice or data.

Bandwidth

The range of frequencies that a circuit can handle. With POTS, for example, the bandwidth is very narrow. The broader the range of frequencies, the more information the line can handle. The typical POTS circuit has a bandwidth of 3100 Hz centered between 300 Hz and 3400 Hz.

Bearer Mode

The type of coding, or compression, which the telephone network is permitted to perform on the bit stream carried on the bearer channel. In POTS, the bearer mode will always be 3.1 kHz voice. The “speech” bearer mode is the most compressible, “voice” less so, and so on. A *data* bearer mode implies that the data stream will not be compressed by the network (the connection is “clear channel”).

Bearer Services

Services designed to transfer information from point A to point B.

BRI-ISDN

A CCITT-defined “Basic-Rate Interface” ISDN connection consisting of two B channels of 64 Kbps each for voice or data, and one D channel of 16 Kbps for control (2B+D).

See [PRI-ISDN](#).

Call

Two or more parties exchanging information (or attempting to change information) using telephony equipment. Many of the functions in TAPI and in the Telephony SPI operate on calls.

Call Progress

Setting up a telephone call goes through several phases. Taking the phone offhook returns dial tone to indicate that a number can be dialed. Hearing the dial tone, the user dials the desired number. When the call reaches the destination phone, the caller will either receive a busy indication, indicating the called number is busy, or a ring back indication, indicating the dialed party is being alerted. Call progress is the process of monitoring the progress of a call through the various stages.

Called-ID

An identification (number, name) of the party being called. This identification is of interest when you transfer or forward a call. For example, when an unanswered call is forwarded to a voice messaging system, the called-ID of the original call is used to locate the mailbox of the called party.

Caller-ID

An identification (number, name) of the party initiating a call, as displayed to the called party prior to answering the call. A caller-ID may also be either unknown (due to telephone switch limitations), blocked (concealed by the caller), or not yet known, but received later.

Calling Card

To Telephony, a calling card is not just a means for billing calls, it represents a distinct dialing procedure. For example, an application can use calling-card functions to present a menu of pre-configured calling cards to the user. The user's response determines the proper dialing sequence for the call, which tells TAPI whether to make the call with the default carrier, override the default carrier and use a given calling code, or use another specific dialing sequence.

Central Office

Central Office of a telephone company. Usually a nexus or main node consisting of switching and head-end equipment. Connects subscribers' lines to other lines local and long distance.

Centrex™

A service provided by central offices that provides a virtual PBX to a set of extensions. It offers features such as transfer, conference, and forward within that set of extensions.

Client Computer

The host environment for which the Windows® Telephony API is defined. This is the computer running the Windows® operating system version 3.1 or higher.

CSU

Channel service units are used to connect a digital phone line (T-1 or Switched 56 line) coming in from the Telco to either a multiplexer, channel bank directly to another device producing a digital signal, i.e. a digital PBX, a PC or other data communications device.

D Channel

An ISDN interface that is used to carry control signals and customer call data in a packet switched mode.

Desktop

The logical pairing of a user's computer and telephone.

Device

A Device is a physical component of the system.

Telephony devices include line devices and phone devices.

A Line Device is a physical device such as a fax board, a modem, or an ISDN card that is connected to an actual telephone line. Line devices support telephonic capabilities by allowing applications to send or receive information to or from a telephone network. A line device is the logical representation of a physical line device, one of the two device classes supported by TAPI.

A Phone Device is a physical device that behaves as a telephone set. This is usually, although not necessarily, the phone already on the user's desk located "next to" the computer. In essence, a phone is any device that implements the phone behavior defined by TAPI and by the SPI as the set of functions and messages for phones.

Dialtone

A connection to the switch that allows attempts at establishing calls to be made.

DID

Direct inward dialing is a capability that allows one to dial inside a company directly without going through the attendant. Used to be an exclusive feature of Centrex™, but is now provided by almost all PBXs. One must connect via specially configured DID lines from the CO.

Digital Line

A digital station line on a PBX or digital-key system. Signaling on a digital line uses vendor-specific (proprietary) protocols to exchange messages between the switch and the phone. A digital line typically requires a “matched” phone set.

DNIS

Dialed Number Identification Service is a feature of 800 and 900 lines that provides the number the caller dialed to access the attached CT. The DNIS identifies to the CT system the application (i.e. FoD) the caller dialed.

DTMF

Dual Tone Multiple Frequency. Pressing a button on the keypad of a Touchtone phone generates a pair of tones of specified frequency and duration. The network or the equipment at the other end of the connection (such as a remote control for a phone answering machine) detects and interprets these tones.

