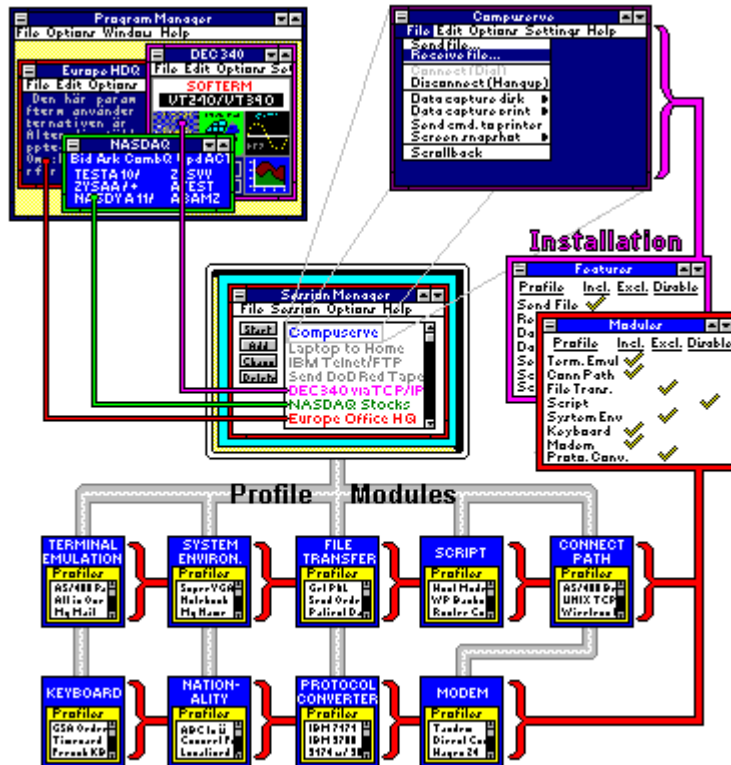




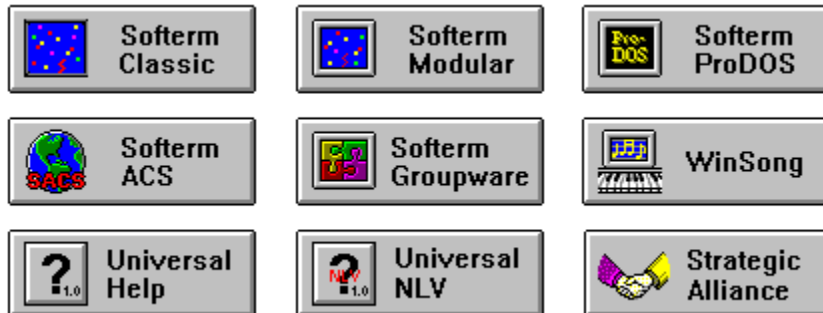
# Softerm



Click on any part of this image for a detailed description of the item selected.

Use the scrollbar to scroll down for additional product information.

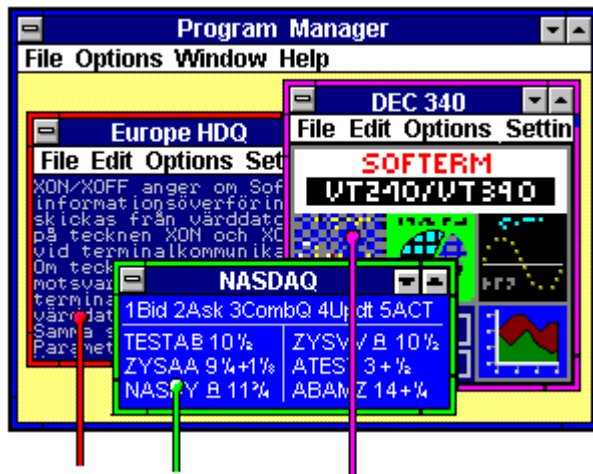
## Other Softronic Products



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Softronic, Inc.  
5085 List Drive  
Colorado Springs, CO 80919

Sales - (800) 225-8590  
Office- (719) 593-9540  
FAX - (719) 548-1878  
Tech Support - (900) 884-7638



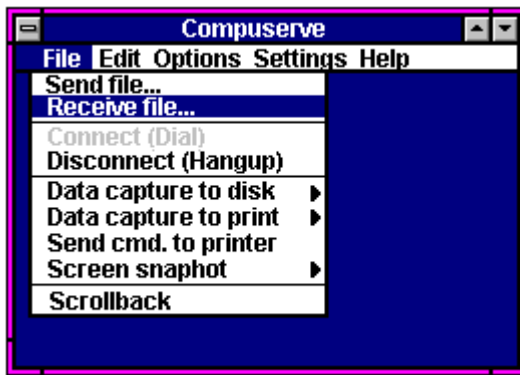
## Concurrent Session Windows

Multiple concurrent session windows can be run using Softerm. You can run as many active simultaneous sessions windows as connection paths available to your computer. The example here shows you three concurrent session windows:  
 European Office HDQ via a modem connected to COM1, DEC 340 Graphic terminal emulation via TCP/IP telnet, and NASDAQ stock quotes via asynchronous communications server (NACS) on a Novell Network.

To see over 30 connectivity types available, click on [Connection Paths](#).

## Other related topics include:

[Session Window](#)  
[Session Manager](#)  
[Install Features](#)



## Session Window

Softerm's Session Window gives you easy point and click control over your communications session. The Graphical User Interface (GUI) uses Common User Access (CUA) standards to ensure that all functionality is easy to understand and use.

### On-Line Session Features include:

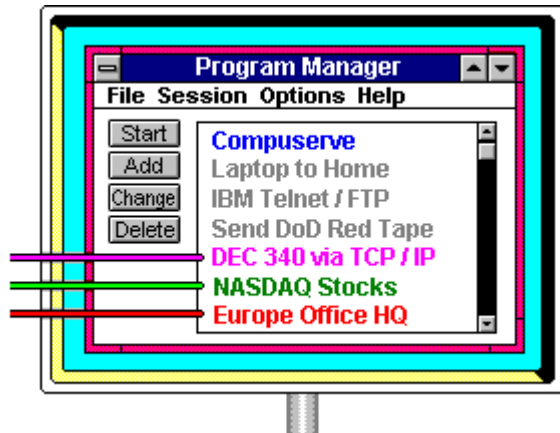
- Point and Click File Transfers
- Capture on-line session data to Disk or Print
- Screen Snapshot
- Scrollback replays your session
- Mark and Copy
- A dynamic sizing font for any size window
- Keyboard Remap using a graphical interface
- Learn-Mode Macros
- On-line configuration of Settings while Session is active
- Script File execution
- Session Icon indicates incoming data when session is minimized
- A responsive context-sensitive Help System

### Other related topics include:

[Concurrent Sessions](#)

[Session Manager](#)

[Install Features](#)



## Session Manager

The Session Manager gives you complete control over multiple concurrent sessions. It is an all-encompassing yet easy-to-use database that gives you complete communications from A to Z, from IBM to DEC, from TCP/IP to X.25.

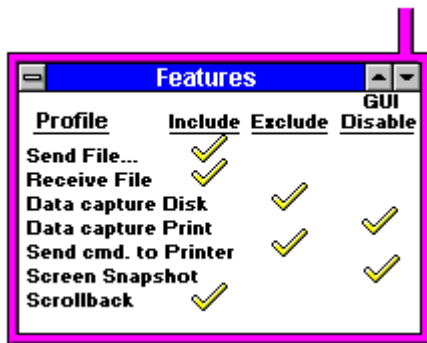
Softerm's Procognitive User Interface adjusts to your level of technical expertise, and the system builds upon success. You manage tasks by choosing objects that you name and comment. Softerm provides

immediate feedback during decision-intensive actions. An on-line Help subsystem assists you while operating the program. The Procognitive Graphical User Interface (GUI) uses common user access conventions so you do not have to learn new methods of operation.

You choose the features that you want and build a right-sizing communications system. The User Interface dynamically builds menus to present only the features that you picked. Only the terminal emulations and the communications that you require are included in your run-time version.

### Other related topics include:

[Session Window](#)  
[Install Features](#)  
[Install Modules](#)  
[Profile Modules](#)



## Install Features

Softerm provides you with the specific features you require and lets you eliminate features you don't need. With Softerm's fast and easy installation program you will be up and running quickly and with a precise configuration without unwanted bells and whistles. You choose the features that you want and create a communications system with exactly the right characteristics. The User Interface dynamically builds menus to present only the features that you picked.

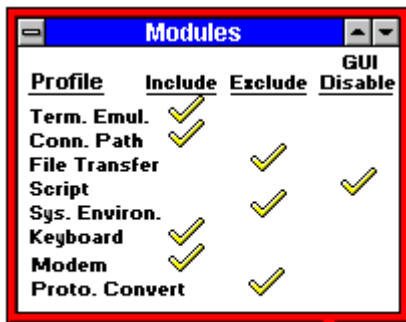
If you later find that you omitted a feature that you require, that feature can easily be added to your Softerm configuration.

## Session Manager Feature Choices include:

- New, Open and Save Communication Database Files
- Stop Session
- Add/Change Session and Profiles
- Setup Profiles
- Save Window
- Minimize on Use
- Show all (features)
- Session Manager Help

## Run-Time Session Window Feature Choices include:

- Send File/Receive Files
- Connect/Disconnect
- Data Capture to Disk/Print
- Screen Snapshot
- Send Printer Command
- Session Scrollback
- Mark text
- Copy text
- Select Session Font
- Save Session Window
- Perform Terminal Keyboard Function
- Display Terminal Keyboard
- Keyboard Record (Macros)
- Start Script
- Change Terminal Emulation Settings
- Change Connection Path Settings
- Change System Environment Settings
- Change Keyboard Settings
- Change Print Path Settings
- Session Window Help



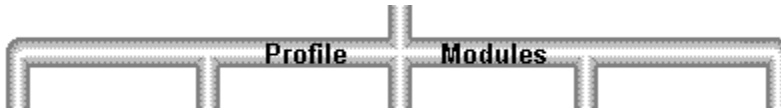
## Install Modules

Softerm lets you pick and choose the exact modules that your communications system requires. With Softerm's fast and easy installation program you will be up and running quickly and with a precise configuration without unwanted bells and whistles. The User Interface dynamically builds menus to present only the modules that you picked.

If you later find that you omitted a module that you require, it can easily be added to your Softerm configuration.

## Softerm Modules include:

Terminal Emulation  
Keyboard  
Connection Path  
Modem  
System Environment  
Nationality  
File Transfer  
Protocol Converter  
Script



## Profile Modules

Softerm is a procognitive system that gives you the ability to easily learn and use data communications at your own pace. Through Softerm's Modules, you can eliminate unnecessary features and with Profiles you can personalize the system so while using Softerm you work with your names that you recognize and understand. Softerm is the only procognitive communications software in today's market.

### Modules

Softerm modules logically separate functionality and features into objects. Modules can be a single feature or are grouped together to perform various functions.

By having a modular system, you can build a user-selectable feature set. The Graphic User Interface dynamically modifies to display only the modular functionality that you chose. A modular architecture eradicates "Feature Glut."

Your program is customized by using Softerm's modules. The user interface and features reflect your specific needs and make the program your own personal tool.

### Profiles

A profile is a user-named collection of settings and/or other profiles. Profiling breaks down communications tasks into smaller more understandable and manageable modules.

- 1) The **Session Profile** is the unified profile that synthesizes all profile modules.
- 2) A **Simple Profile Module** contains its own functional collection of settings.
- 3) A **Compound Profile Module** contains its own functional collection of settings and at least one other Profile Module.

When a session is started, the profile's saved settings are applied to the activated on-line session.

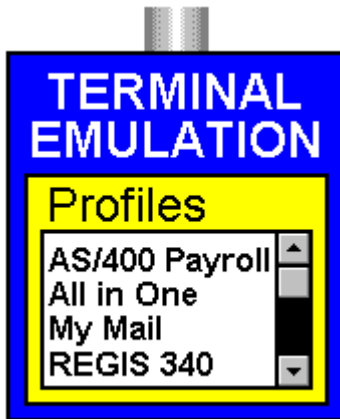
Once you successfully configure a group of settings to perform a task, you name the group as a profile and never need to configure that particular profile task again. You use the profile by the name you gave it to perform its task. Profiling lets you create a mental model compatible with your own thinking process, and makes expanded and advanced use transpire without conscious effort, and over time, you achieve a higher level of user interaction.

Millions of Session Profiles, performing any asynchronous communications task, can be created from these profiled building-blocks.

### Profile Summary

1. Every major function is defined by a Profile.
2. All Profiles are user named and then used by name.
3. Module Profiles (Simple and Compound) are manipulated to combine into a unified Session Profile.





