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InfoSpy

Ver 2.10 (12/15/94) **with IntelliLib (tm)**

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InfoSpy Overview

InfoSpy is a Windows utility that interrogates and lists the various items within your Windows environment, including:

- A. Global Heap
- B. Active Windows
- C. Windows Tasks
- D. Loaded Modules
- E. Open Files
- F. Memory Information
- G. Dos Information

InfoSpy also acts as a real-time monitoring utility allowing you to monitor Windows messages and serial communications.

Windows developers, testers, debuggers and technical assistants have few tools that will allow them to detail what exactly is loaded and running under Windows. InfoSpy will provide real-time information regarding the items that directly affect Windows and the user.

InfoSpy provides multiple adjustable windows showing one of the above Windows items. Each window can be independantly scrolled and examined.

InfoSpy can also print or save values from it's examination of Windows as well as having several key utility features for terminating hung tasks and unloading loaded modules.

Loading InfoSpy

InfoSpy can be loaded:

- As an Icon from a Program Manager group.
- From the RUN feature of Program Manager or other Windows Shell programs.

If you have added InfoSpy to a group within Program Manager (or other shells) you can load InfoSpy by Clicking on the Icon.

If you use the RUN facility within Program Manager (or other shells) you can load InfoSpy by simply typing "**InfoSpy**" and pressing ENTER.

Closing InfoSpy

You can close InfoSpy by selecting the **"Close"** option from the System Menu, you can select **"Exit"** from the File Menu or you can double click your mouse on the System Menu indicator at the top left corner of the InfoSpy Window.

IntelliLib (tm)

This program utilizes IntelliLib (tm) Library management technology.

IntelliLib enables this program to selectively use Windows Dynamic Link Libraries (DLLs) to perform non-standard tasks. The user has the ability to choose which Libraries are loaded, thereby allowing him to tailor this program to his specific needs.

IntelliLib also allows this program to fully operate without DLL modules that were expected. Functionality for a missing Library is disabled from the main program.

Additional Topics:

[Setting Active Libraries](#)

Setting Active Libraries with IntelliLib

InfoSpy can load several libraries that will provide you with more detailed information on several aspects of your Windows environment.

Using the IntelliLib setup screen, select each library that you want loaded or unloaded.

1. Load Message & File Activity Trace Library - This library contains the functions required to trace Windows messages.

2. Load Network Library - This library contains the functions required to view Network details.

3. Load Communications Trace Library - This library contains the functions required to trace communications sessions on serial ports.

4. Load DOS Inquiry Library - This library contains the functions required to make inquiries of DOSMode.

5. Load VM&VxD Library - This library contains the functions required to make inquiries of the Ring 0 Virtual Machines and Virtual Device Drivers.

6. Load General Windows Library - This library contains general functions used by InfoSpy for Windows Inquiries.

7. Load Stress Library - This Library contains all Stress functions used by InfoSpy.

8. Load Alarm Library - This Library contains all Alarm functions used by InfoSpy.

9. Load Schedule Library - This Library contains all Task Scheduling functions used by InfoSpy.

Menu Options

InfoSpy has the following menu options:

File Menu

Spy Menu

Action Menu

Monitor Menu

System Menu

Configuration Menu

Memory Menu

Heap Menu

Window Menu

Help Menu

File Menu

The File Menu provides functions for saving, printing and exiting InfoSpy:

Save Contents of Active Window To File

Print Setup

Print Contents of Active Window

CopyContents of Active Window To Clipboard

Exit InfoSpy

Save As

The **Save Contents** option will save the contents of the **Active Window** to a file. This is useful in order to save a snapshot for later review.

When selected, this option displays the standard Windows **File Save** dialog. Enter a valid file name and select **Ok** to save the contents of the active Window.

Copy Contents of Active Window to Clipboard

The **Copy Contents** option will copy the contents of the **Active Window** to the Windows Clipboard. If the contents of the active window exceed the maximum size of the clipboard, then excess data will be truncated.

Setting Print Options

The **Print Setup** option will allow you to modify the current print parameters and then optionally print the contents of the **Active Window** to a printer. [Print Options](#)

[Printer Selection](#)

[Printer Port Selection](#)

Print Contents of Active Window

The **Print Contents** of active window option will print the contents of the **Active Window** to a printer using the current printer setup options.

Print Options

Before printing a file or a portion of the Viewing Window, you must select the various print options from the **Print Request** window.

Printer - see the section on [Selecting a Printer](#)

Printer Port - see the section on [Selecting a Communications Port](#)

Margins - The Left, Right, Top and Bottom margins can be modified so that your print page size can be adjusted. Valid values are from 0-page size in inches and parts of inches.

Copies - Select the number of copies to print.

Print Font - You can choose between printing using the Font used in the viewer or the Default printer Font.

Print Lines - The values that are initially shown here are '1' and 'Number of Lines' in the text. You may adjust these values to print only a portion of the file or Viewing Window.

Print Selected Text - If you only want a specific range of line numbers to print, select this button and enter the range of line numbers.

Print Line Numbers - If you select this field your output will have line numbers printed at the start of each line.

Print Page Numbers - If you select this field your output will have page numbers at the top of each page.

Selecting a Printer

The **Print Request** window will show you the currently selected printer in the **Printer** field. If you want to change to another available printer, click on the **Select Printer** button.

The **Select Printer** window will appear with a list of available printers as well as your current printer. To select any of the available printers, Click your mouse on the selection, it will then appear in the **Current Printer** field.

Click on **Ok** button to save your change of printer, otherwise click on **Cancel** to exit without changing your printer.

It is recommended that you Set up a printer that has been made active. This can be done using the **Setup** button on either the **Print Request** window or the **Select Printer** window. The setup for each printer will be different, consult the printer manual or the Windows manual for more information.

Selecting a Communications Port

You can change the communications port to which you will be printing. This facility can let you print to a printer hooked to any valid port. In addition, this option provides a means for you to print to a file.

In the **Print Request** window there will be a list of available ports and a field showing the port to which you are currently assigned, for example:

- LPT1:
- LPT2:
- LPT3:
- COM1:
- COM2:
- EPT:
- FILE:
- LPT1.OS2

To change ports, select the port to which you want to direct your output then double click your mouse on that selection.

When selected, the new port will appear in the **Printer Port** field.

Note: InfoSpy or Windows will not ensure that a printer is connected to the port until such time as a file is printed.

Spying on the Windows Environment

InfoSpy provides the following options for examining the various aspects of your Windows environment:

List and explore all Active Windows.

Build a Window Class List.

List all Open Files and allocated File Handles.

List all Windows Tasks.

List all Loaded Modules.

Build an Application Summary for a specific task.

List all Global Atoms

List the Memory Usage by Task for all loaded tasks.

DLL search - Usage, References and Duplicates Files.

Active Windows

This option lists all active windows in your Windows environment. A window can be described as any window, dialog box, list box, button, control or Icon that is active (either visible, hidden or minimized) in your Window environment.

Each line in the listbox contains the following information on a Window:

- The handle
- The type of Window (Top Level, Child, Icon)
- The parent handle
- The task handle
- Class name
- Window name

In order to further detail each Window double click on it. This will create a dialog box that describes the following items on each Window:

- Window Style
- Class Style
- Windows function address
- Class extra allocation
- Windows extra allocation
- Window rectangle co-ordinates
- Window rectangle size
- Window related handles

Windows Class List

This option provides a sorted list of Window Classes currently in use by the Modules loaded in Windows.