Duplex

Two-way, real-time communication capability, as in a telephone, but not a two way radio (called simplex).

Events

Events are generated by Service Providers and Telephony Applications running on the local computer.

An event is a change of State in the Telephony system.

A state change may be the result of an application or a telephone company switch interacting with the local computers telephony services.

Hookswitch

The switch that connects or disconnects the device from the phone line. On a telephone, for example, this is the switch that is automatically activated when a user lifts the receiver from the cradle to get a new dial tone.

Hot Phone

A telephone whose connection is configured so that no dialing is required. As soon as the hot phone goes offhook, a destination phone (at a predetermined address) automatically begins to ring.

Inband

Transmitted within the data stream. Examples: POTS uses DTMF for inband dialing instructions and tones for inband notification that the remote station is busy or alerting.

See [Out Of Band](#).

ISDN

Integrated Services Digital Network, a set of standards for a new class of telephone services. ISDN is an entirely digital telephone service that can be installed by the local telephone company to replace the old analog local loop (the connection to the telephone company's nearest central switching office, or CO) with a digital line.

Because long distance lines are usually digital already, replacing the local loop with an ISDN line provides "end-to-end" digital service.

For Telephony, ISDN's major significance is its ability to provide multiple channels on a single line.

See also [BRI-ISDN](#) and [PRI_ISDN](#).

Key System

A switching system in which the phones have multiple buttons that permit the user to directly select incoming or outgoing lines. Key systems can typically support fewer users than PBXs, and their features are more limited.

Line

A line is a logical representation of a physical line device. On an analog telephone network, there is usually one channel (phone number) per line. On a digital telephone network such as ISDN, there are usually more than one channels and the concept of phone number becomes less applicable.

An address is tightly associated with the channels on a line. If you use an analog telephone network, there is exactly one address for each phone number.

A device may be both a line and a phone.

Media

The media is whatever takes place on a line, usually on a 3.1-kHz audio bearer channel.

Media Mode

A call's media mode describes what type of information the call is carrying, such as data or voice. An application can tell what media mode is indicated on an inbound call by examining a field in the call information record. It can use this information, for example, to route the call to a more appropriate application, such as a data application for an incoming data call.

Media Stream

The information carried on a call - that is, what actually is transmitted and received over the line, and can, with the necessary hardware, be read and written by a media stream API.

Modem

Modulate/DEModulate.

A piece of equipment that connects a computer to an analog communications transmission line, typically a plain old telephone line (POTS).

The modem translates digital information by manipulating an analogue carrier (sine) wave from the POTS and changes that carrier signal in concert with the data it is sending.

Out of Band

Transmitted over a separate signaling channel. For example, with the media stream on the B channel, ISDN uses protocol messages on the D channel to indicate call states such as dialtone, ringback, and busy, and for signaling dialing instructions to the switch.

See [Inband](#).

PBX

Private Branch Exchange. A digital switch on the customer's premises that provides switching (including a full set of switching features) for an office or campus. PBXs often use proprietary digital-line protocols, although some are analog based. The user features provided by the different PBX vendors are generally similar.

Phone

A Phone is a logical representation of a physical phone device. Phone devices have the same characteristics as a physical phone.

These include, hookswitches, ringers, buttons, handsets, headsets, and speakerphones.

A device may be both a line and a phone.

POTS

Plain Old Telephone Service. Basic single-line telephone service for the public switched telephone network (PSTN). With some exceptions, POTS only supports making and receiving calls, and POTS lines can handle only one conversation at a time. To use a conventional modem and a telephone at the same time on a POTS system, two lines are needed.

PRI-ISDN

A “Primary-Rate Interface” ISDN connection, which in the U.S., Canada, and Japan consists of 23 64-Kbps B channels and one 64-Kbps D channel (23B+D). In Europe, PRI provides for 30 B channels and two D channels (30B+2D).

See also [BRI-ISDN](#).

 PSTN

Public Switched Telephone Network.

Ringback

The tone heard by a calling party when, at the called-party's end, the telephone is ringing or the system is otherwise being alerted of the incoming call.

Speech

“Speech” is human speech, a specific type of “voice” (See *voice*). Telephone networks treats speech and voice differently, because speech can be modeled and compressed more than voice. Voice is less likely to be compressed than speech (especially on international calls), because compression can interfere with some high-speed voice band data and fax transmissions. In contrast, speech can be understood when re-expanded even after being compressed to 1/18 its original bandwidth.