## Terminal Emulation

Softerm's terminal emulations are exact emulations. Every aspect of functionality is retained. Every keystroke, every video presentation, every printer function of the terminal being emulated is reproduced exactly. Our attention to detail results in one single fact: if the original terminal works, Softerm PC works. We guarantee it. Over 65 exact terminal emulations, supporting both block and conversational modes, give your computer the ability to flawlessly connect to your host, serially or through a LAN. Terminal configuration and options for accessing a remote system can be completely specified. Your host application and operating system will not be aware that it is

communicating with a PC. Connection between Micro and Mainframe can be established via modem or direct connection.

For terminals that include Multi-national Character Sets, Softerm provides comprehensive support. Over 10 Multi-national Character Sets can be selected, including Danish, French, German, Italian, Spanish, and Swedish (Graphic Adapters are not required to use International Character Sets).

New terminals are constantly being added to the Terminal Emulation Library. After completion of a new terminal emulation, it is made available to Softerm users, free of charge, on the Softronics BBS (a preconfigured session is included with every copy of Softerm, allowing you immediate access to the Softronics BBS). Because of Softerm's continued growth and improvements, it is the only emulation/communications program you will ever need. As your needs change, Softerm supplies the connection.

### Softerm Modular

Softerm Modular gives you the entire Softerm Terminal Emulation Library in every package. No matter what Host System, Mainframe, or BBS connection you require, Softerm Modular delivers. No other communications software on today's market comes close. Softerm Modular is the most complete terminal emulation software available.

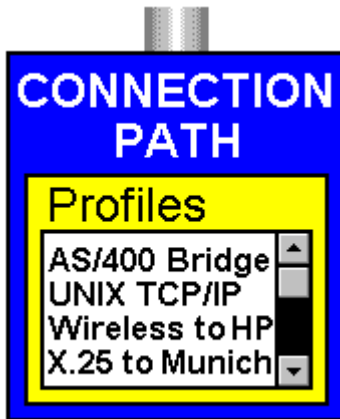
### Softerm GroupWare

With Softerm GroupWare, you choose the specific terminal emulation you need from the Softerm Terminal Emulation Library. Your enterprise network users will gain right-sizing terminal connectivity to your company's host computer system. No more, no less. GroupWare also includes seven basic terminal emulations that provide access to most BBS systems: The DEC series, TTY, ANSI, and more.

### The Softerm Terminal Emulation Library

ADDs Regent 20, 25, 40, 60  
ADDs Viewpoint, Viewpoint/78  
AT&T 610  
ANSI 3.64  
Data General D200, D410  
Data Media DT80  
Datapoint 3601, 8220  
Digital (DEC) VT 320, 220, 100, 52, VT131, VT240/241, VT340/341  
Esprit 6310, 105C  
Hazeltine 1400/1410, 1420, 1421, 1500, 1520, 2000  
Hewlett Packard 2622A, 2392A, 700-94  
Honeywell VIP 7205, 7801, 7803, 7813  
IBM 3101-10, 3101-20, 3162, ANSI

IBM TN3270, TN5250  
Kimtron KT7  
Lear Siegler ADM-2, ADM-3A, ADM-5, ADM-11  
Microdata Prism II  
Perkin Elmer 1251  
Prime PST100  
Soroq IQ120  
Qume 102  
Tandberg 2200  
Tandem 6530  
Tektronics 4010/4014  
Televideo 910, 912, 921, 925, 950, 955  
Texas Instruments 931  
TRS-80 Model 16 Console  
Tymnet 78  
Wang 2110  
Wyse WY50, WY60 (with PC Term personality)



## Connection Path

Softerm offers the most complete connectivity available in communications software. Connection through TCP/IP, X.25, DEC LAT, Network Gateway/Interfaces, Asynchronous Communications Servers, and Serial Ports.

### Softerm Modular

Softerm Modular gives you the entire Connection Path Library in every package. No matter what connectivity you require, Softerm Modular delivers. No other communications software on today's market comes close. Softerm Modular is the most complete communications software available.

### Softerm GroupWare

With Softerm GroupWare, you choose the specific connectivity you need from the Connection Path Library. Your enterprise network users will gain right-sizing connectivity to your company's host computer system. No more, no less. GroupWare also includes basic COM1 through COM4.

### The Connection Path Library

#### TCP/IP - Socket Support and Interfaces

Softronics TCP/IP (includes TCP/IP Kernal for each user)	W
3 Com 3 Plus Open	W,O
Novell LAN Workplace for DOS	W
Novell LAN Workplace for OS/2	O
PC/TCP (supports SLIP)	W,O
PC/NFS (supports SLIP)	W,O
NCSA/MIT (supports SLIP)	O
OS/2 2.0 Communications Manager	O
OS/2 2.0 Extended Services	W
KA9Q	W
Winsock	

W = Microsoft Windows

O = OS/2

D = DOS

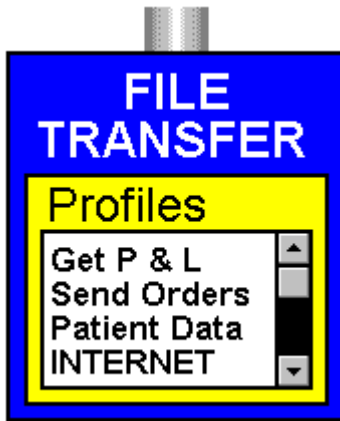
#### TCP/IP - Redirectors/Interfaces

Novell LAN Workplace for DOS	W,D
LAN Workplace for OS/2	O
Hughes LAN Systems, Prolinc	W,D
Excelan TCP/IP	W,D
3Com Associates, BAPI	
Prime Telnet	
Interlan TCP/IP	W,D

#### Interrupt 14 - Redirectors/Interfaces

Allen Bradley, PLP (Personal LAN Program)	W,D
	W,D
	W,D
	W,D

3Com BAPI	W,D
Banyan Vines	
Hughes LAN Systems, ProLinc	
Novell Excelan TCP/IP	W,D
Other Interrupt 14	W,D
	O
<b>Other - Redirectors/Interfaces</b>	
Banyan Vines RASync	
Novell LAN Workplace for DOS	
Novell LAN Workplace for OS/2	W,O,D
	W,O,D
<b>Asynchronous Communication Server</b>	
	W,D
<b>(ACS) Gateway and Interfaces</b>	
Novell ACS (NACS)	W,D
Novell NASI/NCSI	W,O,D
3Com Bridge CS/100	W,O,D
3Com Bridge CS/200	W,O,D
3Com Bridge CS/400	O
Softterm ACS	W,O,D
IBM ACS	W,D
IBM LANACS	W,O,D
IBM ACDI	
Crystal Point, Sparkle	
Banyan Vines	W,O,D
AT&T StarLAN AGS	O
<b>X.25 Gateway and Interfaces</b>	
	W,D
Eicon, Access for Windows	
Eicon, Access for OS/2	
(Developing Now)	O
Novell PCOX	W,D
<b>DEC LAT and Interfaces</b>	
	W,D
Novell Pathworks	
Digital Equipment Corporation	
(DEC), SLAT	
Meridian Technologies SLAT	W,O,D
<b>Serial Adapters</b>	
<b>(RS232 : Modem/Direct Connect)</b>	
COM1 through COM4	



## File Transfer

Softerm offers all of the most popular file transfer protocols. The selection of protocols ensures that any type of file on a remote system is obtainable. By using Softerm, your PC will exchange information with a wide variety of mainframes, minis, and BBS systems. Maximum accessibility is guaranteed. And Softerm's list of protocols continues to grow. When new communications protocols become popular, Softerm adds them.

### The File Transfer Protocol Library

#### **IND\$FILE**

The IBM IND\$FILE protocol operates with the IBM VM/CMS, MVS/TSO and CICS host environments. Unique profiling support for IBM 7171 Model 1, 9370, 3708, 3174 with 3020, and S/1 Yale IUP protocol converters is also included. All file types can be downloaded and uploaded to/from the IBM Information Network. Softerm's implementation of IND\$FILE supports code page conversion.

#### **Kermit**

Kermit Protocol, developed by Columbia University Center for Computing Activities, has become an industry standard for asynchronous file transfers between computer systems. Softerm supports a full implementation of Kermit Protocol, with or without sliding windows. Two modes of Kermit are contained within Softerm: Dumb mode, in which commands are issued at both ends of the transfer, and Smart mode. Smart mode allows your PC to become a Kermit-Server; this provides the ability to access files from unattended mainframes, minis, and micros.

#### **Honeywell Kermit**

Support is also available for Honeywell's implementation of Kermit and Kermit server, which includes support for GCOS Mapping. The Honeywell Kermit Protocol will handle all packet negotiation between Softerm and Honeywell Systems, including file transfers will logged onto the host as a Text Mode terminal.

#### **Softrons**

The Softerm Softrons protocol is an intelligent protocol designed specifically for file transfers between computer systems, either serially or through a LAN. Softrons transfers any type of data using a 7-bit system and provides automatic binary encoding and decoding, CRC-16 error checking with automatic retransmission, and data compression. Softrons also supports unattended operation; your PC can become an efficient Softrons-server with Softrons as the protocol.

The source code for Softrons is provided by Softronics in FORTRAN 77. And Softrons has already been adapted to many host systems making it easy to take full advantage of this powerful transfer protocol. You not only receive a high level protocol for your PC, but for your host system as well.

Softrons operates, error free, over any public network making it perfect for transparent file transfer between mainframes, minis, and micros. Most public networks are priced on a character basis regardless of distance. For diverse geographical locations, Softrons is the most economical and reliable transmission medium available.

#### **XMODEM and XMODEM CRC Protocols**

Softerm includes an implementation of the standard public domain protocols, XMODEM and XMODEM CRC, which may be used for file transfer between computer systems. XMODEM is a popular protocol used by many bulletin board systems. The protocol operates in block mode and allows any type of data to be transferred imposing no restrictions on the contents of the data. XMODEM uses asynchronous transmission with 8 data bits, 1 stop bit, and no parity.

#### **XMODEM and XMODEM CRC (1k) Protocols**

This implementation of Xmodem is the same as Xmodem and Xmodem CRC protocols, except the default data block size is 1024 bytes as opposed to 128 bytes. This protocol greatly enhances throughput of data during a file transfer because of the larger block size.

#### **YMODEM and YMODEM (1k) Protocols**

The Ymodem protocol is sometimes referred to as Ymodem Batch, which is an extension of Xmodem and Xmodem CRC protocols, with the additional functionality that allows multiple file transfers with a single command.

#### **YMODEM-g and YMODEM-g (1k) Protocols**

Ymodem-g, which is an extension of Ymodem, provides maximum throughput when using an error-free modem or communications link, such as X.PC or an MNP error correcting capable modem. There is no dual protocol enveloping, which is undesirable on an error-free data link.

#### **ZMODEM**

The new and popular ZMODEM protocol is now used by most public BBS systems. Softerm gives you a full implementation with the following features:

- Incomplete receives can be resumed at the point of interruption
- Automatic 16 bit or 32 bit CRC error checking
- Run length encoding (data compression)
- Handles data block sizes of 128 to 1024 characters
- Simple block or streaming modes

#### **Character File Send/Receive (ASCII)**

The Character File Transfer provides maximum flexibility for text files. Character File Transfer allows files comprised of the standard ASCII character set to be exchanged with other systems.

Send files using the Character File Transfer can be accomplished in a simple block or streaming mode. If an end of block terminator string is defined, Softerm can insert the terminator after a pre-specified maximum block size. If an acknowledge string is specified, Softerm waits for the acknowledge string to be received after transmitting the terminator. Echo wait can also be specified; with echo wait, Softerm will not transmit a character until the previously transmitted character is echoed back. If an acknowledge string is not specified, file transfer operates in a streaming mode until completed.

Capturing files using the Character File Transfer permits an optional initialization string to be transmitted to the host computer. A termination string can also be specified. Character File Transfer allows character codes to be translated to different character codes or removed as they are sent. Softerm provides all possible controls for performing character file transfers. With Softerm, text file transfer is efficient and extremely flexible.

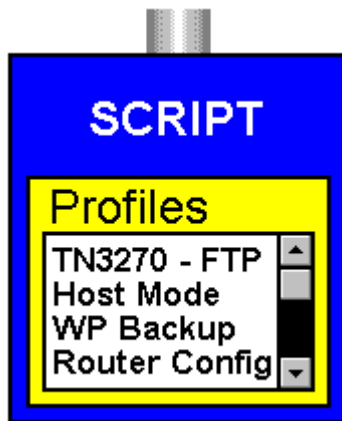
#### **Softerm Modular File Transfer**

The entire File Transfer Library is included in every copy of Softerm Modular. With Softerm Modular, no file is inaccessible. A point and click send file/receive file makes uploading and downloading simple and fast. Softerm's unique profiling capabilities let you create and name your own configurations of file transfer protocols. Softerm Modular is truly the most complete communications available.