Each class name is preceded by the loaded module and the Heap module from which it is loaded.

To get detailed information on the class module, double click on it. A window will appear detailing the class attributes as well as instance and handle information. Select the **Ok** button to close the detail window.

Open Files

This option provides a list of all open file on your system with their assigned File Handle, owner PSP segment, Path, Date and Time.

Certain applications (especially efficient ones) do not keep the file they are working on open, therefore those files may not appear in the list.

Windows Tasks

The 3rd list box lists all the active tasks within the Windows environment. A task essentially is a loaded application that may have many modules or Windows.

The items listed here are the same as those listed by the Windows Task Manager which can be invoked by pressing CTRL-ESC on your keyboard. Unfortunately the Windows Task Manager does not provide any detail on the listed task.

The information provided about each task is:

- The handle
- The parent's handle
- The module's handle
- The name of the task

In order to get more details on a task double click on it. This will cause a dialog to appear that relates the following information:

- The parent handle
- The instance handle
- The value of the SS register
- The stack top
- The minimum stack
- The PSP offset
- The Queue handle
- The Module handle
- The SP register
- The Stack bottom
- Number of Events

Related subjects:

[Terminating Tasks](#)

Loaded Modules

This option builds a list of all the modules that are currently loaded by your Windows environment. Modules include programs, DLL, other libraries, fonts, drivers and any other code that is loaded from a file.

When you double click on a module that is listed you will be presented with the size, date and time of the module as it appears on disk in the path that is listed. InfoSpy will also attempt to determine the Heap usage for the module by examining the Heap, a process which can be cancelled at any time by selecting the **Cancel** button on the status window.

Related Subjects:

[Unloading Modules](#)

Global Atoms

As defined in the Windows API Global Atoms are integers that uniquely identify strings that are stored in tables that can be accessed by any program.

The Global Atom table can be listed using the **Global Atom List** function found under the **Spy** menu.

Each line in the report will show the Atom #, the size of the string and the string itself.

Memory Usage by Task

This feature allows you to view the amount of memory currently used by all active applications on your system. These figures can assist you in determining which applications are utilizing too much memory.

Each line of the window provides the following information:

1. Task Handle.
2. Task Name.
3. Stack usage - the number of bytes of stack in use by the application.
4. Global Heap usage - the number of bytes of global heap in use by the application.

Application Summary

The Application Summary option provides a means of summarizing all the Task, Module, Window and Heap information on a specific application.

A summary can be used to debug an application or provide a snapshot to an application vendor of what resources and memory an application is using.

Related Subjects:

[Cancelling the Application Summary](#)

DLL Usage, References & Duplicate files

InfoSpy can be used as a tool to help determine whether your system is bogged down with DLLs that are either never referenced or reside in more than 1 place on the disk.

From the **Spy** menu select the **DLL Search** option. The Dialog that will appear will allow you to select which Disk or Network drive will be searched for files that reference DLLs as well as DLL files themselves. Note that all drive letters appear in the pull down list, if you select a drive that does not exist InfoSpy will provide a null report.

Once the drive is chosen, selecting **Ok** will invoke a search of the selected drive for all files that may reference DLLs. Once complete this process will then determine which DLLs are never referenced by any other programs and finally the process will report any duplicate DLL files that reside on the disk.

When you select an item from one of the 5 list boxes InfoSpy will attempt to identify that item in the remaining 4 list boxes. If found the item will be highlighted.

When you select the **Ok** button you will be returned to the drive selection dialog.

Note: There is now a multitude of programs that do not load their DLLs automatically, instead they are referenced as needed. By not loading DLLs automatically the Compiler or Linker for the new Windows EXE file format will be unable to put the DLL name into the DLL reference table that resides in the file's header. This in turn prevents InfoSpy and other DLL search programs from determining which DLLs that program uses.

The conclusion: The table of unreferenced DLLs only indicates that the DLLs are not referenced by any other program that may automatically load them, it does not necessarily mean that the DLLs are not referenced individually as needed, so be careful when you delete any DLL files!

As an example: InfoSpy individually loads its DLLs so you will see several DLLs such as InfWnDLL and InfCmDLL in the unreferenced DLL list.

Related subjects:

[Unloading Modules](#)

[Deleting Duplicate Files](#)

Unloading Modules

When you select **Unload** you will be asked to confirm that you want to unload the module you selected from the Loaded DLL list. If there are multiple copies of a module loaded, **Unload** will unload a single copy each time, until finally all copies are unloaded.

Note: Unloading a module may adversely affect Windows. Be cautious about what you unload since unloading device drivers, DLLs or other modules may cause applications to hang or Windows to lock up.

Deleting Duplicate Files

When you select **Delete** you will be asked to confirm that you want to delete the DLL file name you selected from the Duplicate DLL list.

Actions

Unloading Modules

Terminating Tasks

Windows Shutdown

Restarting Windows

Warm Boot Your System

Cold Boot Your System

Put a Task ON TOP of all Others

Saving CMOS values to a File

Restoring CMOS from a File

Terminating tasks

If a Windows program hangs or enters an infinite loop, Windows may not be able to terminate it using the standard Program Manager termination. The **'Terminate'** menu option will terminate any program in any state.

When you select **'Terminate'** you will be asked to confirm that you want to actually terminate the task you have selected.

Note: as the warning states, terminating a task may adversely affect Windows. It is strongly recommended that you Restart Windows immediately.

Unloading Modules

Windows loads many modules, sometimes multiple copies of a module. In order to free resources, memory and generally improve the performance of your system, you can unload modules that are listed in the Loaded Modules list box. The **Unload** menu option will unload any module listed in the list box.

When you select **Unload** you will be asked to confirm that you want to actually unload the module you have selected. If there are multiple copies of a module loaded, **Unload** will unload a single copy each time, until finally all copies are unloaded.

Note: Unloading a module may adversely affect Windows. Be cautious about what you unload since unloading device drivers, DLLs or other modules may cause applications to hang or Windows to lock up.

Windows Shutdown

The Windows Shutdown feature will cause Windows to Exit and return to the Dos Prompt.

Related Subjects:

[Rapid Application Shutdown](#)

Restart Windows

The Windows Restart feature will cause Windows to Exit, return to the Dos Prompt and then Restart.

This feature can be used when Windows is **Acting Up** or when Windows options have been changed and a Windows restart is requested.

Related Subjects:

[Rapid Application Shutdown](#)

Warm Boot Your System

The Warm Boot feature will cause Windows to Exit to the DOS prompt and will then automatically perform a warm boot of your system.

Note: A warm boot does not necessarily clear memory interrupt or irq related problems, use the Cold Boot option to truly clean up your system.

Related Subjects:

[Rapid Application Shutdown](#)

Cold boot Your System

The Cold Boot feature will cause Windows to shutdown and will then automatically Cold boot your system.

Related Subjects:

[Rapid Application Shutdown](#)

Rapid Application Shutdown

InfoSpy provides a rapid application shutdown feature that is used with the Windows Shutdown, Restart and System Reboot options.

