Contents

DLL Master

Overview

DLL Master is a tool that lists all the modules currently loaded by Microsoft Windows and allows you a certain degree of control over the loading and unloading of specific DLLs.   Here is a brief summary of the features of DLL Master:

- Displays a list of all modules currently loaded in Windows' memory.

- DLLs can be loaded or unloaded from memory, or their use count altered.

- Specific versions of DLLs can be loaded from disk.

- Specific DLLs can be pre-loaded at Windows startup.

- The display list can be rebuilt at any time, such as before or after loading another application.

- The last several lists are saved, and can be viewed each in its own window.

- Any two lists can be compared to produce a list of changes.

- Lists can be printed, saved to disk, and restored from disk.

- Version information can be displayed for any executable containing a version resource.

These capabilities can be extremely helpful to Windows developers who may be working with multiple versions of programs and DLLs.   You might get lucky and find it possible to unload a DLL which was orphaned in memory when an application died in testing.   One can certainly raise the use count of a DLL so that it doesn't unload.   Network administrators and others also find DLL Master useful in debugging potential DLL conflicts on networked PCs.   The common question "Which version of this DLL got loaded, anyway?" is quickly answered by DLL Master.

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Current List Window

When you start DLL Master, the main or Current Lists window appears.   This window contains the list of modules currently loaded in memory, along with descriptive information including usage count, full pathname, filesize, timestamp and internal version number.   You can view full version information by double-clicking on a module in the list, compare the list to others, print or save it.   Closing the Current List window via its System Menu merely causes it to minimize.

There is a field below the list where you can enter a short description for your own purposes (say, if you will be refreshing the list several times and want to keep track of which list is which).

There is only one Current List window, although DLL Master will save up to nine prior lists in similar windows, referred to as Prior List windows.

The Current Lists window is where you load or unload modules.   As you may know, "loading" a DLL that is already in memory merely increases the use count of the loaded copy.   You should also be aware that unloading or decrementing the use count of a DLL may--or, in the case of an EXE or other module, almost certainly will--cause Windows to die a sudden and painful death.   Do so at your own risk!

NOTE: loading, unloading or decrementing the use count of a DLL does NOT cause the list to be saved in a Prior List window, even though the list is rebuilt so as to properly reflect all changes (e.g. unloading one DLL may cause others to be released as well).   Issuing the Refresh List command is what causes the existing list to be copied to a Prior List window and replaced in the Current List window.

Prior List Window

When the Current List is refreshed, using the Action/Refresh List menu item or toolbar button, the existing contents of the Current List window are first copied to a Prior List window.   This window will appear minimized, and can be opened and viewed.   A Prior List window contains the same module list along with the same descriptive information.

There is a field below the list where you can enter a short description for your own purposes (say, if you will be refreshing the list several times and want to keep track of which list is which).

You cannot load or unload modules from this list since it is no longer assumed to reflect the current contents of memory.   You can, however, view version information about the modules, compare the list to others, print or save it.   You may delete a Prior List window by closing it via its System Menu.

Up to ten lists (including the Current List) can be loaded in DLL Master at any given time.   When this maximum is reached, each Refresh causes the oldest list to be deleted.   (Any number of lists may be saved to disk and later restored for viewing, comparing or printing.)

Lists that are saved to disk and later restored are restored into a Prior List window.

Comparing Lists

Any two loaded lists may be compared by selecting the Action/Compare Lists menu item or toolbar button.

The results of the comparison are displayed in a list in a third window.   The new list has three sections:

- <u>Added</u> section

    Modules which appear in the later list but not the earlier one.

- <u>Removed</u> section

    Modules in the earlier list which do not appear in the later one.

- <u>Use Count Changed</u> section

    Modules whose use count changed.

This function is very helpful in determining the effect on the system of loading a particular application. Want to know why Windows starts paging to disk when you load App X?   Compare DLL Master before and after lists to see just how many megabytes of EXEs, DLLs and other files get loaded when App X is run!

NOTE: Actions taken within DLL Master itself will sometimes alter the use count of one or more Windows modules.   This appears to be unavoidable.   Also, DLL Master requires certain DLLs, and will load them if they are not already resident; these are DLLMSTRD.DLL, GRID.VBX, THREED.VBX and CMDIALOG.VBX.

Menu Selections

File Menu
Actions Menu
Options Menu

File Menu

The File Menu contains the following items:

- Save List

    This allows you to save the contents of any list window or compare window to a disk file.

- Restore Saved List

    This allows you to restore a saved list from disk back into a Prior List window.

- Print List

    This allows you to print any list.

- Print Setup

    This brings up the standard Print Setup dialog.   The main reason for this is to change the printer orientation to Landscape since the printed list is too wide for Portrait mode..

- Exit

    Exits from DLL Master.

Actions Menu

The Actions Menu contains the following items:

- Refresh List

  This will rebuild the Current List based on a new scan of memory.   The previous list will be copied from the Current List window to a Prior List window first.

- Show Lists

  This item displays a dialog box from from which you can open or bring to the front one or more existing list windows.   You can also select lists from the Windows menu, or just double-click on minimized list windows.   The advantage of Show Lists is that part of each list window description is shown, making it easier to select the list you want.

- Compare Lists

  This item opens a dialog box from which any two of the existing lists can be compared.   The results will be displayed in a new window.   See Comparing Lists.

- Version Info

  This allows you to display the full version resource information embedded in a module.   A file dialog first appears so you can select which file to examine.   Version information for any module in a list can also be seen by double-clicking the module's row in the list.

- Load DLL

  This item opens a standard file dialog from which you can select a DLL file to load.   Keep in mind that if the DLL is already loaded in memory, its use count will just be increased--it will not be reloaded from disk.   This menu selection is only available on the Current List window.

- Decrement Usage

  When a DLL is highlighted in a list, selecting this item will cause its use count to be reduced by 1. If the count becomes zero Windows will automatically remove the DLL from memory.   This menu selection is only available on the Current List window.

- Unload DLL

  When a DLL is highlighted in a list, selecting this item will cause it to be removed from memory. This menu selection is only available on the Current List window.

Options Menu

The Options Menu contains the following item:

- Autoloading

    This item opens a text window that explains how to use DLL Master to load specific DLLs when Windows is started.   See <u>Loading DLLs At Windows Startup</u>.

Filtering The Displayed List

You can limit the modules displayed in a list to particular extensions, using the checkboxes on the toolbar. Depending on which boxes you check, all or some of the following module types will be displayed: DLL, EXE, FON, DRV, VBX, and Other.

Filtering out modules using the checkboxes only affects which modules are actually displayed.   The complete list is still available should you decide to change the checkbox selections.

Loading DLLs At Windows Startup

You can instruct DLL Master to automatically load one or more DLLs when Windows starts up. Simply place a DLL Master program item in the Windows Startup group, and pass it a text file as a command line argument.   The text file consists of a list of files like this:

C:\CSTUFF\THIS.DLL

C:\CSTUFF\THAT.DLL

D:\TEST\THEOTHER.DLL

If this file were named LOADLIST.TXT, the command line property of the item in the Startup group would look like this:

DLLMSTR.EXE LOADLIST.TXT

You may want to do this to be sure a specific version loads, or to raise the use count so a DLL is not unloaded until you want it to be.

Note that this will not work with DLLs that are loaded into memory before the DLL Master loader routine gets control.

Registering DLL Master

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