#### **Softerm GroupWare File Transfer**

With GroupWare, File Transfer is an optional module. If your enterprise network requires file transfer capabilities, the entire file transfer protocol library is only \$10.00 per user. The choice is yours,

GroupWare never overwhelms you with unwanted features.



## Script

Included with Softerm is a powerful script language for automating any communications task. Over 30 commands can be used to provide intelligent communications with any host system. Script files can be generated to automatically perform any simple or complex communications task: logon or logoff procedures, file transfers, callback, unattended operation, and any task that can be performed manually. Comprehensive support for variables allow script files to adapt to the dynamic requirements of a changing environment. By using script files, the operator is freed from complicated and time consuming tasks. Scripts can even be set to automatically start when a session is initiated.

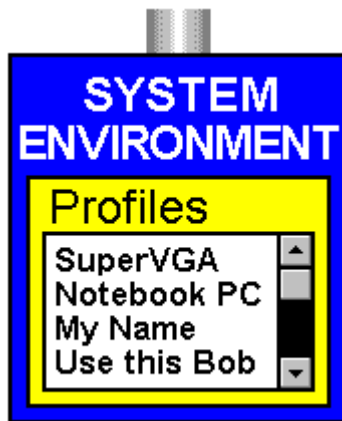
### Softerm Modular

Scripting is a standard feature of Softerm Modular.

### Softerm GroupWare

With GroupWare, Scripting capability is an optional module. If your enterprise network requires automation of communications, the Script File Module is only \$10.00 per user. The choice is yours, GroupWare never overwhelms you with unwanted features.





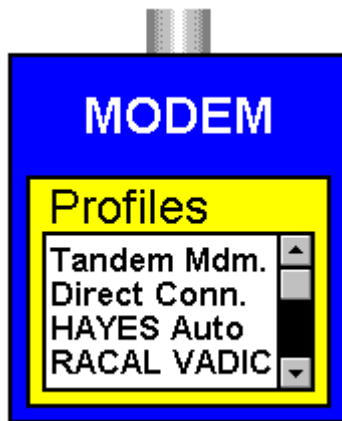
## System Environment

Setup the communications environment your liking. Choose colors, disk paths, printers, and multi-national video presentations for your communications sessions. Have one session display white text on a blue background, have another session display black text on a red background. The communications environment is completely at your control.



## Keyboard

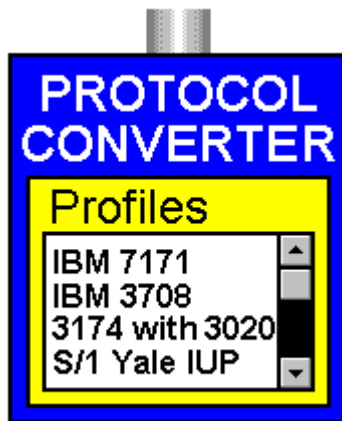
Softterm's Graphical Keyboard Remapping capability allows complete translation of keys. Any customization of an emulation is possible. All Base, Shifted, Control, Alt and AltGR keystrokes, generate whatever character, character string, terminal function or keyboard function you need. Of course, Softterm comes with the keyboard already ergonomically configured to standard key output. Softterm not only supplies the most accurate terminal emulations available, it gives you the benefit of custom tailoring these emulations.



## Modem

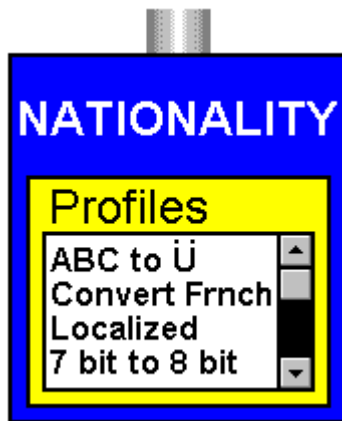
Softerm offers support for all of the latest modems and will support any Hayes compatible.

As with all of Softerm's modules, each modem configuration can be profiled by the user, and later used by its user name.



## Protocol Converter

Unique profiling support for IBM 7171 Model 1, 9370, 3708, 3174 with 3020, and S/1 Yale IUP protocol converters



## Nationality

Softterm Modular's global communications supports many multi-national environments. One-of-a-kind profiling of multi-national serial translations gives you the ability to configure your communications environment to operate precisely with host computers in many different countries.

- Multi-national keyboard support
- Dead Key support
- Multi-national host character/host code page support
- Supports both 7-bit to 8-bit and 8-bit to 8-bit character translations to allow multi-national support in all communications environments
- Localized versions of Graphic User Interface (GUI) available
  - Danish
  - Dutch
  - Finnish
  - French
  - German
  - Italian
  - Norwegian
  - Portuguese
  - Spanish
  - Swedish

# Procognitive Systems

Softterm is a Procognitive System for asynchronous communications and terminal emulation written specifically for the Graphical User Interface (GUI) of Operating System/2 (OS/2) Presentation Manager (PM) and Microsoft Windows, Standard and Enhanced modes.

## Procognitive System Definition

A system that extends "farther into the process of generating, organizing, and using knowledge through interaction among men, computers, and the body of knowledge."<sup>1</sup>

## Procognitive System Criteria

1. Facilitate seemingly unconscious learning during interaction between user and system.
2. Achieve a higher level of user interface interaction through protracted use.
3. Adjust to the individual user by allowing a user-built feature set.
4. Build upon user success.
5. Allow the user to manage tasks by manipulating user-named objects.
6. Provide the user with immediate feedback during decision-intensive actions.
7. Assist the user with on-line Help.

1. Smith, Linda C. "User Friendly Future: Applications of New Information Technology" In "What is User Friendly?" pp. 109-110, Graduate School of Library and Information Science University of Illinois at Urbana - Champaign (1986)



## **UniversalHelp**

UniversalHelp is the first product of its type for simultaneous authoring of Windows and OS/2 Help. Used in conjunction with Microsoft Word for Windows, UniversalHelp transforms the leading Windows word processor into a fully-functional Help authoring and conversion system.

### ***Simultaneous Authoring of Windows and OS/2 Help***

Developers who create an application for both Windows and OS/2 can author the accompanying Help system concurrently for both environments using UniversalHelp. Help can be exported to Windows Rich Text Format (RTF) and OS/2 Information Presentation Facility (IPF) source files on demand.

### ***Interactive WYSIWYG Environment***

UniversalHelp is an interactive What-You-See-Is-What-You-Get (WYSIWYG) environment that simulates the Windows Help system. Never again struggling with foot notes, hidden text, or "markup" tags, Windows and OS/2 Help authors can:

- Enter hypertext controls in a point-and-click manner.
- Test hypertext and hypergraphic jumps before compiling a Help system.
- Create "popup definition" topics on-the-fly.
- Delete a topic and all references to that topic through a one-step process.
- Browse through previously written topics in a window while authoring in another window.

### ***Powerful Word Processing***

UniversalHelp was developed to run in conjunction with Microsoft Word for Windows. Using Word as a platform enables the author to have full access to its rich assembly of features:

- Spelling checker, thesaurus, grammar checker
- Glossary
- Find and replace
- On-the-fly list and table creation
- Drag-and-drop text editing
- and much more...

### ***Who Should Use It?***

UniversalHelp is designed for all Windows and OS/2 Help authors, particularly those who:

- need to create similar Help for Windows and OS/2. already have Help for Windows or OS/2 and want to convert it quickly to the other format.
- have little or no experience working with Help and do not want to struggle with the complexities of RTF or IPF format.
- are experienced in authoring Help, but want to speed up their current processes without sacrificing any functionality.
- need to create multiple language versions of a Help system. UniversalHelp can be used in combination with UniversalNLV to create National Language Versions (NLV) of Help.

### ***System Recommendations***

- IBM-PC compatible computer with a 386 or higher coprocessor
- 4 MB of RAM
- VGA or Super VGA display
- 2.5 MB or greater of hard disk space
- Microsoft Windows 3.0 or higher
- Microsoft Word for Windows 2.0

### ***Ordering Information***

UniversalHelp is available for \$645.00. To order, call Softronic at 800/225-8590 or fax 719/548-1878.



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**See Also:**

Strategic Alliance : Bundling Softronics Software  
Softronics address and phone information

***Other Softronics Products***

Softerm Modular  
Softerm PC Classic  
Softerm ProDOS  
Softerm GroupWare  
Softerm ACS  
WinSong  
UniversalNLV

## UniversalNLV

UniversalNLV is the first translator's software of its type for simultaneous translation of Windows and OS/2 Help and graphical user interfaces into National Language Versions (NLV). Used in conjunction with Microsoft Word for Windows, UniversalNLV transforms the leading Windows word processor into a fully-functional GUI Help translating and conversion system.

### I. HELP TRANSLATION

#### ***Simultaneous Translation of Windows and OS/2 Help***

Developers who create an application for both Windows and OS/2 can translate the accompanying Help system concurrently for both environments using UniversalNLV. Help can be exported to Windows Rich Text Format (RTF) and OS/2 Information Presentation Facility (IPF) source files on demand. It also imports existing Windows RTF and OS/2 IPF source files.

#### ***Point & Click WYSIWYG Environment***

When translating Help, UniversalNLV features an interactive What-You-See-Is- What-You-Get (WYSIWYG) environment displaying the original Help composition on the left and a translating window on the right.

#### ***Verifies Translations***

While allowing freedom for the translator during editing, UniversalNLV performs validity checks on the output to ensure that the proper controls are translated or defined for each topic of an NLV Help system. It eliminates functional testing of new language versions by maintaining referential integrity between original Help and its NLV translated derivatives.

#### ***Powerful Word Processing***

UniversalHelp was developed to run in conjunction with Microsoft Word for Windows. Using Word as a platform enables the author to have full access to its rich assembly of features:

- Spelling checker, thesaurus, grammar checker
- Glossary
- Find and replace
- On-the-fly list and table creation
- Drag-and-drop text editing
- and much more...

### II. GUI TRANSLATION

#### ***A Systematic Approach***

When translating GUI elements, UniversalNLV works in combination with two program utilities to provide a systematic approach to GUI translation. UniversalNLV imports GUI text from a program utility which copies GUI text from original source code. UniversalNLV presents the original text string in a display-only window for the user to translate into a separate window, maintaining integrity between the original and translated strings. After the translation is completed, it exports an NLV version of the GUI source text to a second program utility which replaces original GUI text with the translated strings into a copy of the original source code. UniversalNLV Extractor and Insertor program utility source code are also provided.

#### ***Saves Time and Money***

Using UniversalNLV:

- reduces functional verification testing of National Language Versions up to 75% by maintaining referential integrity between original source files and NLV translated derivatives.

- reduces time and cost of translations.
- guarantees uniform translations of frequent occurrences of GUI text.

***System Recommendations***

- IBM-PC compatible computer with a 386 or higher coprocessor
- 4 MB of RAM
- VGA or Super VGA display
- 2.5 MB or greater of hard disk space
- Microsoft Windows 3.0 or higher
- Microsoft Word for Windows 2.0

***Ordering Information***

UniversalNLV is available for \$845.00. To order, call Softronics at 800/225-8590 or fax 719/548-1878.

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***See Also:***

Strategic Alliance : Bundling Softronics Software  
Softronics address and phone information

***Other Softronics Products***

Softerm Modular  
Softerm PC Classic  
Softerm ProDOS  
Softerm GroupWare  
Softerm ACS  
WinSong  
UniversalHelp

## Softterm PC Classic

Communications and Terminal Emulation Software for DOS

Softterm PC Classic guarantees *Connectability*: Exact terminal emulations are your key to achieving communications with your mainframe computer, with no loss of functionality.

Softterm PC Classic guarantees *Accessibility*: Advanced communications capabilities are your key to transporting data between your PC and mainframe applications.

Softterm PC Classic is the most comprehensive terminal emulation and communications program available today! With more emulations, more script file capabilities, multiple concurrent port access, Local Area Network (LAN) support, and simultaneous background execution; Softterm PC provides a complete communications environment for even the most demanding applications.

The benefits are enormous.

Exact emulations, with all keyboard and display characteristics built in, for over 60 popular conversational and block mode terminals. Keyboard remapping allows redefinition of the keyboard layout to suit personal customization and standardization requirements. Extended character support provides 132 columns of text and over 20 International character sets. Keyboard macros, with a built in learn mode, provide single keystroke access to often used key sequences in host applications. A built-in phone book that remembers names, numbers, communications settings, logon sequences, and even a notes field for personal reminders. And, you can hot key right into terminal emulation for a session with your host, and return to the exact point at which you left your PC application.

A rich and powerful script language, coupled with an intuitive menu driven presentation, provides advanced communications capabilities to all users, from novice to experienced. Operations involving dialup, logon, file transfers in either direction, host applications dialogue, and signoff can be automated using the script language. Simple and complex procedures are reduced to a single command. With conditional processing, error detection, and variables, scripts can be made both reliable and user friendly. Scripts can be initiated by you, by your host, or by time and/or date.