The rapid application shutdown destroys all active applications on your system (including DOS sessions) before causing Windows to Exit normally.

The drawbacks of using the rapid application shutdown are that applications **may not** save work to files as they normally would with a shutdown, however this is probably offset by the fact that Windows exits in 2-3 seconds!

Put a Task ON TOP of all Others

You can use InfoSpy to make any running program the one that is ON TOP of all others, in other words if it is covered by another windows it will always show through as being on top of it.

To make a task On Top of all others, create a Task List by selecting the **Windows Tasks** option from the **Spy** menu.

From the list of tasks that appears, select the one you want on top.

Now select the **Put a Task On Top of all Others** option from the **Action** menu. Immediately the task that you specified will move to the upper left corner of your screen where it can be moved. It will now be On Top until Windows is restarted.

Note: You can make multiple Windows On Top however the priority of who's on top of who will follow your selections.

Save CMOS Values to a File

In order to ensure that your CMOS values are not destroyed if the CMOS battery backup fails you should save the CMOS values to a file which can be restored later.

The **Save CMOS** option under the **Action** menu lets you specify a file to which the CMOS values will be saved. We strongly recommend that the values be saved to a diskette which can be saved in a safe place.

Note: This function is in the Dos Functions Library (INFDSDLL.DLL) and will only appear on the menu if this library is loaded.

Restoring CMOS from a File

If your system's CMOS has been violated or destroyed you can restore it from a previously saved copy made with InfoSpy's **Save CMOS** utility. To restore the CMOS use the **Restore CMOS** option on the **Action** menu.

You will be given a file dialog for selecting the correct file, after choosing the file InfoSpy will load the values directly into CMOS.

Note: This function is in the Dos Functions Library (INFDSDDL.DLL) and will only appear on the menu if this library is loaded.

Note: Do not attempt to use InfoSpy's CMOS restoration utility to restore CMOS saved with other utilities!

Restoration From DOS: Your InfoSpy installation diskette contains the program **RESTCMOS.EXE**. This program can be used to restore an InfoSpy created CMOS save file from the DOS line. If your CMOS is destroyed you may not be able to get into Windows to use InfoSpy's restoration, in this case use RESTCMOS.EXE

Explore your System

[Dumping a Task's Stack.](#)
[Windows System Information](#)
[MultiMedia Devices](#)
[Master Environment](#)
[Current Environment](#)
[Newest DOS Environment](#)
[Device Redirection](#)
[DOS Memory Control Blocks](#)
[DOS Device Drivers](#)
[Timer and Clock Information](#)
[Network Information](#)
[List of VxDs](#)
[List of VMs \(virtual machines\)](#)
[Dump CMOS Values](#)

Dumping a Task's Stack

This option allows you to take a snapshot of a given task's stack within Windows. An application's stack is dynamic, changing every time an application is active, therefore the information you receive may only be correct for the instance of when the snapshot was made.

The stack information provided is as follows for each entry within the stack for the application:

- Stack Trace: SS BP CS IP Segment# and Module id.
- Stack offsets.
- Next CS:IP location.

Windows System Information

Windows System Information displays a child window containing Windows and DOS version information.

Select the **Close** button under the System Menu to close this window.

MultiMedia Devices

InfoSpy will interrogate the Multi-media Windows hooks and will provide you with a list of all Multi-media devices connects via Windows, including:

- CD Rom
- Keyboard, Mouse and Joystick
- Sound devices

Note: InfoSpy can only detect those multi-media devices that were attached via a Windows call, any that are attached from DOS will not appear in this list.

Master Environment

The Master Environment contains all the environment variables set prior to Windows loading. This list should provide similar results to doing the **SET** command from the DOS command line when Windows is not loaded.

Current Environment

The Current Environment contains all the environment variables carried over from DOS into the Windows environment.

This window also provides the amount of memory remaining to the current environment from the allocated maximum (default to 64k).

Newest DOS Environment

Multiple DOS systems may have several DOS environments. This window will provide a summary of the environment variables within the newest DOS environment.

Note: In most cases a message box will appear informing you that the Newest DOS environment matches the Master DOS environment. This is a normal situation for a single DOS system.

Device Redirection

The Device Redirection list provides a list of all Disk Drives and communications ports that are allocated via DOS, Windows or a Network.

Disks can be considered Removable, Fixed or Remote (Redirected to a network device). Any disk that has no redirection information is either not attached to your system or is an invalid physical device.

For detailed disk information double click on any Permanent drive. Related Subjects:

[Detailed Disk Information](#)

Detailed Disk Information

The detailed disk information window provides the following information on any permanent disk drive attached to your system, including Network drives:

- Total space on disk (in bytes).
- Free space on disk (in bytes).
- Bytes per sector.
- Bytes per cluster.
- Disk serial number.

Select the **Ok** button to return to the Device Redirection window.

DOS Memory Control Blocks

This option will provide you with access to the DOS Memory Control Blocks as allocated when Windows was loaded. This is similar to the results of a MEM or CHKMEM command in DOS.

DOS Device Drivers

This option will list the DOS Device Drivers as allocated outside windows.

Timer and Clock Information

This option will list the number of seconds since your system was last started and since Windows was loaded. The Timer resolution refers to the frequency in which the clock is referenced for timer operations.

InfoSpy will also determine the number of user and system timers available on your system. Any timers already allocated to other applications will not be enumerated by this function.

Network Information

In order for InfoSpy to gather any Network information the "**Load Network DLL**" option must be set under the "Intellib" configuration screen.

The Network module will identify most networks under Windows. If a network is found a new menu option will be added under **System** which will have a description of the type of network.

Additional Topics:

[Network Information](#)

[Loading the Network DLL](#)

Netware Information

InfoSpy will add the following menu options under **System** if you are running a Netware Network:

Netware Info - Information on your Preferred server and your workstation, including connection ids.

Netware Connections - Lists all the active connections on your Preferred server.

Print Queue Info - Lists all the Print queues that you have access to as well as the Status and number of jobs in the queue.

Netware Servers - Lists all the Netware Servers on your network regardless of whether you have access to them or an account on them. The servers that you are connected to will list a connection id.

Show all Netware Objects - One of the most obscure issues under Netware -> BINDERY. This option lists all Netware objects within your universe which are found in the Netware bindery. This would include Servers, Queues, Groups, Users, Gateways and much more!

Additional Topics:

[Details on Netware Objects](#)

Details on Netware objects

InfoSpy can provide details on several Netware objects. To see details simply select the item from any of the Netware menu objects and **Double Click** your mouse on that object. A window will appear displaying any additional details. If no window appears or a "**not implemented**" message appears this means that there are no details available on that object.

The following objects have additional details:

Netware Users - Shows the full user name and all Netware groups to which they belong.

Netware Groups - Shows the full group name and all members of that group.

List of VxDs (Virtual Device Drivers)

VxDs (Virtual Device Drivers) are loaded in Ring 0 of Windows. The use of VxDs in Windows 3.10 is blossoming, driving access to most every device. Windows 3.11 and upcoming versions of Windows will rely heavily on VxDs to replace many of the drivers now loaded by Dos.

InfoSpy will access Ring 0 to provide a precise list of all VxDs loaded under Windows.