Service Provider

The conglomerate of software code (DLLs, device drivers, firmware) and hardware (add-on hardware, server, phone set, switch, network) that jointly implement the SPI.

Service Provider Interface (SPI)

The Windows® Telephony SPI (Service Provider Interface) is the interface that a service provider must implement to make its telephony services available to applications through the API. The SPI is a collection of C language function definitions, message definitions, type and data-structure definitions, along with descriptions of their meanings in English.

Station

A peripheral device of the switch, a station is any piece of equipment connected to a switch over a phone line. Examples are telephone sets, fax machines, computers with add-in telephony cards, and answering machines.

State

The current state of a line or phone device a the result of an event occurring in the Telephony system.

Switch

Telephone switch. A piece of equipment capable of establishing telephone calls. Within the context of TAPI and SPI, a switch can be a PBX, a key system, or a central office.

Synchronous Completion

An application calls a function in the DLL, which then completes and returns to the application. If it completes immediately, this completion is known as synchronous, but if it is sent off to another system entity and the application goes on to other activities before the function completes (and the system later sends a message to the application announcing the function's completion), that completion is known as *asynchronous*.

T-1

A digital transmission link with a capacity of 1.544 Mbps. Can normally handle 24 voice conversations each digitized at 64 Kbps. Typically used for connections of networks across remote distances.

Tapi DLL

The client software module that interacts directly with the Telephone service provider by means of the Telephone SPI. TAPI DLL exports the Windows® Telephony API to its clients. Its clients in turn are usually applications, which may be DLLs operating on behalf of applications.

See [Telephony Application](#)

Telephony

Telephony is the application of computer electronic data processing and transaction services to telecommunication devices and systems, especially switches and modems.

Windows® implements Telephony using specially developed software called the Service Provider Interface SPI and the Telephony Application Programming Interface TAPI. Windows® builds TAPI and SPI into Windows®95 and Windows NT™ 4.0.

Windows® Telephony is transparent to the user. Functionality is realized by the Telephony Service Providers and Telephony Applications running on the computer.

If you use Dial-Up Networking or Hyper Terminal, you are already using Telephony.

Telephony Application

Any software that uses Windows® TAPI. The term “application” is used in its broadest sense possible; it need not necessarily be a user-level program, but can also be a dynamic link library (DLL) or system function that uses the TAPI and provides higher level services by means of its interface.

Telephony Application Programming Interface (TAPI)


The Windows® TAPI (Telephony Application Programming Interface) defines the interface that applications use to access telephony functions in Windows®. The API is a collection of C language function definitions, message definitions, type and data-structure definitions, along with descriptions of their meanings in English.

Voice

Anything that can be transferred on a POTS network, namely any signal that fits on a 3.1 kHz - bandwidth channel. Voice can consist of voiceband-modulated data or facsimile signals or human speech.

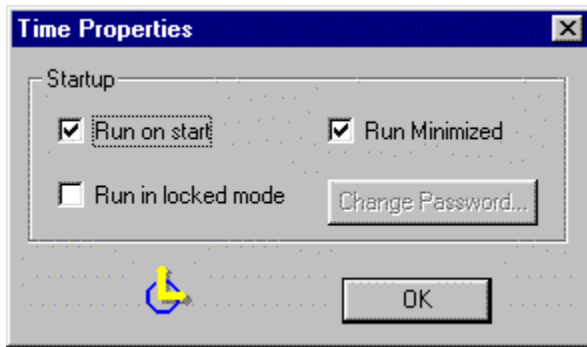
See [Speech](#)

 **Tip 1**

 Archive regularly.

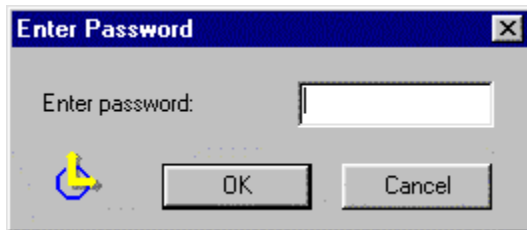
Time stores a lot of information. The best means of protecting the information stored by Time is to archive the current dataset weekly or monthly. This will help Time operate at peak performance, and provide backup safety as well.

 Tip 2



Running in locked mode.

Time can be password protected to start or exit the application. When “run in locked mode” is selected in the properties dialog, a password dialog will be displayed to set this feature.



If “run in locked mode” is deselected, the same password set previously will no longer be valid when “run in locked mode” is selected again. A password will need to be reentered.