Softterm PC even supplies the final catalyst for uniting host and PC applications. Seamless Remote Virtual-Disk (SRV-Disk), pioneered by Softronic and embodied in the File Agent, provides seamless integration of file transfers between remote systems and PC applications. From within any PC application, data may be read from or written to your host. Transparently. Effortlessly.

Softterm PC is easy to install and simple to use. A comprehensive installation program will have first-time users, as well as communications experts, on-line and operating Softterm within minutes. When you are connected to your host system, Softterm remains transparent until you need it; and when you need Softterm, it immediately responds with menus and commands that are human engineered to be functionally descriptive. Through the use of Script Files and Keyboard Macros, Softterm can be configured so that any operation involves no more than one keystroke.

The list of features goes on: an integrated full screen text editor, complete DOS file management utilities, a Background Mail Monitor, local file copying and printing. The bottom line for you is:

Softterm PC guarantees productivity!

## SOFTERM FUNCTIONS

### ***Terminal Emulation***

*Connectability*. In a world of countless Mainframe, Mini, and Micro systems, Softterm PC provides

connectivity through exact terminal emulation. Over 50 exact emulations are included in Softerm. All functions are present. Every keystroke, every video presentation, every printer function of the terminal being emulated is reproduced exactly within the limits of the PC hardware. And Softerm operates serially or through a LAN. With Softerm as the connection, your PC is transformed into the terminal of your choice.

The connection between micro and mainframe goes beyond the functions of the native terminal; Softerm integrates the abilities of the PC with mainframe resources. During terminal emulation, Softerm allows use of disk, printer, keyboard macros, or your favorite PC application. Only a few keystrokes separate you from file transfer, screen capture to disk or print, background printing and job control, a text editor, disk utilities, queue management, and keyboard remapping. Softerm will record an entire session with your host by toggling data capture on and off. Softerm gives you a capability not present in native terminals: the ability to use the power of a PC and terminal simultaneously.

Softerm PC is a dynamic emulation package which adapts as your PC environment changes. New emulations are constantly being added to the Softerm Library. After completion of a new emulation, it is made available to Softerm users, free of charge, on the General Electric Network for Information Exchange (GENIE). Enhancements or program corrections for existing emulations are distributed in the same manner. Because of Softerm's continued growth and improvements, it is the only emulation/communications program you will ever need. As your needs change, Softerm supplies the connection.

**Exact Emulations** Softerm's terminal emulations are exact emulations. Every aspect of functionality is retained. Our attention to detail results in one single fact: if the original terminal works, Softerm PC works. We guarantee it. Over 50 exact emulations, supporting both block and conversational modes, give a PC the ability to flawlessly connect to your host, serially or through a LAN. Terminal configuration and options for accessing a remote system can be completely specified. Your host application and operating system will not be aware that it is communicating with a PC. Connection between Micro and Mainframe can be established via modem or direct connection.

Softerm PC can be made memory resident. With Softerm in memory, you can toggle between terminal emulation and foreground application with a Hot Key eliminating the problem of terminating a running program to access remote systems. Softerm preserves the last terminal screen and PC application screen in memory.

### **132 Column Display**

For terminals that support 132 column display, Softerm provides the entire video display. All of the popular graphic adapters are supported: EGA, CGA, and Hercules (MGA). Softerm even provides 132 column capability for PCs without a graphic adapter through horizontal scrolling (scrolling the screen from left to right).

### **Multinational Character Set**

For terminals that include International Character Sets, Softerm provides comprehensive support. Over 10 International Character can be selected, including Danish, French, German, Italian, Spanish, and Swedish (Graphic Adapters are not required to use International Character Sets).

### **Keyboard Remapping**

Softerm's keyboard remapping capability allows complete translation of keys. Any customization of an emulation is possible. All Control and Alt combinations, character, number, cursor, and function keys generate whatever characters you need. In addition, any key can be remapped to an unlimited number of keystroke sequences. Of course, Softerm comes with the keyboard already ergonomically preconfigured to standard key output. Softerm not only supplies the most accurate emulations available, it gives you the benefit of custom tailoring these emulations.

### **General Communications**

**Accessibility.** An integral attribute for communications programs is the ability to access and transport

information to or from a wide variety of systems; Softerm provides this accurately and fast. Background communications permit four serial and three parallel ports to concurrently transfer data. Whether your PC connects serially or through a LAN, Softerm guarantees accessibility. With the seven file transfer protocols included in Softerm, no file is unreachable. And Softerm constantly improves; as new protocols are introduced to the communication world, Softerm adds them. Softerm PC maintains accessibility in a rapidly changing environment.

### ***File Transfer***

Softerm supports file capture/send during active terminal emulation or while executing other PC applications. File transfer between computer systems can be initiated by the operator using convenient menu-driven procedures, or multi-port background transfers can be achieved transparently using Script Files. The seven File Transfer Protocols supplied by Softerm provide state-of-the-art communications. Our own protocol, Softrans, gives error-free transfer for any type of data; the source code for Softrans is provided ready for your host system. The popular public domain protocols, Kermit, Kermit-Server, XMODEM, and XMODEM CRC make Softerm easily adaptable to any system. Character File Transfer allows maximum flexibility with text file transfers. In addition, Softerm includes Crosstalk and Hayes Verification protocols. Facilities for making your PC a stand-alone file server are also provided by Softerm.

File transfer protocols included in Softerm PC are:

- Softrans Protocol
- Kermit Protocol
- Kermit-Server Protocol
- XMODEM and XMODEM CRC Protocols
- Crosstalk Protocol
- Hayes Verification Protocol
- Character File Transfer (capture/send)

(for details see separate Protocol Summary brief)

### ***Script Files***

Included with Softerm PC is a powerful script language for automating any communications task. Over 30 commands can be used interactively or in a script file to provide intelligent communications with any host system. Script, or command, files can be generated to automatically perform any simple or complex communications task: logon or logoff procedures, file transfers at predetermined times, callback, unattended operation, and multi-port concurrent background communications. Comprehensive support for variables allow script files to adapt to the dynamic requirements of a changing environment. Script files can be executed with Softerm's keyboard macros making even the most difficult communications procedure as simple as pressing one key. By using script files, the operator is freed from complicated and time consuming tasks.

### ***Host Mode***

Softerm enables a PC to become an unattended, remote access system through the use of Host Mode. Files can be accepted or sent by Host Mode, and up to four serial ports can be active conducting simultaneous communications. Softerm even provides optional logon security for remote users. The possibilities Host Mode presents are unlimited. A PC can be used as a file source for any remote system, a file server for after-hours work, or a bulletin board for public use. And with Softerm's concurrent capabilities, Host Mode can take place in the background leaving the foreground available to perform other tasks. Host Mode operates, serially or through a LAN, with any of the seven protocols supplied by Softerm.

### ***Phone Utilities***

Phone utilities include a user phone directory with auto-dial capabilities. Each entry in the Softerm phone book has fields for name, number, communications parameters, and notes. Communications parameters include the number of data and stop bits, parity, and speed; each time an entry from the phone book is

selected, the parameters are automatically set. Also, the phone book contains a field for an initial transmit string which is automatically sent as soon as a connection is established; the string can contain any characters or keyboard macros, and provides automatic logons, instant access to necessary areas of the host system, or instigation of any job which can be activated from your keyboard. Having the parameters recorded in Softerm's phone book makes phone communications simple and fast. The directory can be stored on floppy or hard drive with no restrictions on number of entries.

### ***Utilities***

A full compliment of PC utilities are provided by Softerm. These handy utilities, providing access to disk, printer, screen, and modem, can be initiated while in emulation or PC applications. Softerm PC gives you full use of your system during any phase of operation.

### ***Disk File Management***

While using terminal emulation or PC applications, Softerm's Disk File Management options allow full command of PC devices. Disk File Management can flexibly manipulate data between video, disk, and printer providing the user with a capability never before present in a standard terminal. Softerm even gives the option of reformatting files during the transfer.

### ***Disk Utilities***

Softerm's disk utilities allow file deletion and renaming, directory display, and default path setting. While memory resident, Softerm provides the benefit -- to any PC application -- of performing routine disk procedures without exiting to DOS.

### ***Full Screen Text Editor***

Softerm PC provides a full-featured text editor. The editor can process two documents concurrently and supports functions such as block operations, insertion/overwrite, read/write to disk, keyboard macro editing, forward/backward search, search and replace, and more. While terminal emulation is active, received data is captured to a buffer up to 64K in size. When the editor is invoked, the contents of the capture are displayed allowing the information to be edited and/or transferred to disk or print. This prevents flip-flopping between Softerm and an external text editor. With Softerm residing in memory, the text editor can be accessed from any PC application.

### ***Communications Agent (Red Ring)***

At the core of Softerm PC is the Communications Agent (Comm-Agent). The Comm-Agent is a powerful communications manager which provides features not found in other communications packages. All resources of the PC are fully managed by the Comm-Agent. The Comm-Agent can be installed and made resident in memory, with or without terminal emulation, to become an extremely useful extension of the operating system. Once installed in memory, the features of the Comm-Agent can be utilized at any time, even while other programs are active. Using the Comm-Agent, you can access communications functions, disk utilities, the text editor, keyboard macros, queue management, and disk file management without terminating the application currently executing. The Comm-Agent can be used as a background program allowing communications to take place concurrently with the execution of foreground PC applications. Also, the Comm-Agent functions as a background print program which provides a multi-port print spooling capability allowing concurrent printing while other programs execute. The Comm-Agent enhances the functionality of your personal computer by creating the ability to process a different job for each port -- saving you time and money.

### ***Background Job Control***

A unique feature of Softerm is its ability to process multiple jobs concurrently in the background. The Comm-Agent incorporates a multi-tasking, interrupt-driven, prioritized scheduler to manage the concurrent operations of up to four serial and three parallel ports. Each port can execute communications tasks, such as file transfer or script file execution, simultaneously without interrupting foreground applications.

### ***Keyboard Macros***

To simplify keyboard operations, Softerm PC provides keyboard macro capabilities. Virtually any

keyboard operation can be incorporated into a macro. Users can then perform long and complicated interactions by simply pressing one key. Inputting iterative processes such as repetitious data entry, logon and logoff procedures, or traversing host menus can be eliminated by Softerm. Softerm PC supports up to 36 different keyboard macros for any series of keystrokes. Softerm gives you the ability to build macros from Learn Mode, an extremely useful and easy to use feature. Any combination of keystrokes can be captured and automatically built into a macro simply by turning on Learn Mode. Even the most non-technical person can create keyboard macros.

### ***Queue Management***

The Comm-Agent provides a job queue for each COM and LPT port as well as a Time queue. The Time queue can be used for file transfer or script files which have a deferred execution until a specific time. Jobs may be managed by the operator from any phase of emulation or application. Also, utility programs are provided to allow inter-program and DOS queuing to the Comm-Agent for background execution. Softerm allows a maximum of 127 active jobs.

### ***Modem Support***

Softerm supports an extensive list of modems, including any Hayes compatible. A single user-interface for all modems allows the user to change modems without learning new command and convention procedures for dialing.

### ***Menu Control***

Softerm employs an easy-to-use, menu-driven format for terminal configuration, file transfer, utility access, modem configuration, and data capturing processes. At any time during an emulation session, a Help Screen can be displayed providing an instant keyboard template.

### ***DOS Interface***

Softerm PC provides a consistent interface to MS or PC DOS regardless of version. This provides easy customization for future releases of DOS. Upgrades of Softerm, to new versions of DOS, are made available to Softerm users at no additional charge. Softerm is always up to date.

### ***System Management***

System Management changes the personality of Softerm to suit the personal computer and/or LAN of your choice. This unique method of system definition provides a cohesive integration with different makes of IBM, IBM compatibles, semi-compatibles, and LANs. Just select the correct system file, and Softerm is ready to execute. Our extensive list of compatible systems is always growing (see Specifications Sheet for a complete list). Local Area Network (LAN) support: Softerm is NetBIOS compatible and operates over most LANs. Softerm also provides full-featured custom LAN support (see Specification Sheet for a complete list).

## **FILE AGENT**

### ***Seamless Remote Virtual Disk***

Encompassing Softerm PC is the File Agent. The File Agent is an undetectable file manager which works in concert with host systems providing seamless integration of host data into PC applications. With the File Agent and Comm-Agent residing in memory, information from mainframes, minis, or other micros can be transparently accessed and united with the foreground application currently executing. Remote transfer of data is accomplished, with end user simplicity, through the use of Seamless Remote Virtual- Disk (SRV-Disk).

### ***What is SRV-Disk?***

SRV-Disk utilizes a remote disk resource as though it were a local disk drive. Remote file retrieve and save are achieved by local DOS syntax. Additional hardware or code alterations are not needed. Through the File Agent, host disk and I/O system become a transparent extension to DOS. Each call is examined; if the call is local, it is given to DOS for execution, otherwise the File Agent redirects the call to the remote operating system. During redirection, the File Agent translates DOS commands into the appropriate host operating system convention. Users do not have to learn any new commands.