Note: Due to the way InfoSpy accesses Ring 0 there can only be one VM or VxD window active at time, all other VM & VxD menu options are disabled until the active Window is closed.

Additional Topics:

[Loading the VM&VxD Library](#)

List of VMs (Virtual Machines)

InfoSpy will list all Virtual Machines currently loaded on your system. In general: Windows is a virtual machine and each DOS session under Windows will be an additional virtual machine.

Note: Due to the way InfoSpy accesses Ring 0 there can only be one VM or VxD window active at time, all other VM & VxD menu options are disabled until the active Window is closed.

Additional Topics:

[Loading the VM&VxD Library](#)

Dump CMOS Values

You can use the **Dump CMOS Values** option on the **System** menu to view the 100 bytes of CMOS values that your system retains.

Note: This function is in the Dos Functions Library (INFDSDDL.DLL) and will only appear on the menu if this library is loaded.

Additional Topics:

[Loading the DOS Functions Library](#)

Monitoring your System

The monitoring feature of InfoSpy is still in its fledgling state, however you can select from the following tracing capabilities:

Monitoring System Resources & Memory.

Tracing Messages to a Task.

Tracing all Windows Messages.

Monitoring File Activity.

Monitoring Serial Communications

Tracing Virtual Machine (VM) messages

Setting a timed Automatic Refresh of all InfoSpy Windows.

Setting System Alarms that run in the background.

Monitoring System Resources & Memory

InfoSpy can act as a system resource and memory monitor to help you dynamically view the changes in resources and memory as windows event occur.

You can monitor the real-time level of: System Resources, GDI Resources, USER Resources, Virtual-Memory-Manager Linear memory available, Heap Space Available and Number of Heap Items.

To invoke resource and memory monitoring select the **Resource & Memory** option from the **Monitor** menu. The selection screen allows you to specify which levels to monitor, you may select any or all of the options.

Once the options are select, you can start the monitoring in text mode by pressing the **Text Display** button or in a bar-graph display using the **Graphic Display** button.

During the monitoring session a clock will be displayed at the top of the monitor window to indicate the actual time being monitored. The display will only refresh if any of the monitored values changes.

The Monitor checks all values every 1000 ms.

Tracing Messages to a Task

In order for InfoSpy to provide Message Tracing "**Load Message Tracing DLL**" option must be set under the "Intellib" configuration screen.

To trace messages being sent to a specific task select a task from the **Windows Tasks** list (invoked from the **Spy** menu).

When the task you wish to trace has been highlighted, select the **Trace** menu following by the **Trace Stack for a Task** sub-menu.

From the Message Trace Selection Screen that will appear, either choose a specific message filter or select the **Trace All** Message Filter Types option.

Start the trace by selecting the **Start** button or use **Cancel** to exit the function without starting a trace.

When the trace starts a Window will appear in InfoSpy showing the the number of messages already captured. In addition, the **PauseMessage** menu option will appear on InfoSpy's menu.

Related Subjects:

[Windows Message Filters](#)

[Pausing and Restarting a Trace](#)

[Examining a Message Trace](#)

Tracing all Windows Messages

In order for InfoSpy to provide message tracing the "**Load Message & File Activity Trace Library**" option must be set under the "Intellib" configuration screen.

This option traces messages going to all tasks within Windows.

From the Message Trace Selection Screen that will appear, either choose a specific message filter or select the **Trace All** Message Filter Types option.

Start the trace by selecting the **Start** button or use **Cancel** to exit the function without starting a trace.

When the trace starts a Window will appear in InfoSpy showing the name of the task being traced as well as the number of messages already captured. In addition, the **PauseMessage** menu option will appear on InfoSpy's menu.

Note: Messages sent to InfoSpy will not be captured.

Related Subjects:

[Loading the Message & File Activity Trace Library](#)

[Windows Message Filters](#)

[Pausing and Restarting a Trace](#)

[Examining a Message Trace](#)

Monitoring File Activity

Related Subjects:

InfoSpy provides you with the ability to monitor most File Activity within Windows or DOS (under Windows) applications.

[Loading the Message & File Activity Trace Library](#)

Tracing Virtual Machine (VM) Messages

InfoSpy can trace all virtual machine messages issued on Ring 0 of Windows via this option. Messages are issued when you move between DOS sessions, when you open or close a DOS session or when you shell a new COMMAND.COM within a DOS session.

Note: Due to the way InfoSpy accesses Ring 0 there can only be one VM or VxD window active at time, all other VM & VxD menu options are disabled until the active Window is closed.

Related Subjects:

[Loading the VM&VxD Library](#)

Windows Message Filters

GetMessage Filter (wh_getmessage) -

System Message Filter (wh_sysmsgfilter) -

Standard Message Filter (wh_msgfilter) -

Hardware Message Filter (wh_hardware) -

Mouse Event Filter (wh_mouse) -

Keyboard Event Filter (wh_Keyboard) -

Default Windows Procedure Messages (wh_DefWndProc) -

Pausing and Restarting a Trace

When tracing messages you have the ability to pause and restart the trace. When a trace starts the **PauseTrace** menu option will appear on InfoSpy's menu, use it to Pause the tracing process indefinitely.

When you Pause a trace the menu option will change to read **ReStartTrace**. Selecting this menu option will restart the trace with the same parameters as when it was paused.

When a trace is ended the PauseTrace and ReStartTrace menu option is removed from InfoSpy's menu.

Examining a Message Trace

Tracing Windows messages is an art. You will be surprised at the number of messages required to do the simplest of tasks, however we **all** know that Windows had a lot of overhead.

There are a lot of Message Spy utilities on the market (Microsoft, Borland, etc..) that provide extremely detailed information regarding each message and the parameters that are passed. In our case however we simply wanted to provide a concise, easy to read summary of each message to assist you in understanding and debugging your Windows program(s).

First you need to understand the types of messages that you can trace. Use the [Windows Message Filters](#) section of this help text to get information on message filters.

Automatic Windows Refresh

One of the most effective ways of tracing Windows activity is to set an automatic timed refresh on any of InfoSpy's informative windows. This will cause the contents of any InfoSpy window that is active to be completely refreshed based on an interval (in seconds) that you specify.

To set the automatic refresh interval use the [InfoSpy Preferences](#) screen under the **Configure** menu option.

To start the automatic refresh option first set the InfoSpy windows you want updated as well as their position within the InfoSpy frame. Then select the **Timed Refresh (x secs)** option from the **Trace** menu. When selected and active a checkmark will appear next to the menu option.

After the initial interval you will notice that all InfoSpy windows will begin automatically refreshing. To stop the automatic refresh select the **Timed Refresh** menu option again, the checkmark will disappear.

Setting System Alarms

InfoSpy has the capability to monitor the key resources of your system in the background and then alert you when they fall below a predefined level.

Select the **Set Alarms** option from the **Monitor** menu in order to select and set the Alarms.

Each of the following system resources can be set:

GDI Heap - Set the minimum percentage available at which the alarm will trigger.

SYSTEM Heap - Set the minimum percentage available at which the alarm will trigger.

USER Heap - Set the minimum percentage available at which the alarm will trigger.

Virtual Memory - Set the minimum number of memory pages available at which the alarm will trigger.

Global Heap - Set the minimum number of bytes available at which the alarm will trigger.

