

# RTPM

Version 1.03

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## Synopsis

This is the third release of the Windows 3.1 Real-Time Performance Monitor (RTPM) utility. This utility provides a real-time graphical display of any one of a number of user-selectable Windows performance parameters as well as a numerical display of some other interesting user-selectable Windows information as the window caption. RTPM is a rewrite of my Visual Basic WinEKG utility into C (using Microsoft's Visual C++). By using C, I've been able to get around some of the limitations of VB. As a result, RTPM is faster, has a smaller memory footprint and provides more capability than does WinEKG.

The RTPM window may be of any size or minimized to a dynamic icon. Color and Control options are available thru the Control Box (System) menu. Color options allow the user to adjust the background and foreground colors used in the window. Control options provide the user the capability to select the parameters displayed in the graph and the caption; allow for customization of sampling interval and size; and provide for control of the graphical presentation. Adjustment of the sampling parameters affect system performance, i.e.- a fast sampling interval coupled with a large sample size requires more computation each sampling interval than a moderate sampling interval with a small sample size. When run as a dynamic icon, the sample size is predetermined and cannot be changed. Either a line graph or a bar graph may be selected for the graphical display. Experience indicates that a bar graph is the best display for the graphic icon while a line graph is best for a window. The advantage of displaying the graph in a window is better resolution. The advantage of using a dynamic icon is minimal memory utilization and size. Current options along with window size and position are saved whenever the window is closed either by operator action or Windows exit. The Window State, i.e. - minimized or normal, is not saved, since typically, this state is determined by the setting of the 'Run Minimized' option of the Program Item Property in the Program Manager.

## FSR Warning feature

For users of Windows 3.1, this utility will provide a warning when Free System Resources (FSR) fall below a selectable threshold.

## Version Description

### Version 1.03 (November 1994)

- Fixed bug which would cause StayOnTop option to not be properly selected.  
(Thanks to Dan Robino daniel.robino@hartford.com  
and Jeff Zubricky CIS ID[74734, 2656] for the bug report.)
- Added Control options to monitor free GDI resources and free USER resources in caption.

### Version 1.02 (October 1994)

- Fixed bug which would intermittently cause the RTPM display to not display 0% utilization when no applications are running and the sample interval is greater than 1 second. For example, display would show 50% when utilization was 0% and sample interval = 2 seconds.  
(Thanks to Bryan Davis rbdavis@comp.uark.edu for the bug report.)

### Version 1.01 (September 1994)

- Fixed bug causing resource leak when RTPM is minimized.  
(Thanks to Stephan Hetzelt CIS[100333,3515] for the bug report.)

Version 1.00 (August 1994)

- Initial Release

## **Options...**

The RTPM Options menu is available thru selection of the '**Options...**' item in the Control Box (System) menu of the utility. Available options are '**Controls...**', '**Colors...**', '**Stay On Top**' and '**About...**'.

### **Colors...**

Selection of this item brings up a dialog box which allows the user to customize the background and foreground colors of the graphical display. The Background scroll bar adjusts the color of the graph background. The Foreground scroll bar adjusts the color of the line used in the graph. Use the scroll bar thumb or arrows to cycle to the color you desire. A small display provides instant feedback on your color choices.

### **Controls...**

Selection of this item brings up a dialog box which allows the user to customize parameters of the RTPM utility.

The Graph dropdown listbox allows the user to select the Windows parameter to be graphed in the window. At present, the options are Utilization and Context Switches. Utilization is a graph of the Windows CPU load. Context Switches graphs the number of context switches per second.

The Caption dropdown listbox allows the user to select the Windows parameter to be displayed as a caption.

The Sample Interval dropdown listbox allows the user to select the number of seconds which is to elapse between each update of the graphical display.

The Warn if FSR Less Than dropdown listbox allows the user to select the threshold, as a percentage of remaining Free System Resources, below which a warning will be issued.

The Sample Size option buttons allow the user to select the number of samples which are collected and displayed on the utilization graph.  $\text{Sample Interval} \times \text{Sample Size} = \text{time history of utilization}$ .

The horizontal axis of the window, in pixels, should be greater than or equal to the Sample Size for proper presentation. FYI, utilization is computed to 1 part in 200. Therefore, best utilization resolution is obtained if the vertical axis of the display window is at least 200 pixels. As the number of samples is fixed when the window is minimized, the Sample Size option is disabled until the window is restored.

The Graph Type option buttons allow the user to select either a bar graph or a line graph for the graphic display.

### **Stay On Top**

Selection of this item causes the RTPM window or icon to always be visible.

### **About...**

Selection of this item brings up copyright information about this utility.

## **Requirements**

The RTPM utility has no restrictions on where it can be located on your hard drive(s), but the .EXE file and the .INI file *must* be located in the same directory. RTPM uses the CTL3D.DLL. A copy is provided with RTPM. If you already have a copy of this DLL on your system, the provided copy can be deleted from your hard drive. No other setup is required. Start the utility via the RTPM.EXE file as you would any other small Windows utility or applet.

This utility makes no modifications to the Windows .INI files or any other files or directories. To delete this utility from your system, delete this file, the RTPM.EXE file and the RTPM.INI file. If you have added this utility to a program group then delete it from there as well.

### **Known Problems**

In Version 1.0x, RTPM graphs either Windows Utilization or Context Switches (Yes, other parameters will be provided in future versions.). There are no known problems when graphing Utilization. However, the Context Switches graph uses functions provided by the TOOLHELP.DLL. I've experienced a couple of problems while Context Switches is selected as the Graph. The first problem is that the SYSEDIT.EXE program provided with Windows 3.1 does not function properly. The second problem is that if Context Switches is selected when Windows is exited, and RTPM is in the Program Manager's Startup group, then the next time Windows is started, Program Manager sometimes doesn't work right. It apparently depends on where RTPM is in the Startup group loading sequence and what else is in the Startup group. I'm working both of these problems.

### **Right Of Use**

This program is shareware, but there is no fee for its use. Please see the copyright notice which is accessible thru the Options menu "About..." selection. In lieu of payment, please send questions, constructive criticisms, bug reports and suggestions for improvement to the author via the Compuserve address displayed below.

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