SRV-Disk transforms a desktop computer into much more than a basic, solitary PC. Softerm is the gateway to a new and innovative PC environment; an environment in which every personal computer can share the resources of a mainframe without the operator having to learn new communications procedures or operating systems.

### ***How is SRV-Disk used?***

During the execution of a PC application (ie. WordPerfect, dBase, Lotus, etc.), a file needs to be retrieved or saved to the host. When the PC application prompts for the local device specifier and filename (ie. C:Filename), C: is substituted by a device specifier such as H:Filename. The specifier, H:, signifies the file to be retrieved/saved is located at the host. After encountering an SRV-Disk specifier, Softerm, through the File Agent, redirects file I/O requests. A saved file is automatically written to the host disk drive, while retrieved files are transparently delivered into the application. WordPerfect, dBase, Lotus, or any PC application will work unchanged without terminating.

SRV-Disk supports the DIR command. To view a directory on a remote system, simply type the correct drive specifier and the DIR command. The directory appears on your screen, and by means of familiar pointing and selecting techniques, users may traverse among directories and choose the file they desire.

### ***Why use SRV-Disk?***

Many non-technical people find the intricacies of communications programs unfamiliar and hard to understand. To educate these people takes time and money and many simply do not want to learn. SRV-Disk solves this problem. If someone can use WordPerfect, dBase, Lotus, or any PC application, they can use SRV-Disk.

Mainframes can be used as PC file reservoirs. With nearly unlimited storage, any amount of files, in any PC file format can be saved on the company computer. Whether you need to keep Lotus, WordPerfect, dBase, or any other type of file on the mainframe, Softerm accesses the file from within the application. And, SRV-Disk is ideal for resident programmers use with in-house development. SRV-Disk calls can be made from within custom programs.

### ***Preconfigured versions are available.***

Softerm can be ordered with preconfigured SRV-Disk capabilities for many popular hosts including Digital (DEC) and Data General. A preconfigured version for mainframe WordPerfect is also available. Softerm even supplies a remapped keyboard allowing PC WordPerfect commands to be accepted by the host system. Whether you are operating WordPerfect on your mainframe through terminal emulation, or using PC WordPerfect, the keyboard commands are identical. For more information about preconfigured versions of Softerm, contact Softronics, Inc.

### ***Background Mail Monitor***

Softerm provides a passive background utility for receiving electronic mail. Softerm constantly monitors for incoming mail, and when it is transmitted to your PC, an automatic foreground message notifies you that mail has been sent. The message can be read immediately, or you can Hot Key to the message at a later time. Parameters can be set to control the initial message notification time, the time elapsed between reminder notifications, and the Hot Key keystroke. Softerm supports most electronic mail systems including DEC's All In One, Data General's CEO, and the WordPerfect Office. .

### ***Multiple Concurrent Emulations Using Add-A-Terminal!***

Softerm makes it possible to run four different terminal emulations simultaneously. Concurrent active emulations can be accomplished with multiple serial ports or through a LAN. Softerm achieves multiple emulations by working in conjunction with a companion Softronics' product, Add-A-Terminal. For more information about concurrent emulations and Add-A-Terminal, contact Softronics, Inc.

## **USER SUPPORT**

### ***Reference Manuals***

Softerm PC includes two reference manuals to meet the varying needs and abilities of Softerm users. The Users' Guide is a task-oriented description of Softerm's most frequently used functions including examples and tips. A comprehensive Technical Reference Manual provides over 600 pages of indexed material explaining every technical detail of Softerm.

### ***Quick Reference Cards***

A color-coded General Reference card provides quick access to any of Softerm's emulation, macro, text editor, phone book, and utility functions. The File Transfer and File Agent Reference Card includes a list of Communications Agent and File Agent commands.

### ***Technical Support***

An expert Technical-Support staff is available for hotline telephone support from 8:00AM to 5:00PM Mountain Standard Time (MST). Problems and questions about Softerm will be promptly solved free of charge for the first six months. A wide variety of optional technical services are available including remapping the keyboard for custom emulations, preconfiguring Softerm to fit specialized needs, custom programming of script files, and on-site training. We have a level of technical service that suits your specific purpose.

### ***Money Back Guarantee***

Softerm comes with a conditional money-back guarantee. If Softerm does not work on your system, or operate as advertised, Softronics will correct the problem or refund your money.

## **SOFTERM PROVIDES FULL-FEATURED SUPPORT FOR LANS!**

Softerm now supports any NetBIOS compatible LAN. Softerm also operates over some single-vendor LANs and their asynchronous servers. For a complete list of compatible LANs and asynchronous servers see the specification sheet. A special configuration program ensures optimum functionality over the LAN.

All PCs acquire 40 exact terminal emulations for interfacing with a wide range of remote host systems. With Softerm, each LAN client gains accessibility to mainframes, minis, micros, public information services, and other LANs. File transfers, to or from remote systems or between PCs within the LAN, occur without passing through the file server. Softerm provides access to all client's files, allowing every PC to become a file server (see Host Mode section of this document). And all clients can concurrently support four serial and three parallel activities offering unparalleled connectivity. For example, your home PC can connect through modems to your office PC which is attached to a LAN. Your home PC can now send and receive files directly to or from the file server. This can be accomplished in the background on the home and the office PC while using your favorite application in the foreground. All features of SRV-Disk and Background Mail Monitor are supported. SRV-Disk provides a multi-directional link to each client allowing file transfer from within PC applications. Background Mail Monitor connects you to electronic mail systems, such as the WordPerfect Office, Data General's CEO, and Digital's All In One. For more information about SRV-Disk and the Background Mail Monitor, see the File Agent section of this document.

Softerm's phone utilities provide an easy interface to the syntax and naming conventions of the LAN's Network Operating System and asynchronous servers (see Phone Utilities section of this document). Softerm can reside on the file server in a common directory for all LAN clients. Personal directories can be maintained for specific configurations of each individual client.

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### ***See Also:***

Strategic Alliance : Bundling Softronics Software  
Softronics address and phone information

***Other Softronics Products***

Softerm Modular

Softerm ProDOS

Softerm GroupWare

Softerm ACS

WinSong

UniversalHelp

UniversalNLV

## Softerm GroupWare

*"Softerm GroupWare is the only product of its kind! It's always the right size."*

When you need to access remote host computer systems through your PC network, Softerm GroupWare delivers enterprise oriented communication solutions. GroupWare gives you uniform operating system support for Windows, OS/2 and DOS. You choose the specific feature set for your communications needs. Choose from an extensive communications and terminal emulation library, pick the feature set to suit your enterprise requirements, and Softerm GroupWare will be tailor-made to your exact specifications.

*Why pay for something you don't want? Softerm Workgroup is rightsizing communication software for your environment.*

Standard GroupWare Module Set includes:

- Terminal Emulation Module

Standard Terminal Emulations:

ANSI 3.64  
DEC VT320, VT220, VT100, VT52  
IBM 3101-20, 3101-10  
IBM ANSI  
TTY Compatible

The Terminal Emulation of your choice from the Terminal Emulation Library.

Choose from over 60 exact terminal emulations. All terminal functions are present. Every keystroke, every video presentation, every printerfunction of the terminal being emulated is reproduced exactly. A graphical representation of the keyboard provides quick and easy remapping of the terminal keyboard. Multiple terminal sessions run uninterrupted within

their

own window.

- Connection Path Module

Standard Connection Path:

COM1 through COM4 for all client PCs

The Connection Path of your choice from the Connection Path Library.

Choose from Softerm's many Network Connectivity/Gateways Redirectors/Interfaces including Novell, 3Com, TCP/IP, X.25, Asynchronous Communications Servers and many more.

- Session Manager Module

The Session Manger comes complete with a personalized session phonebook. Procognitive Point and Click communications management provides easy on-line operation for all levels of users -- from novice to advanced.

- Session Window Module

Pick the functionality you want. Softerm's dynamic menu system displays your chosen feature set for all users or individualize for each

specific workstation while eliminating unwanted features. Choose or eliminate Data Capture, Screen Snapshot, Session Scrollback, Mark and Copy, Save Window, Perform Keyboard Function, Display Keyboard, Keyboard Record Mode (Macros), On-Line Settings options, Help, and many more.

- Windows, OS/2 and DOS Modules  
Pick the operating system for each user. Softterm GroupWare contains support for Windows, OS/2 and DOS. Users can migrate between platforms as their needs dictate.

Optional GroupWare Modules include:

- File Transfer Module  
Includes all of the current popular file transfer protocols: IND\$FILE, Kermit, Kermit Server, XMODEM, YMODEM, ZMODEM, and ASCII Character File Transfer.
- Script Module  
Automate your communications with GroupWare's feature-rich Script Language.
- Additional Terminal Emulation Modules  
Add as many additional Terminal Emulations as your enterprise system requires.
- Additional Connection Path Modules  
No matter how you connect, whether it's through Local Area Networks, X.25, TCP/IP or LAT, Softterm WorkGroup has the connectivity solution. Mix and match many Connection Path modules for a multitude of accessibility.

The Terminal Emulation Library

Choose the emulation(s) that you require.

ADDS Regent 20, 25, 40, 60

ADDS Viewpoint, Viewpoint/78

AT&T 610

Data General D200, D410

Data Media DT80

Datapoint 3601, 8220

Digital (DEC) VT131, VT240/241, VT340/341

Esprit 6310

Hazeltine 1400/1410, 1420, 1421, 1500, 1520, 2000

Hewlett Packard 2622A, 2392A, 700-94

Honeywell VIP 7205, 7801, 7803, 7813

IBM 3162

IBM TN3270, TN5250

Kimtron KT7

Lear Siegler ADM-2, ADM-3A, ADM-5, ADM-11

Microdata Prism II

Perkin Elmer 1251  
 Prime PST100  
 Soroq IQ120  
 Qume 102  
 Tandberg 2200  
 Tandem 6530  
 Tektronics 4010/4014  
 Televideo 910, 912, 921, 925, 950, 955  
 Texas Instruments 931  
 TRS-80 Model 16 Console  
 Tymnet 78  
 Wang 2110  
 Wyse WY50, WY60 (with PC Term personality)

#### The Connection Path Library

(W = Windows Support, O = OS/2 Support, D = DOS Support)  
 Choose the connectivity that you require.

#### TCP/IP - Socket Support and Interfaces

3 Com 3 Plus Open	W,O
Novell LAN Workplace for DOS	W
Novell LAN Workplace for OS/2	O
PC/TCP (supports SLIP)	W,O
PC/NFS (supports SLIP)	W,O
NCSA/MIT (supports SLIP)	W,O
OS/2 2.0 Communications Manager	O
OS/2 2.0 Extended Services	O
KA9Q	

#### TCP/IP - Redirectors/Interfaces

Novell LAN Workplace for DOS	W,D
LAN Workplace for OS/2	O
Hughes LAN Systems, Prolinc	W,D
Excelan TCP/IP	W,D
3Com Associates, BAPI	W,D
Prime Telnet	W,D
Interlan TCP/IP	W,D

#### Interrupt 14 - Redirectors/Interfaces

Allen Bradley, PLP (Personal LAN Program)	W,D
3Com BAPI	W,D
Banyan Vines	W,D
Hughes LAN Systems, Prolinc	W,D
Novell Excelan TCP/IP	W,D
Other Interrupt 14	W,D

#### Other - Redirectors/Interfaces

Banyan Vines RASYNC	W,D
Novell LAN Workplace for DOS	W,D
Novell LAN Workplace for OS/2	O

#### IBM OS/2 Redirector/Interface

Asynchronous Communications Device Interface (ACDI)	O
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#### Asynchronous Communication Server (ACS) Gateway and Interfaces

Novell ACS (NACS)	W,O,D
Novell NASI/NCSI	W,O,D
3Com Bridge CS/100	W,D
3Com Bridge CS/200	W,D
3Com Bridge CS/400	W,D
Softerm ACS	W,O,D
IBM ACS	W,O,D
IBM LANACS	W,O,D
IBM ACDI	O
Crystal Point, Sparkle	W,O,D
Banyan Vines	W,D
AT&T StarLAN AGS	W,O,D

#### X.25 Gateway and Interfaces

Eicon, Access for Windows	W,O,D
Eicon, Access for OS/2 (Developing Now)	O
Novell PCOX	W,D

#### DEC LAT and Interfaces

Novell Pathworks	O
Digital Equipment Corporation (DEC), SLAT	W,D
Meridian Technologies SLAT	W,D

#### Serial Adapters (RS232: Modem/Direct Connect)

COM1 through COM4	W,O,D
IBM Asynchronous Communications Device Interface (ACDI)	
ACDI COM1 through COM3	O

#### Softerm GroupWare Pricing

##### Standard Module Set

Number of Users	List Price	Price Per User (Additional)
5	\$ 500.00	\$ 100.00
10	750.00	75.00
25	1250.00	50.00
100	2500.00	25.00

##### Optional Module

Optional Module	Module Price Per User
Terminal Emulation	\$ 10.00
File Transfer	10.00
Connection Path	30.00
Script File	5.00

##### Additional Users and Modules

For each Optional Module, add the "Module Price Per User" to the "Price Per User" of the Standard Module Set and determine the Total Price Per User. Multiply to derive the Total Price for your rightsized Softerm GroupWare.