DOS Memory - Set the minimum number of bytes available at which the alarm will trigger.

Disk Drives - For each of the 4 disk drives you can set the minimum number of bytes available at which the alarm will trigger.

Virtual Memory Alarm - When the system swap file is used due to low virtual memory, this alarm will trigger.

Monitoring Serial Communications

In order for InfoSpy to provide Serial Communications monitoring the "**Load Communications Trace Library**" option must be set under the "Intellib" configuration screen.

This option allows you to trace all activity on a serial port or on all serial ports at once. The activities include:

ReadComm - All data being read from the serial port(s).

WriteComm - All data being written to the serial port(s).

ReadComm,WriteComm - All data being read from and written to the serial port(s).

All activity - All data being read from and written to the serial port(s) as well as all status updates, flushing, opening and closing of the port(s).

You also can optionally show all **GetCommError** activity, however be warned that most communications programs overuse this function which may cause your trace to quickly fill to capacity.

Each trace entry includes the Serial activity type, the Communications port, the time the activity took place and any data involved in the activity.

When tracing is started InfoSpy will add a new menu option: "**StopCommTrace**". You can use this menu option to stop an active trace in the visible trace window. You can later restart the Trace in the same window by selecting the "Trace Serial Comm" menu option. If you close the Trace window a subsequent trace will create a new window.

All activity data is divided into 80 characters per line to make it more readable. Ascii characters are shown in ascii and non-readable characters are shown in Hex surrounded by square brackets.

Due to the fact that each communication command is written to InfoSpy's screen before being passed forward to Windows, you might notice a delay in your communications program while InfoSpy updates its screen. To reduce the delays to a negligible level we suggest you minimize the Comm Trace window while tracing then maximize it when done.

Note: You should read the additional topic on Communications Trace Errors to help avoid GPFs!.Additional Topics:

[Loading the Communications Trace Library](#)
[Communications Trace Errors](#)

Communications Trace Errors

InfoSpy sets its hooks for tracing serial communications into USER.EXE at the exported locations for all 16 communications commands which causes them to be redirected to INFCMDLL. When a serial communications command is issued to USER.EXE, InfoSpy intercepts it, puts it on our screen and then forwards it back to USER.EXE for normal processing.

The procedure is good, provides accurate tracing and is safe... However several things could happen:

1. When attempting to set its hooks into USER.EXE, InfoSpy may get outright rejection due to other applications having already set their hooks into these calls, specifically programs like EXTRA, PROCOMM, FAXPRO, etc.. essentially any program that fools with Serial communications under Windows potentially can get its hooks into USER.EXE. This may cause InfoSpy to get a GPF - NOT PRESENT FAULT when trying to trace serial communications
2. A communications program may get a GPF - KERNEL.EXE when trying to load if InfoSpy serial trace is active. Once again the hooks are to blame.

What to do! If you need to trace the serial comm and have experienced problems loading InfoSpy comm trace then restart Windows without any applications, load InfoSpy and start the serial communications trace, then load your other applications normally. InfoSpy WILL NOT hog the hook and will let other applications share it!

Stress Functions

InfoSpy has a library of functions that allow you to perform stress testing on other windows programs.

Grab Global Heap - Will grab as much of the Global heap as you specify.

Grab GDI Heap - Will grab as much of the GDI Heap as you specify. (used for graphics)

Grab USER Heap - Will grab as much of the USER Heap as you specify.

Grab File Handles - Windows has up to 255 file handles in its default table. InfoSpy can grab as many of them as you specify. Note that this function will not grab alternate file handle tables.

Grab Disk Space - Will grab as much disk space as you specify (into an InfoSpy temporary file).

Grab Timers - Windows has over 30 timers. This function will grab as many of them as you specify.

Grab Printer & Comm Ports - Will grab any of the printer (1-4) or Comm ports (1-4) available on your system.

Continuous Disk IO - Will start a procedure that will continuously read and write from the disk.

Configuring InfoSpy

InfoSpy has several configuration options; both for Startup and for standard operation:

[Setting Option Preferences](#)

[IntelliLib](#)

[Set Font for InfoSpy Windows](#)

[Set Font for Hex Dumps](#)

[Using the Button Bar](#)

[Using the Help Line](#)

InfoSpy Option Preferences

Default Heap Ordering. Select Address, Size, Module, Handle or Type as the default Heap Sort order for Global Heap List operations.

Windows to load on Startup. Select none, any or all of the listed windows to load automatically when InfoSpy is started.

Seconds for Auto-Refresh. Enter the number of seconds between each Auto-Refresh operation.

Add Trace Entries to.. For any trace operations you can select whether the Trace list box receives new entries either at the top of the list (newest entry at top) or at the bottom of the list (newest entry at bottom).

When Trace Window is full.. In Windows 3.1 a list box may contain up to 64k of information. The tracing facilities of InfoSpy use List boxes and are therefore limited to showing 64k of trace information (approx. 1000 lines). This option lets you indicate whether to stop the trace when the list box is full or whether to reuse the oldest trace entry.

Set Font for InfoSpy Windows

Use the Font Selection window to select the font for all InfoSpy windows.

The Font you select will be saved to the INI file under the **FONT** heading and will be re-used on subsequent executions of InfoSpy.

Note: Certain fonts provide TAB operations while others use proportional spacing.

Set Font for Hex Dumps

Use the Font Selection window to select the font for all Hex Dump windows.

Note: Certain fonts provide TAB operations while others use proportional spacing.

Button Bar

InfoSpy has the ability to display an optional Button Bar containing your choice of over 20 different buttons representing most of InfoSpy's menu options.

To show or hide the button bar select the **Show Button Bar** menu option. When the button bar is visible there will be a checkmark next to this menu option.

Use the **Setup Button Bar** option to select which menu options will be represented on the Button Bar.

When InfoSpy is first started (or upgraded) all of the Buttons will be displayed, which may cause several buttons to overrun the size of the InfoSpy window. However the Button Bar will automatically redraw once you make selections from the Button Bar Setup.

Help Line

InfoSpy can optionally display a menu help line at the bottom of the InfoSpy main window. The help line is used to provide real-time information on menu and button bar selections. To get help on a menu or button bar selection simply click on the menu or button. Text will appear in the help line until you release the mouse button.

To show or hide the help line select the **Show Help Line** menu option. When the help line is visible there will be a checkmark next to this menu option.

Task Scheduler

The InfoSpy Task Scheduler is a full featured system scheduler that allows you to set up to 100 independant events to occur at a frequency you specify.

In order to use the Task Scheduler you must first ensure that the **Task Scheduler Library** is loaded using the **IntelliLib** setup screen.

If the Library is loaded you will see the **Scheduler** menu item appear on the InfoSpy main menu. Within this menu are 2 menu options:

1. Start or Stop Task Scheduler. This option lets you dynamically turn the scheduler on and off as desired. When turned off no scheduled events will occur.

2. Edit the Task Scheduler. This option will display the main Scheduler window providing a list of all scheduled items, access to the **Setup** window and selections for adding, editing and deleting scheduled items.