##### EXAMPLE of Softerm GroupWare pricing:

Pricing for two terminal emulations (one emulation of your choice for the Standard Module Set and one Optional Terminal Emulation Module), one connection path of your choice for the Standard Module Set, and

the optional File Transfer Module for a LAN with six users is determined as follows:

Standard Module Set for 5 Users  
Price Per User: \$ 100.00 ea

Optional Terminal Emulation Module  
Module Price per User: \$ 10.00 ea

Optional File Transfer Module  
Module Price per User: \$ 10.00 ea

Total Price per User: \$ 120.00 ea

Total Price: 6 Users \* \$120.00 = \$ 720.00  
Standard Module Set  
2 Terminal Emulations of your choice  
1 Connection Path of your choice  
File Transfer Module

Adding Additional Users to your current GroupWare configuration At any time in the future, you can effortlessly expand your GroupWare enterprise system as your needs dictate. Additional Modules or more users can be easily added to GroupWare. Pricing is calculated as illustrated in the example above.

Customization Need a terminal emulation, connection path, or special feature that is not currently supported? Call us. Softronics is constantly adding new functionality to the GroupWare Module offering. Just call (800) 225-8590

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**See Also:**

Strategic Alliance : Bundling Softronics Software  
Softronics address and phone information

***Other Softronics Products***

Softerm Modular  
Softerm PC Classic  
Softerm ProDOS  
Softerm ACS  
WinSong  
UniversalHelp  
UniversalNLV



## **Softerm ProDOS**

### **SOFTERM ProDOS GUARANTEES CONNECTABILITY**

Exact Terminal emulations are your key to achieving communications with your mainframe computer, with no loss of functionality.

### **SOFTERM ProDOS GUARANTEES ACCESSIBILITY**

Advanced communications capabilities are your key to transporting data between your Apple and mainframe applications.

### **SOFTERM ProDOS PROVIDES EASE OF USE**

Easy to remember key sequences make features instantly accessible and pull down menus provide easy access to commands and procedures.

Softerm ProDOS is the most comprehensive terminal emulation and communications program available for the Apple II family. Whether you use an Apple IIgs, IIe, IIc, or II+, Softerm provides the connection to virtually any host computer system. Your Apple will have access to Digital (DEC), Data General, IBM, Hewlett-Packard, Honeywell, NCR, public information systems, local BBSs, and other micros. No other communications package for the Apple offers the extensive connectivity found in Softerm ProDOS.

Softerm provides a complete communications environment for even the most demanding user. Error-free file transfers in the ProDOS file format operate at speeds up to 9600 baud whether you are connected by means of a modem or hardwired directly to the host system, no file is unreachable.

### **TERMINAL EMULATION**

Connectability. In a world of countless Mainframe, Mini, and Micro systems, Softerm ProDOS provides connectivity through exact terminal emulation. Over 20 exact emulations are included in Softerm. All functions are present. Every keystroke, every video presentation, every printer function of the terminal being emulated is reproduced exactly within the limits of the Apple hardware. With Softerm as the connection, your Apple is transformed into the terminal of your choice.

The connection between micro and mainframe goes beyond the functions of the native terminal; Softerm integrates the abilities of the Apple with mainframe resources. During active terminal emulation, Softerm allows use of disk, printer, and keyboard macros. Only a few keystrokes separate you from file transfer, screen capture to disk or print, and disk utilities. Softerm will record an entire session with your host by toggling data capture on and off. Softerm gives you a capability not present in native terminals: the ability to use the versatility of an Apple and terminal simultaneously.

Softerm's terminal emulations are exact emulations. Every aspect of functionality is retained. Our attention to detail results in one single fact: if the original terminal works, Softerm ProDOS works. We guarantee it. Over 24 exact emulations, supporting both block and conversational modes, give an Apple the ability to flawlessly connect to your host. Terminal configuration and options for accessing a remote system can be completely specified. Your host application and operating system will not be aware that it is communicating with an Apple. Connection between Micro and Mainframe can be established via modem or direct connection.

### **FILE TRANSFER:**

Softerm provides file capture/send with three file transfer protocols.

Softrans, our own proprietary protocol, provides error-free data transfer of any file type. The source code for Softrans, written in Fortran 77, can be obtained for many host systems; an executable version for the DEC VAX VMS or Data General AOS and AOS/VS operating systems can be purchased on magnetic tape ready to load on your host.

The standard public domain protocol, XMODEM, is also included. XMODEM provides easy access to files on most public information services and local bulletin boards.

Character File Transfer offers easy and reliable transfers of ASCII text files. Maximum flexibility in text file transfers is achieved by using a streaming or simple block mode transmission. If block mode is specified, Softerm provides options for user-definable fixed or variable block size, end of block terminator and acknowledge character strings, end of block delay, and character echo wait.

#### HOST MODE

Your Apple can become a remote file server with Softerm. While using our unique Host Mode, files can be uploaded or downloaded to your Apple from a remote location. Any of the three File Transfer Protocols included in Softerm can be used to access files while in Host Mode.

#### SCRIPT FILES

Softerm ProDOS provides an extensive command language for automating communications tasks. Processes such as logon, logoffs and file transfers can be completely self-operating.

#### KEYBOARD MACROS

Softerm provides keyboard macros during active terminal emulation. Iterative keystrokes and repetitious data entry can be combined into one keystroke. A macro editor permits all macros to be assembled and edited while on-line to a remote system.

#### MODEM SUPPORT

An extensive list of modems, internal and external, are supported. Any Hayes compatible modem up to 9600 baud will operate with Softerm.

#### AUTO-DIAL PHONE BOOK

A user phone directory provides an easy method for storing frequently called numbers. Each entry allows you to store the communications parameters of that number and Softerm will automatically set those parameters when the call is made.

#### TECHNICAL SUPPORT

Free hot-line technical support is available from 8:00AM to 5:00PM Mountain Time, Monday through Friday for the first 90 days after the purchase of Softerm ProDOS. Our well-trained staff of engineers will find a solution to your technical problems.

#### MONEY-BACK GUARANTEE

Softerm ProDOS has a conditional money-back guarantee. If Softerm fails to work on your system, or does not operate as advertised, Softronics will fix the problem or refund your money within 30 days of purchase (proof of purchase required).

#### TERMINAL EMULATIONS INCLUDED

ADDS Regent 20, 25, 40, 60  
ADDS Viewpoint  
Data General D200  
Datapoint Datastation 3601  
Digital Equipment (DEC) VT52, VT100, VT102  
Hazeltine 1400/1410, 1500, 1520  
Hewlett Packard 2622A  
Honeywell VIP7205, VIP7801, VIP7803  
IBM 3101 Model 10, 3101 Model 20  
Lear Siegler ADM-3A, ADM-5  
TeleVideo 910, 925, 950  
User Defined

## HARDWARE REQUIREMENTS

An asynchronous serial interface is required for connecting to another computer system or modem. Equipment required includes an 80-column video board, serial or parallel printer. 64k Memory and ProDOS version 1.1 or higher.

The following interface hardware is supported.

- Apple Communications Card
- Apple Parallel Printer
- Apple Serial Interface (Printer Only)
- Apple Super Serial Card

Coming soon - support for:

- ALS Dispatcher Serial Interface\* Dasis 108 Serial and Parallel
- Bit 3 Dual-Comm Plus
- CCS 7710, 7711, 7720, 7728
- Epson APL Printer Interface
- Franklin Ace Dual Interface Card
- Interactive Structures PKASO Interface
- Intra Computer PSIO
- Microtek Apple Dumpling-GX, Apple Dumpling-16
- Microtek SV-622C Serial Interface
- Mountain Computer CPS Multifunction Card
- MPC AP-SIO
- Orange Micro Grappler , Grappler+
- Practical Peripherals Micro Buffer II
- Prometheus VERSAcards
- Transend ASIO, APIO, AIO, AIO II
- Videx PSIO Parallel/Serial I/O
- Wesper Micro Wizard BPO

The following 80-column boards are supported:

- Apple IIe 80-column Text Cards
- Techcom Enterprises SuperVision
- Videx Videoterm, Ultraterm

Coming soon - support for:

- ALS Smarterm , Smarterm II\* Applied Engineering Viewmaster
- Basis 108 80-column
- Bit 3 Full-View 80
- Computer Stop Omnivision
- Franklin 80-column
- M&R Sup'R'Terminal
- Micromax Viewmax 80
- Microtek Magnum 80
- STB Systems STB-80
- Vista Computer Vision 80
- Wesper Micro Wizard 80

The following auto-dial modems and modem cards are supported by the Softerm Phone Book:

- ANY HAYES COMPATIBLE MODEM

- Applied Engineering Datalink
- Hayes Micromodem II , IIe
- Hayes Smartmodem 300 & 1200
- Multi-Tech MT212C
- Multi-Tech Modem II
- NEC N212BR Auto Dial/Auto Logon
- Novation Apple-Cat II 300 & 1200 (212)
- Prometheus ProModem
- Racal-Vadic VA212
- Rixon R212A
- Signalman Mark XII
- Transcend ModemCard
- UDS 212A/D
- US Robotics Password
- US Robotics 212A
- Ven-Tel MD212 Plus

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**See Also:**

Strategic Alliance : Bundling Softronics Software  
Softronics address and phone information

***Other Softronics Products***

Softerm Modular

Softerm PC Classic

Softerm GroupWare

Softerm ACS

WinSong

UniversalHelp

UniversalNLV

## WinSong

### Electronic Music Software for Windows

You probably already know how to use WinSong because...

... *WinSong is like a Word Processor for music.* You can easily write and edit music. You can cut, paste, move and copy notes and symbols in your musical composition. WinSong even takes dictation while you play and then prints the sheet music.

... *WinSong is like a Tape Recorder.* The Windows Graphical User Interface works just like a multi-track tape recorder -- point and click buttons for Play, Record, Rewind, Fast-forward, and Stop. Your musical arrangements can be orchestrated using up to 64 musical tracks.

... *WinSong is like a Player Piano.* It plays music on any MIDI compatible instrument. So it is not limited to being just a Player Piano; it is also a Player Guitar, a Player Organ, a Player Synthesizer, a Player Drum set, a Player Saxophone, and a Player Clarinet.

But most of all, WinSong is fun to use. Immediately, you'll become a musician. If you already understand the concept of a word processor, if you already know how to use a tape recorder, if you have the desire to play music, then you already know how to use WinSong. And WinSong runs in Windows, so you know it's easy-to-use.

As soon as you start WinSong, you effortlessly begin composing your own songs. It's as simple as pointing the mouse and clicking the buttons. WinSong positions musical notes on the staff and then plays back your composition. It's that simple.

WinSong is a wholesome activity for whole family participation or individual enjoyment. Kids have fun while they learn music. During the Christmas season, WinSong plays all of your favorite Christmas Carols. You can even have an old-fashioned sing-along.

If you're a musician, all the better!

For musicians who play by ear, WinSong is a dream come true. You can record what you play and WinSong will write the sheet music. Expand your creativity by recording your songs on one MIDI instrument like a guitar, and have WinSong play it back on another MIDI instrument like a piano. Copyright your own songs after WinSong prints the sheet music.

For musicians who read music, WinSong is the ultimate creative tool. Break free from the tedious and stifling aspects of writing music. You can concentrate all of your artistic imagination on composing. WinSong automatically performs all time-consuming tasks of music notation.

WinSong works with any standard MIDI song file.

WinSong comes with MIDI songs so that you can immediately begin having fun with music. WinSong works with any commercially available MIDI music. There is a wealth of WinSong compatible music on many public Bulletin Boards Systems (BBS), such as Compuserve.

WinSong is the lowest price and highest value in music software.

WinSong is a Composer, Tape Deck, and Juke Box -- all in one.

### **Composer**

Look at how easy-to-use and fun WinSong is. Just push the button for the musical symbol you want, and drag-and-drop that symbol on the staff. WinSong plays back your song while you compose. As the

music plays, the musical notation horizontally scrolls on the computer display. You see the notes as they are being played.