Additional Topics:

[Loading the Task Scheduler Library](#)

[Task Scheduler Setup](#)

[Adding a Schedule item](#)

[Deleting a Schedule item](#)

[Editing a Schedule item](#)

[How to View the Scheduler Log](#)

Adding a Schedule Item

Setting the Task Event Time

The task event time is the hour and minute at which the event will trigger. The time is set using a 24 hour clock, ie: 2pm=1400 hours.

Either type the correct hour and minute into the appropriate fields or use the speed buttons to increase or decrease each field until the correct hour or minute appears.

Note that every scheduled item must have a unique time. They can be within 1 minute of each other but no duplicate times are allowed. This is due to the timing cycle that can only handle a single scheduled task per minute.

Setting the Type of Task

You can select from the following types of tasks:

1. **Run a Program** - This choice lets you select any DOS or Windows program or batch file and have it executed. The program name & path can not exceed 60 characters. Use the Program Browser button to select a program.
2. **Windows Shutdown** - This choice will close all open applications and cause windows to shut down.
3. **Windows Restart** - This choice will close all open applications, shutdown Windows and then will immediately restart Windows.
4. **System Warm Boot** - This choice will close all open applications, shut down Windows and then will immediately perform a Warm Boot of your system.
5. **System Cold Boot** - This choice will close all open applications and will then immediately Cold Boot your system (no Windows shutdown).
6. **Task Shutdown** - This choice allows you to specify a Windows Application (via its Task Name) to shut down. You can use the drop down list to select a task from your system's current task list.

Setting the Frequency

You can select from the following frequencies:

1. **Today Only** - Perform the scheduled activity today only.
2. **Every Day** - Perform the scheduled activity every day of the week.
3. **Specified Days** - Select the days on which the scheduled activity should take place.
4. **Specific Date** - Enter the date on which the activity will take place.

Setting the Options

The following options are available for scheduled items:

1. **Use Rapid Shutdown** - This option forces applications to close rapidly instead of performing a normal shutdown. It is possible that using this option with some types of applications will cause them to not save their data!

Note: Rapid Shutdown is required if you have DOS Sessions which need to be closed or if you want to bypass an application's shutdown dialog.

2. **Delete Item** - If the scheduled item is a one-time shot you can select this option to cause it to be deleted from the Schedule automatically once it has successfully occurred.

3. **Provide 10 Second Countdown** - Selecting this option provides the user with a countdown dialog on the screen prior to the event occurring. The dialog shows the event that will occur and provides a **Cancel** button to allow the user to abort the scheduled activity.

4. **Change Working Directory** - This option is only used when scheduling the execution of a program. Prior to the program being executed InfoSpy will examine the program name for its path and will change the System's working directory to that path. Many programs require that they be executed from a specific working directory since they load configuration or INI files.

Deleting a Schedule Item

To delete an item already on the schedule:

1. Select the item from the list box.
2. Press the **Delete Item** button in the dialog.
3. Confirm the deletion.

After an item is deleted the list is refreshed and automatically written to disk.

Editing a Schedule Item

To edit an item already on the schedule you can either:

1. Double click on the item in the list box.
2. Select the item from the list box and press the **Edit Item** button.

In both cases the schedule detail window will load with the details of the selected item loaded into the correct fields.

Task Scheduler Setup

Using the **Setup** menu option found on the Task Scheduler list, you can set the following options:

1. The name & path of the Scheduler file containing the task scheduling information. This feature allows you to maintain more than 1 scheduler file. Use the **Browse** button to browse your disk.
2. Log Scheduler activity. Set this checkbox if you want all scheduler activity to be logged.
3. The name & path of the Scheduler log file.

How to View the Scheduler Log

The task scheduler log can be viewed using any text editor or word processor as it is in 80 character line delimited format.

Each log line contains the following information:

- Date & Time.
- The Task that was performed.
- Whether is was Successful or Failed.

If you delete the log InfoSpy will automatically create a new one when the next log entry is to be written.

Memory Information

InfoSpy provides detailed memory information:

- Largest free block of memory (in bytes).
- Maximum memory pages available.
- Maximum memory pages lockable.
- Total linear space.
- Total unlocked pages of memory.
- Free pages.
- Total pages.
- Free linear space.
- Swap file pages.
- Page size (in bytes).

Heap Information

Under Windows the Heap is used to maintain data related to almost every facet of applications, modules, graphics, etc.. Examining the Heap provides you with the ability to actually spy on the data an application may be maintaining in the Heap.

[Global Heap](#)

[Global Heap for a Selected Module](#)

[Heap Information](#)

[GDI Local Heap](#)

[USER Local Heap](#)

[Sort Options](#)

Global Heap

When you choose this option, InfoSpy will walk the heap to provide a detailed list of all Heap Entries used under Windows. You can have this list sorted by Handle, Address, Size, Type or Module. Building the list can take several seconds, if you choose to Cancel the process using the provided **Cancel** button then you will be provided with a partial list.

You have the option of building the list for a selected Module, for the GDI local Heap or for the USER local heap, see the **Related Subjects** choices for more information.

The displayed window contains all valid Local Memory Descriptors for the Global Heap within your Windows environment. Each program, DLL, task or module that is loaded allocates certain memory areas for its own internal use, such as tables, lists and pointers.

The Items on each line of the list box are:

- System Address for this memory.
- Handle to this global heap memory descriptor.
- Accessed flag.
- Loaded flag.
- Local Heap available flag.
- Size of the allocated memory in bytes.
- Type of Memory descriptor.
- Owner module name and Handle.

In order to further examine each descriptor double click on it. This will create a memory examination window which will show the contents of those particular memory segments in a Hex/Ascii dump.

Related Subjects:

[Hex Contents of a Heap Entry](#)

[Local Heap Walk](#)

[Cancelling a Heap Examination](#)

Hex Contents of a Heap Entry

This option is used to view Global Heap entries. To invoke a memory dump double click on any Heap entry. A new window will appear showing the Heap values in the following format:

```
000A 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F .....
```

- the offset
- 16 byte hex values
- 16 byte ascii values. All non-terminal characters are replaced with a '.'.

Each memory dump can be retained, minimized or viewed with other memory dumps. Since the memory dump window is dependant on InfoSpy, when you close InfoSpy the dump will automatically close. InfoSpy can maintain multiple windows containing Hex dumps so that they may be saved for future viewing or comparison.

You can Print and Save Hex dumps by invoking the **Print** and **Save** options located on the System Menu (upper left corner) of each Hex Dump window.

Cancelling a Heap Examination

While InfoSpy is examining the Heap and building the requested list of Heap entries it displays a status box with a cancel button. The Heap examination process can take several seconds depending on the scope of the examination, ie: examining the Heap for a single module will take far less time than building an application summary.

If you get tired of waiting for the results of a Heap Examination, select the **Cancel** button on the Status window. This will terminate the Heap Examination and will provide you with the results so far.

Local Heap Walk

Certain Global Heap descriptors have Local Heap relationships. If so, a Global Heap entry will be marked with an 'L' in the 'Loc' column of the Global Heap Walker.

To walk the Local Heap, select the Global Heap entry and then select the **'Local Heap'** menu option on the InfoSpy menu. If the Global Heap entry does not have any Local Heap a message will appear to notify you.

Related Subjects:

[Hex Contents of a Heap Entry](#)

[Cancelling a Heap Examination](#)

Global Heap for a Selected Module

Using this option you can selectively list the Heap entries for any loaded module. Using the Module selection list box that appears, select the module for which you want Heap information.