With no musical training and minimal computer skills, you can immediately write professional musical compositions

- Play music that you compose played through any MIDI compatible instrument.
- Print sheet music from your musical compositions
- Great for learning music, yet fully-featured for any professional musicians to perform
- Input songs from printed sheet music and play
- Singers can create their own accompaniment
- Select musical symbols, such as notes, time signatures, sharps, flats, and others, from the note palette and position them on the staff with the mouse
- Watch your music scroll by as it is played
- A great teaching tool and incredibly fun to use.
- Cut, copy, paste, insert, merge, erase, clear portions or whole compositions
- Transpose whole pieces of music between any key
- WinSong offers unique control of computer operations from the MIDI keyboard
- Lyrics can be added to the music using mixed fonts, sizes and styles
- Includes four pre-defined clefs: treble, alto, bass, and percussion
- Supports multiple clefs per measure
- Includes rests within beam groups
- Performs global rebeaming of notes
- Supports different meters and varied tempos in a single composition
- Highest rhythmic value supported: Dotted Whole Note
- Lowest rhythmic value supported: 32nd Note
- No limit to the maximum number of measures in a composition
- Maximum number of staves in a composition: 64
- Supports user configurable note palette
- Supports multiple MIDI channels per staff
- Adjustable margins for individual staff systems, page margins, and page sizes
- Can place any symbol, character, graphic shape, text, or block of text on the page

### ***Tape Deck***

The Tape Deck is a complete recording studio. As you can see, arranging music with WinSong is a guided path. You don't have to memorize musical or computer commands. WinSong will not let you make mistakes.

- Record music as you play on any MIDI compatible instrument
- A fully functional easy-to-use MIDI sequencer
- A MIDI music studio that will have you instantly creating and playing your own orchestra, band, or single instrument arrangements
- Transcribes any performance into standard notation with a click of a button
- Reads external sequencer files that support the standard MIDI file format
- Record step-time via a MIDI instrument
- Supports complex time signatures and time signatures up to 256 over a 64th note
- Supports standard and user-definable, non-standard key signatures
- Sends MIDI start, stop and continue commands
- Sends and receives MIDI Clock data
- Note resolution equals 120 ticks per quarter note
- Overdubbing each of the 64 tracks
- Edit individual events
- Quantize, Cut, Copy, Paste, Transpose, Change Volume, Length, Pitch, for each MIDI Channel
- Move, Loop, Transpose, and adjust the Volume of entire tracks
- Program time signatures and tempo changes
- Read and Write standard MIDI files

### ***Juke Box***

The Juke Box is a fun-to-use player piano. It will give you hours of enjoyment. Just tell the Juke Box what songs -- from one to 100, from Jingle Bells to Bach -- you want to hear, and it plays your songs for you.

- Play your own song lists
- Great for sing-alongs with family and friends
- If you're a musician, use the Juke Box to queue up your song sets
- Pick music to suit your mood

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**See Also:**

Strategic Alliance : Bundling Softronics Software  
Softronics address and phone information

***Other Softronics Products***

Softerm Modular  
Softerm PC Classic  
Softerm ProDOS  
Softerm GroupWare  
Softerm ACS  
UniversalHelp  
UniversalNLV



## **Softterm Modular**

Communications/Terminal Emulation Software for Windows and OS/2

### **Features**

- Procognitive Modular design allows for individual "Customization" of feature set and functionality
- Profiling lets users "Personalize" their communications environment
- Graphic User Interface (GUI) uses Common User Access (CUA) standards

### **Global Connectivity**

- Uniform support included for both Windows and OS/2 platforms

### **Includes over 60 terminal emulations**

- Exact emulations supporting all terminal functions
- Block, Page, and Conversational Modes
- Printer Pass-through
- Double High - Double Wide Character support
- 132 Columns supported in a single session window

### **Extensive LAN/Gateway Connectivity**

- Optimized support for LANs
- TCP/IP
- X.25
- DEC LAT
- NetBIOS
- Interrupt 14

### **Telnet and FTP (TCP/IP) Socket Level Support**

(Not available until third quarter, 1992)

- Multi-Session Telnet
- FTP Interactive
- FTP Batch with Script Language Support

### **Numerous File Transfer Protocols**

- IND\$FILE

- Kermit (Dumb Mode)
- Kermit (Smart Mode, Kermit Server)
- Honeywell Kermit
- Softrons (some Host's Source Code Included)
- Xmodem and Xmodem 1k
- Ymodem and Ymodem 1k
- Ymodem-g and Ymodem-g 1k
- Zmodem
- Character (ASCII) File Send/Receive
- Filtering/Edit Options during File Transfer

### **Session Management**

- Unlimited number of Personalized Named and Commented Sessions
- Point and Click Start for consistent automatic Session connection
- Construct Sessions with user-built profiles
- Multiple concurrent sessions run within their own window
- Auto-dial Phonebook
- Auto-start Sessions
- Pre-profiled sessions for most on-line services, for example: Compuserp, EXIS/LEXIS, Dow Jones, Softrons BBS, and many more

### **On-Line Sessions**

- Scrollback replays session
- Dynamic sizing font for any size window
- Session Icon indicates incoming data when session is minimized
- Capture on-line session data to disk or print
- Point and Click File Transfer

### **Keyboard Management**

- Graphic Keyboard presentation for keyboard management
- Unlimited number of Personalized Named and Commented Keyboard Profiles

- Keyboard remapping allows any terminal function, keyboard function, character, character string, or any combination to be mapped to any key or shifted key (Shift, Ctrl, Alt, AltGr)
- Find Function shows where to find any key output
- Point and click to perform any keyboard or terminal keyboard function

### **Full-featured**

- Robust Script Language
- All-inclusive context-sensitive Help
- Record Mode Keyboard Macros automation of repetitive keyboard tasks
- Password Security
- Comprehensive Install Program
- Host Mode
- Extensive User's Manual
- Mark and Copy session data to Operating System Clipboard
- Multi-National Support
- Multi-national keyboard support
- Dead Key support
- Multi-national host character/host code page support
- Supports both 7-bit to 8-bit and 8-bit to 8-bit character translations to allow multi-national support in all communications environments

### **Localized versions of Graphic User Interface (GUI) available**

- Danish
- Dutch
- Finnish
- French
- German
- Italian
- Norwegian
- Portuguese
- Spanish
- Swedish

### **Technical Assistance**

- Hotline Technical Assistance
- Custom Script Files, keyboard remapping, macros, session configurations
- 24 Hour on-line Softronics BBS

- 24 Hour on-line update service on the Softronics Product Support Roundtable on GENie
- On-site training available

### **Terminal Emulations**

- ADDS Regent 20, 25, 40, 60
- ADDS Viewpoint, Viewpoint/78
- ANSI 3.64 Mode
- AT&T 610
- Data General D200, D410
- Data Media DT80
- Datapoint 3601, 8220
- Digital (DEC) VT52, VT100/VT102, VT131, VT220, VT320
- DEC Graphic Terminals VT240/241, VT340/341
- Esprit 6310
- Hazeltine 1400/1410, 1420, 1421, 1500, 1520, 2000
- Hewlett Packard 2622A, 2392A, 700-94
- Honeywell VIP 7205, 7801, 7803, 7813
- IBM 3101 Model 10, Model 20
- IBM 3162
- IBM ANSI
- IBM TN3270, TN5250
- Kimtron KT7
- Lear Siegler ADM-2, ADM-3A, ADM-5, ADM-11
- Microdata Prism II
- Perkin Elmer 1251
- Prime PST100
- Soroq IQ120
- Qume 102
- Tandberg 2200
- Tandem 6530
- Tektronics 4010/4014
- Televideo 910, 912, 921, 925, 950, 955
- Texas Instruments 931
- TRS-80 Model 16 Console
- TTY compatible
- Tymnet 78
- Wang 2110
- Wyse WY50, WY60 (with PC Term personality)

### **File Transfer Protocols**

#### **IND\$FILE**

- IBM VM/CMS, MVS/TSO and CICS host environments
- Unique profiling support for IBM 7171 Model 1, 9370, 3708, 3174 with 3020, and S/1 Yale IUP protocol converters
- supports code page conversion

#### **Kermit**

- Dumb Mode
- Smart Mode (Kermit Server)

#### **Honeywell Kermit**

- support for GCOS mapping
- handles packet negotiations on Honeywell systems

**Softtrans**

- transfers any type of data using a 7-bit system
- provides automatic binary encoding and decoding
- CRC-16 error checking with automatic retransmission
- data compression
- supports unattended operation
- operates error free over any public network
- source code for DEC, UNIX, and Data General hosts

**XMODEM**

- XMODEM
- XMODEM CRC
- XMODEM Big Block (1k)
- XMODEM CRC Big Block (1k)

**YMODEM**

- YMODEM
- YMODEM g
- YMODEM Big Block (1k)
- YMODEM g Big Block (1k)

**ZMODEM**

- incomplete receives can be resumed at the point of interruption
- automatic 16 bit or 32 bit CRC error checking
- run length encoding (data compression)
- handles data block sizes of 128 to 1024 characters
- simple block or streaming modes

**Character File Send/Receive (ASCII)**

- simple block or streaming mode
- end of block terminator string can be defined
- Echo wait can be specified

**Network Support**

## Network Operating Systems

Novell

Netware

3Com Associates

3 Plus Open

3 Plus Share

AT&amp;T

StarLAN

Artisoft

Lantastic

Banyan

Vines

Ungermann Bass

Net1

DEC

Pathworks

IBM

OS/2 LAN Server

PC LAN Program

- Microsoft
  - LAN Manager
  - Network
- Tiara Computer Systems
- 10Net

#### Network Hardware

##### Ethernet Adapters

- 3Com
- Addtron Technology
- Artisoft Lantastic
- Castelle
- CNET, Inc.
- Codenoll
- Compex
- DCA
- D-Link
- DSI
- Everex
- Gateway Communications
- Hayes
- IBM
- IMC Networks Corporation
- National Semiconductor
- Novell
- Pure Data, Inc.
- Racal Interlan
- SMC
- Thomas-Conrad
- Tiara Computer Systems
- Transition Engineering
- Ultratek, Inc.
- Xircom, Inc.

##### Arcnet Adapters

- CNET, Inc.
- D-Link
- Everex
- Pure Data, Inc.
- SMC
- Thomas-Conrad
- Tiara Computer Systems
- Xircom, Inc.

##### Token Ring Adapters

- 3Com
- Castelle
- D-Link
- General Technology
- IBM
- Intel Corporation
- Madge Net, Inc.
- Olicom
- Pure Data, Inc.
- Proteon
- SMC

Star-Tek  
Thomas Conrad  
Tiara Computer Systems  
Ungerman Bass  
Xircom, Inc.

StarLAN  
AT&T

Twisted Pair  
3Com  
Artisoft  
Compex  
D-Link  
DCA  
DSI  
Everex  
Gateway Communications  
IMC Networks Corporation  
Intel Corporation  
Intellicom  
Kodiak Technology  
MiLAN  
Mylex Corporation  
Pure Data, Inc.

Racal Interlan  
SMC  
Thomas-Conrad  
Tiara  
Utlratek, Inc.  
Addtron Technology

Fiber Optics  
Codenoll  
DSI  
D-Link  
SMC  
Thomas-Conrad  
Transition Engineering  
Addtron Technology

Connection Paths - Connectivity/Gateway Support  
Unless otherwise noted, connectivity supported in both Windows  
and OS/2

TCP/IP - Socket Support and Interfaces

3Com Associates  
3 Plus Open (TCP/IP Configuration)  
Novell  
LAN Workplace for DOS (Windows only)  
LAN Workplace for OS/2 (OS/2 only)  
FTP Associates  
PC/TCP (supports SLIP)

Sunsoft, Inc.  
 PC/NFS (supports SLIP)  
 University of Clarkston (public domain)  
 NCSA/MIT (supports SLIP)  
 OS/2 1.3 Extended Edition  
 Communications Manager (OS/2 only)  
 OS/2 2.0 Extended Services  
 Communications Manager (OS/2 only)  
 KA9Q

#### TCP/IP - Redirectors/Interfaces

Novell  
 LAN Workplace for DOS  
 Int 14 (Windows only)  
 TSU (Windows only)  
 Telnet (Windows only)  
 TELAPI (Windows only)  
 LAN Workplace for OS/2 (OS/2 only)  
 Hughes LAN Systems  
 Prolinc  
 Int 14 (Windows only)  
 Excelan  
 Excelan TCP/IP  
 Int 14 (Windows only)  
 Telnet (Windows only)  
 3Com Associates  
 BAPI  
 Int 14 (Windows only)  
 Int 14 (Windows only)  
 Prime Corporation  
 Prime Telnet  
 Int 14 (Windows only)  
 Telnet (Windows only)  
 Interlan  
 Interlan TCP/IP  
 Int 14 (Windows only)

#### Interrupt 14 - Redirectors/Interfaces

Allen Bradley  
 PLP (Personal LAN Program)  
 Int 14 (Windows only)  
 3Com Bridge  
 BAPI  
 Int 14 (Windows only)  
 Banyan  
 Vines  
 Int 14 (Windows only)  
 Hughes LAN Systems  
 Prolinc  
 Int 14 (Windows only)  
 Novell  
 Novell Excelan TCP/IP  
 Int 14 (Windows only)  
 Other Interrupt 14