Related Subjects:

[Hex Contents of a Heap Entry](#)

[Cancelling a Heap Examination](#)

Heap Information

The Heap Information screen provides you with a summary of Heap usage and availability:

The percentage of the USER and GDI heap allocation still free.

The Segment handles to the USER and GDI DGroups.

Heap availability, free space and items allocated on the heap.

Use the **Close** button to close the Heap Information screen.

Related Subjects:

[Hex Contents of a Heap Entry](#)

[Cancelling a Heap Examination](#)

GDI Local Heap

This option selects the local GDI heap entries from the heap and presents them in a Window. These entries include Bitmaps, Device contexts, Fonts and Regions.

Related Subjects:

[Hex Contents of a Heap Entry](#)

[Cancelling a Heap Examination](#)

USER Local Heap

This option selects the local USER heap entries from the heap and presents them in a Window. These entries include Bitmaps, Device contexts, Fonts and Regions.

Related Subjects:

[Hex Contents of a Heap Entry](#)

[Cancelling a Heap Examination](#)

Sort Options

In order to assist you in evaluating your system's Heap, InfoSpy has the ability to sort the Heap in various ways:

- Sort by Address
- Sort by Handle
- Sort by Size
- Sort by Type
- Sort by Module

When you modify the sort option InfoSpy will refresh any Heap windows using the new sort option. In addition, a check mark will be placed by the new sort option and all subsequent Heap dumps will use this sort option.

When InfoSpy is loaded it will use the **Default Sort Option** which is set using the **InfoSpy Preferences** screen under the **Configure** menu.

Window Positioning and Activation

Using the Tile, Cascade and Arrange Icons options.
Choosing from the List of InfoSpy Windows.

Using Tile, Cascade and Arrange Icons

The **Tile** menu option will cause all active InfoSpy windows to equally divide up the InfoSpy window space vertically and horizontally between them.

The **Cascade** menu option will cause all active InfoSpy windows to cascade down from the upper left corner of the InfoSpy main window.

The **Arrange Icons** menu option will take all InfoSpy windows that are iconized and will arrange them at the bottom of the InfoSpy main window.

Choosing from the List of InfoSpy Windows

Each screen displayed in InfoSpy is considered to be a window. The **Windows** menu option of InfoSpy contains a list of all InfoSpy windows that are currently displayed or iconized.

By selecting one of the windows you will maximize it and make it the active window.

Help on InfoSpy

Viewing the [About InfoSpy](#) screen.

Viewing the [Contents of InfoSpy Help](#).

About InfoSpy

The **About** option will display the InfoSpy version screen. Select the **Ok** button to close the screen.

Contents of InfoSpy Help

InfoSpy online help contains subject matter related directly to the operation of InfoSpy. The InfoSpy.Hlp file should be kept with the InfoSpy.Exe module or in the Windows default directory.

The **Contents** option will load InfoSpy.Hlp with the Table of Contents initially visible.

Os/2 Compatability

InfoSpy will run under Os/2 under a win-Os/2 window. Most InfoSpy functions are available under Os/2, those that are not compatable are disabled from use.

Windows NT, OS2, Problems, Errors and GPFs!

This is where we humble ourselves just a little bit....

We have tested InfoSpy running under Windows NT. InfoSpy provided near complete information, however there were isolated problems with Windows Classes, Application Summary, Memory Information and Heap Information. We would appreciate exact feedback of problems you encounter, send us a CompuServe message.

Though InfoSpy was written to provide Information on Windows, assist in debugging programs and monitor your overall system, we have found that at times InfoSpy can prove to cause some problems.... So rather than have you all calling us and blaming us for the demise of your environment, we thought we would lay our cards on the table and hopefully enlist you to help us solve some problems.

As of this release the following problems exist with InfoSpy:

1. The Windows Trace DLL may cause the InfoSpy menu to have extra scroll controls and menu options that are in incorrect places. This is due to the inadvertant interception of Windows messages while tracing them.
2. If you kill InfoSpy without letting it do a normal shutdown all the hooks into the Windows environment will remain so most likely other Win apps will get GPFs, so if you kill InfoSpy, reboot immediately!
3. The Network DLL is still not quite up to standards. There are still missing Netware calls and no Lantastic support whatsoever.
4. The Heap Spy and Application Summary take too long to scan the Heap and build a sorted list of entries.
5. If you are tracing messages for ALL windows and try certain operations with InfoSpy you may get a GPF. We have attempted to isolate the InfoSpy calls however a few still remain which cause integrity problems. This is rare.
6. "Not Present Fault" - When trying to invoke the Communications trace you may get this GPF. InfoSpy was unable to set its hooks into USER.EXE due to other programs already making claim to those hook points. See section on Communications Trace Errors.

Enjoy the program and give us feedback!

Version History

v2.10 - 12/15/94

- Stress Menu was corrected so that it does not grey when disabled, instead it is actually removed from the menu bar.
- Added System Scheduler, including: Intellilib Option, Popup Menu, Start & Stop menu functions and full task scheduling capability.
- Fixed Continuous Disk I/O Stress problem which allowed it to only run once.
- Fixed Grab DOS Memory Stress problem which occasionally gave RTE 201.
- Corrected Grab USER Resources bug that displayed confirmation message twice.
- Made Auto-Refresh counter separate from Schedule & Alarm timers to prevent tie ups.
- The MDI list of open windows now shows up under the **FILE** menu instead of **WINDOW**. We had to move it since our menus are dynamic and the MDI interface is not flexible.
- Will not allow APPLICATION SUMMARY and STACK TRACE for InfoSpy, caused some GPFs.
- Updated Alarms function so that it will activate automatically when InfoSpy is loaded.
- New Alarms menu function lets you Start & Stop the alarms dynamically.

v2.08 - 11/30/94

- Address change for Dean Software Design.
- Remove references to InfView which was sold to NEOSOFT.
- Fixed Mem Usage by Task bug that would not reset the memory usage counters before next usage.
- Added new function to Search your system for DLLs, also inspects All EXE,DLL,VBX & DRV files for any DLLs they might reference and then reports on DLLs that are referenced and unreferenced as well as duplicate DLL files.
- Added 3 second splash screen only on unregistered version and added <unregistered> to top of InfoSpy main window.

v2.07 - 11/03/94

- New function under ACTION to let you put any running task ON TOP of all other tasks. Select task from task list, can be used multiple times to put multiple tasks on top.
- Added 'View CMOS' to the SYSTEM menu. Dumps \$63 bytes of CMOS. (in INFDSDLL.DLL).
- Added 'Save CMOS' and 'Restore CMOS' options to the ACTION menu. These options let you save your CMOS settings to a file or restore them from a file. (in INFDSDLL.DLL).
- Created standalone RESTCMOS.EXE program which is run from DOS line to restore CMOS from a saved file.
- Added Cold Boot option to the ACTION menu. Cold boot acts like powering off your system.
- The Font selection for InfoSpy windows is now saved to the INFORMER.INI file and is loaded whenever InfoSpy is executed.

v2.06 - 10/10/94

- Updated menu items to Windows standards, ie '...'.
- Added SYSTEM ALARMS (under Monitor Menu) that let you specify minimum values for Resources, memory and disk. When any of these reach the minimum InfoSpy will react by posting an Alarm Dialog.
- Added Virtual Memory alarm to System Alarms. This alarm will trigger when windows has exhausted its RAM and is going to start paging to the SWAP file.
- Added DOS Memory available amount to the Memory Info Screen, Alarms screen, Stress screen, Resource Monitor screen. DOS memory available indicates the amount of memory in the first 1mb that is available to windows programs.
- Updated Memory Info and Heap Info screens to be MDI children to let you print & copy them.
- Added MEMORY USAGE BY TASK (under Spy Menu) that shows stack and local heap usage for all running tasks.

- Added MEMORY WATCHER function (under Monitor Menu) that will continuously monitor the Stack, DSeg & Local heap usage of the active task!
- Added PRINT SETUP menu option which gives print params so that PRINT ACTIVE menu option will print immediately without prompting for options.
- Correct print bug that was not printing the window title on the printed output.
- InfoSpy now recognized when it is running on OS/2 and will disable incompatible functions.
- Netware Object list bug fixed.
- System info and Timer info screens are now MDI children.
- IntelliLib sub-system updated to let you dynamically load and unload DLLs and their functionality without restarting InfoSpy.

v2.05 - 8/28/94

- Optional Button bar added as well as dialog to set button bar options.
- Optional MDI help line added.
- Added function to grab printer & Com ports in stress functions.
- Disk Monitor setup now has scroll bars on disk selection list boxes.

v2.04 - 8/10/94

- Added SOUND to InfoSpy error message boxes.
- Removed HELP button from Memory Information screen.
- Added Access mode to Open File list.
- Added PSP seg to Task List.
- Resource Monitor (Text&Graph) now let you monitor disk available on up to 4 disks.
- Corrected bug that would not turn off Timed Refresh option.
- Added Print & Save options to the Memory Hex Dump windows (use the System Menu of the Hex Dump Window).
- Added Clipboard functions to copy contents of Active Windows and Memory Hex Dump windows to the Clipboard.
- New DLL to contain Windows related lookups -> INFWNDLL.
- New Global Atom list to show all global strings allocated to Atoms.
- Corrected Network DLL to correctly show Non-NETWARE networks and to use an alternate Device Redirection scheme for non-Netware networks.
- Menus are updated: Printare under FILE. Memory Info is under HEAP.
- Added CANCEL button to IntelliLib library selection screen.
- New DLL and menu options for STRESS testing Windows. Includes functions to Grab Global Heap, GDI, USER, File Handles, Disk Space, Timers and also a Disk I/O stress functions that continually does disk I/O.

v2.03 - 7/25/94

- Task list modified to contain the path of the task program.
- Added Command line parameter (:) to allow you to specify a different INI configuration file. Example:
InfoSpy :c:.ini.
- Added File Activity Trace. Traces WindowsFile Creates& Deletes.
- Fixed bug (0001:1957) that caused GPF when you pressed CANCEL on the Comm trace startup dialog.
- Added VMRing 0 inquiry support. Lets you list the Virtual machines and VxDs on your system.
- Added VM message trace, traces all Virtual Machine messages from Ring 0.
- Fixed bug (0001:020A) which caused GPF during Application summary.
- Fixed bug in COMM Trace that was giving gpf : 'NOT PRESENT FAULT'. The trace routine will now report that it was 'UNABLE TO INSTALL THE COMM HOOK' without a GPF!.

- Added option to allow trace boxes to filled at top or bottom of list.
- Added option to end trace when box is full or to erase oldest entry.
- Added Resource & Memory monitor in Text or Bar Graph mode.

v2.02 - 6/24/94

- Corrected RunTime Err 201 at 0015:038E that occurs under WFWG. Thanks Ed!
- While Comm Tracing - selecting the "StopCommTrace" menu option now simply disables the trace without deleting the trace window. You can restart the trace in the same trace window by selecting the "Trace Serial Comm" menu option again.
- The "INFNW" Dll was renamed to "INFNWDLL" and the "INFHOOK" Dll was renamed to "INFHKDLL". This was due to complaints of existing DLLs from other products by the same name.
- All the functionality related to DOS inquiries, ie: Device drivers, Memory Control Blocks, Open Files, Environment, etc.. were removed from the mainline code and placed in an IntelliLib DLL - "INFSDLL". This was done to satisfy several complaints of people running OS2 and Windows NT that those functions did not work or gave screwy results... so now they can just shut them off using IntelliLib!

v2.01 - 6/15/94

- Added Network Information DLL.
- Added Serial Communications Trace DLL.
- Added IntelliLib capabilities.

v2.00 - 5/15/94

- Changed to MDI application will seperate window controls.
- Added sort options to Global Heap display
- Added Open Files, Device Redirection, Dos Memory, Dos Device Drivers, Environment, Window Class, MultiMedia, Application Summary and System Information windows.
- Added Automatic Refresh feature.
- Added Windows Shutdown, Restart and Reboot Actions.
- Rewrote Print and SaveAs capabilities.

v1.20 - 4/1/94

- Include DPMI trace info.

v1.14 - 2/8/94

- Updated List box positioning

v1.00 - 9/1/93

- First Version

Register this Program

This version of **InfoSpy** is Unregistered. You may use this program without restriction, however we expect that if you like **InfoSpy** that you will register the program with the authors.

To Register:

A. Register on CompuServe's Shareware Registration Forum: GO SWREG. InfoSpy Registration ID: 1846

B. Send a cheque or money order for \$9.99 to:

Dean Software Design
P.O. Box 13032
Mill Creek, WA 98082-1032

(Canada/Mexico add \$0.50 for postage, all other countries add \$1.50 for postage please!)

Your registration will entitle you to:

1. A registered copy of the latest version of InfoSpy.
2. Other fine shareware by Dean Software Design.
3. Support.

Please use the following form and allow 1-2 weeks for delivery.

=====

InfoSpy Registration

Name:

Company:

Register to:

Address:

City:

Phone:

Number of Copies: _____

Diskette Size: _____

Version: Latest _____ Specific _____

Total: \$ _____

Special Instructions:

=====

Do you have any questions or comments? Send us a letter or use EMail on CompuServe address 75240,65. We will promptly get back to you!

Disclaimer - Registration Agreement

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Shareware Products by Dean Software Design

InfoSpy

Windows Environment Spy Utility. This application provides customized views of Heap, Windows, Tasks, Modules, Open Files, Stack, Dos Information, Windows Information, Environment Info and Timers loaded under Windows.

Provides detailed Hex dumps of Heap entries as well as Memory usage information.

Has Task Terminator and Module Unload features to 'clean up' your environment as well as Windows Rapid Shutdown, Windows Restart and System Reboot menu options.

The Auto-Refresh timer lets you put InfoSpy in a Real-Time diagnostic mode where it will continually update the Window(s) of your choice on a timed basis.

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To Register send a cheque or money order for the Purchase Amount to:

Dean Software Design
P.O. Box 13032
Mill Creek, WA 98082-1032

(Canada/Mexico add \$0.50 for postage, all other countries add \$1.50 for postage please!)

Please use the following form and allow 1-2 weeks for delivery.

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InfoSpy: \$9.99 - No. of Copies _____

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