#### Other - Redirectors/Interfaces

##### Banyan

##### Vines

RASYNC (Windows only)

BASYNC (Windows only)

##### Novell

LAN Workplace for DOS (Windows only)

LAN Workplace for OS/2 (OS/2 only)

#### IBM OS/2 Redirector/Interface

Asynchronous Communications Device Interface (ACDI) (OS/2)

#### Asynchronous Communication Server (ACS) Gateway and Interfaces

##### Novell

##### Novell ACS (NACS)

##### NetBIOS

##### NASI/NCSI

##### NetBIOS

##### 3Com Bridge

CS/100 (Windows only)

##### Int14

##### CS/200

##### Int14

##### CS/400

##### Int14

##### Softronic

##### Softterm ACS

##### SPX/IPX

##### NetBIOS

##### IBM

##### IBM ACS

##### NetBIOS

##### LANACS

##### NetBIOS

ACDI (OS/2 only)

##### Crystal Point

##### Sparkle

##### NetBIOS

##### Banyan

##### Vines

(Windows only)

##### AT&T

##### StarLAN AGS

##### NetBIOS

#### X.25 Gateway and Interfaces

##### Eicon

##### Access for Windows

##### ITI

(Windows only)

Access for OS/2 (Developing Now) (OS/2 only)

##### Novell

##### PCOX

(Windows only)

#### DEC LAT and Interfaces

Novell

Pathworks

(OS/2 only)

Digital Equipment Corporation (DEC)

SLAT

(Windows only)

Meridian Technologies

SLAT

(Windows only)

#### Serial Adapters (RS232: Modem/Direct Connect)

COM1 through COM4

IBM Asynchronous Communications Device Interface (ACDI)

ACDI COM1 through COM3

(OS/2 only)

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#### **See Also:**

Strategic Alliance : Bundling Softronics Software

Softronics address and phone information

#### **Other Softronics Products**

Softerm PC Classic

Softerm ProDOS

Softerm GroupWare

Softerm ACS

WinSong

UniversalHelp

UniversalNLV

## **Softronics Information**

<b>Address</b>	Softronics, Inc. 5085 List Drive Colorado Springs, CO 80919
<b>Phone</b>	Sales - (800) 225-8590 Office - (719) 593-9540 Tech Support - (719) 593-9550 (900) 884-7638
<b>Fax</b>	(719) 548-1878

## **Softerm ACS (Asynchronous Communications Server)**

### **What is an Asynchronous Communications Server?**

Asynchronous Communications Servers (ACS) allow Local Area Network users to share modems, fax boards, serial ports, or other asynchronous devices across the Network.

Softronics' Softerm Asynchronous Communications Server (SACS) complies with IBM ACS (LANACS) standards, yet works across most LANs and with a variety of communications software.

### **What other software do I need?**

Most people are familiar with communications packages used to call a local BBS or transfer files between computers. Softerm ACS -- any ACS -- still requires this software.

Unlike dialing a modem in the same machine, however, communications software now needs a way to tell the network to go find the modem, dial the number, and return the responses. While most ACS packages use proprietary communications software, SACS works with popular communications programs that can be configured for IBM ACS.

SACS talks to networks two ways.

Many networks (3Com, IBM PC Net and PC LAN, StarLAN) communicate using NetBIOS, and most others, including Novell and Banyan, supply NetBIOS emulators. Many network versions of communications software use NetBIOS to talk to an IBM ACS: Softerm PC, and network versions of ProComm and Crosstalk, are the most prominent examples. SACS works with all these.

SACS v2.0 also communicates directly with Novell's IPX, eliminating the need to use Novell's NetBIOS emulator. Only Softerm PC currently supports IPX addressing with SACS.

### **Modem Sharing**

Communications servers let users share modems the way file servers let users share files. With a communications server and compatible software, LAN users gain access to Wide-Area Networking, E-mail, or electronic bulletin boards without installing a modem or serial connection in each workstation.

### **Softerm Asynchronous Communications Server (SACS) offers several advantages:**

1. Works with virtually any network operating system (NOS). SACS works with IBM LANs, 3Com, StarLAN, and other NetBIOS networks; SACS also works with Novell under NetBIOS, or directly with IPX when Softerm PC is used as the communications software.
2. Works with many popular communications packages. NetBIOS operation is supported by Softerm PC, ProComm, Crosstalk, and other popular packages. Novell IPX communication is available with Softerm PC.
3. Supports up to 32 connections per ACS using widely-available serial cards from Digiboard, AST, and standard COM ports. No proprietary hardware needed.
4. Non-dedicated operation up to four ports. SACS runs in about 80K of memory and is designed for background operation. Word processing or data entry workstations are ideal as SACS servers.

## Remote LAN Access

SACS helps users in the field or at home get work done on your LAN in the office. By using SACS with a remote package like PCAnywhere or Carbon Copy, callers can use the SACS server as a remote workstation.

Setting up a remote workstation entails the following (see diagram):

Your SACS server/remote workstation can be any PC that has at least three serial ports.

Configure SACS for only two of the ports, one the modem, the other used to connect to the remote package. Using the ANSERCNF utility included with SACS, tell SACS to redirect the modem port to the other serial port.

Using a null modem cable, connect the second SACS port, the one to which modem calls are redirected, to the third port, the one left out of the SACS configuration.

Install remote software, such as PCAnywhere or Carbon Copy, and configure it for the port not used for SACS. Select 'Hardwire' for the modem type (also called 'Null' in some packages).

Load the network shell, then start SACS, then run the remote package and set it for AutoAnswer. SACS will answer incoming calls, redirect them to the remote package, and callers have immediate access to the LAN.

## Common questions about remote configuration:

*Do all incoming calls have to be directed to the remote? What if I want some callers to have LAN access, but others to have access to the minicomputer?*

No problem. Using SACS' USERCNF utility you can define different connection paths for different callers. If you're using a Digiboard 8i serial board, for example, you can define a user REMOTE who will always connect to a specific port -- the port connected to the remote package. Other users can be defined (e.g., TERMINAL1, RTERMINAL, RICK, SUZY) to connect to other ports, or to connect to the first available port. SACS gives you flexibility.

*What about security? I don't want everyone to have access to my network.*

SACS offers extremely tight security through its ANSERCNF and USERCNF utilities. Password requirements can be defined for users through USERCNF, and separate password requirements for each port can be specified in ANSERCNF. Supervisors also can establish Access Rights Masks, explained in detail in the SACS users guide.

*What's the difference between a remote connection through SACS and a Remote Asynchronous Bridge, like the one packaged with Novell ELSII and above? Why wouldn't I use what I already paid for?*

Remote access through SACS, as detailed above, is essentially terminal emulation -- only screen and keyboard I/O are passed across the telephone line, while all the work is done by the

workstation on the LAN.

Remote Asynchronous Bridges pass everything across the phone line, just like passing programs and data across a network, except that an async bridge at 2400 b.p.s. is roughly 4,000 times slower than an Ethernet connection on a LAN. A database query that might take 15 seconds across Ethernet requires more than 15 hours across an asynchronous bridge, hardly the best use of time and money. (Novell and other suppliers, to their credit, recommend only using asynchronous bridges for file transfer.)

Using a remote package, only keyboard and video signals travel at 2400 b.p.s., a little slower than most people type. All processing and disk I/O is done on the host workstation at network speeds.

### **Asynchronous Gateway**

SACS provides an inexpensive solution to mainframe or minicomputer access through a LAN.

Serial ports from the SACS server can be hardwired to the asynchronous terminal connections of a host computer just by using a null modem cable. By installing additional serial boards, up to 32 users can get to the host through each SACS server -- and there's no limit to the number of SACS you can install on each network.

(Well, okay, you're limited by your pocket book, since each SACS software package is licensed for only one SACS server. To set up multiple SACS servers, you'd need to buy the appropriate number of licensed SACS copies.)

Softerm Modular Workgroup from Softronics is designed expressly for this environment. Modular Workgroup is network-wide terminal emulation that runs stand-alone, requires no communications package, and is priced and licensed per gateway.

### **Things You CAN'T Do with SACS**

You can't have more than one person use one modem at the same time. Everyone on the LAN can get to the modem, but only one person can use it at a time. When he's finished, someone else can use it.

You can't put more than one modem on a phone line. Devices to do that are called multiplexers, they're expensive, and they require hardware.

SACS won't create workstations. If SACS is used for remote LAN access, the caller must have a workstation on the LAN to connect to! SACS is not an operating system: it can't create microprocessors out of thin air.

### **SACS Technical Specifications (Expert SACS)**

Memory requirements: 80K

ACS type: IBM ACS (LANACS)

Networks supported: Novell (IPX or NetBIOS)  
Any NetBIOS network

Maximum number of connections: 32 per ACS

(hardware dependent)

Maximum numbers of SACS per LAN: unlimited  
(licensed to generate only one  
SACS from each package)

Maximum transfer rate: 115,200 bps  
(hardware dependent)

Serial boards supported: DigiBoard  
(8i recommended)  
AST  
IBM Asynchronous Adapter

Communications programs supported: Softerm PC (IPX or NetBIOS)  
ProComm (Network version)  
Crosstalk (Network version)  
... and others with IBM ACS  
support

Remote packages supported: PCAnywhere  
Carbon Copy  
... and others

Installation time: 30 minutes  
(excluding optional hardware)

Operating modes: non-dedicated up to 4 ports  
dedicated up to 32 ports

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**See Also:**

Strategic Alliance : Bundling Softronics Software  
Softronics address and phone information

***Other Softronics Products***

Softerm PC Classic

Softerm ProDOS

Softerm GroupWare

Softerm ACS

WinSong

UniversalHelp

UniversalNLV

## **Strategic Alliance: Bundling Softronics Software**

### **Executive Overview**

Softronics, Inc. provides products, product components, and custom developed software for bundling with companies possessing the opportunity to market software. Whether DOS, Windows, OS/2, Presentation Manager, all of the above, or combinations, Softronics delivers the right package without delay. Eliminate expensive Research and Development gambles - you already know the product works. This unique strategic alliance gives you exactly what you need: on-time solutions to your market and technology with proven results.

Bundling lets you capitalize on your company's identity and reputation by unifying products into an exclusive solution for your customers - a unique product with your Name, your Packaging. Software bundling binds your products with our software producing exponential market opportunities.

A performance-based rate schedule allows you to immediately capitalize and maximize your profits. The larger your product sales, the less of a percentage you pay to Softronics. A true sliding-scale rate structure makes it possible for you to enjoy a greater profit margin. And this is an alliance without fixed up-front obligation; at your discretion, the bundling agreement can be discontinued with a ninety day notice. This kind of business relationship assures you are in control of your own destiny and free to make all decisions necessary to make the bundled product a success in your market.

Technical Assistance Plans are available to suit your needs. Softronics can offer full support to your customer base or merely help your company's Technical Assistance Department. Our Technical Assistance experts are trained in solving unique problems involving Communications, Hardware incompatibilities, Local Area Networking, and User Interface difficulties. We have a level of Technical Service to meet your requirements.

There is nothing like Softronics' Bundling products anywhere. A strategic alliance with Softronics will add considerable breadth and functionality to your product line. We can assist you with product marketing literature and help you determine optimum pricing for the bundled product. We know PC communications and connectivity. You know your market. Together, we become more dynamic, more profitable.

### **Strategic Alliance Agreement Philosophy**

The primary challenge of a strategic alliance is striking an equitable agreement. The agreement must facilitate a business structure that adapts and flourishes in the dynamic market. The agreement must also ensure neither company becomes an unwilling hostage to the alliance and provide a formula for fair revenue sharing during the bundled products' life cycle.

Since the combined product is marketed by you and carries your company's name, there is no question that you must have full control over product pricing and business decisions. Through the Strategic Alliance agreement, your company is free to maximize sales results by discounting, seeding the market with no-charge copies, adding/removing functionality, issuing corporate site licenses for the product, and using any other tactic that direct response channels dictate. The combined product is truly yours to market as you see fit.

The revenue formula must recognize that the strategic partner's products can be in different phases of life cycles - one trending up and the other trending down. For example, one product could be a large-scale high-priced piece of equipment or software, while the other product only contributes a small fraction of the overall combined benefit. During the life of the relationship, market demand and changing technology can affect the pricing of one or both products.

Revenue generated by the combined product will be distributed according to the value-based price that



each party brings to the relationship. The Strategic Alliance agreement ensures that both parties share equally in pricing discounts while you maintain the freedom to push or pull the product through the marketplace.

The strategic alliance is a tandem bicycle. You're in the front seat. You steer. You set the tempo. You change the gears. We pedal.

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**See Also:**

[Strategic Alliance : Bundling Softronics Software](#)  
[Softronics address and phone information](#)

***Other Softronics Products***

[Softerm PC Classic](#)

[Softerm ProDOS](#)

[Softerm GroupWare](#)

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