

Development Cleaning Suite (DCS)

20th May 2006

Overview

DCS is comprised of a number of DLL's and executables.

DevClean.DLL	A disk cleanup handler for use by Windows 2000 and above.
DevConfig.DLL	An interface for the streaming of configuration information.
DCSUtil.EXE	A host application for DevClean.DLL providing an alternative GUI interface.
DCSConfigurator.EXE	A configuration utility to define the parameters to be used by DevClean.DLL.
DCSRES.DLL	A resource DLL shared by DevClean, DCSUtil and DCSConfigurator.

The main DLL, DevClean, is primarily designed as a provider to the Cleanup Manager that is available in Windows 2000 and above. As a disk cleanup handler, this DLL implements the interfaces that scan for files to be deleted, the amount of space that can be cleared and the actual file purge operation. The user is also capable of reviewing the files that have been marked for deletion.

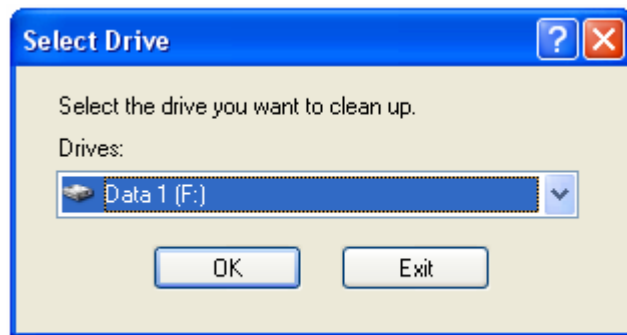
An overview of the user interaction with "Windows Disk Cleanup" is shown next, followed by a detailed look at how the same (and more) can be achieved using DCS.

Using DevClean via Disk Cleanup

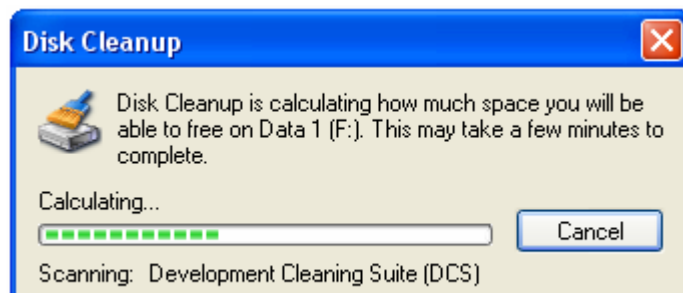
DevClean is the COM DLL implementing the interfaces used by the Windows Disk Cleanup utility, accessed via:

Start | Programs | Accessories | System Tools | Disk Cleanup

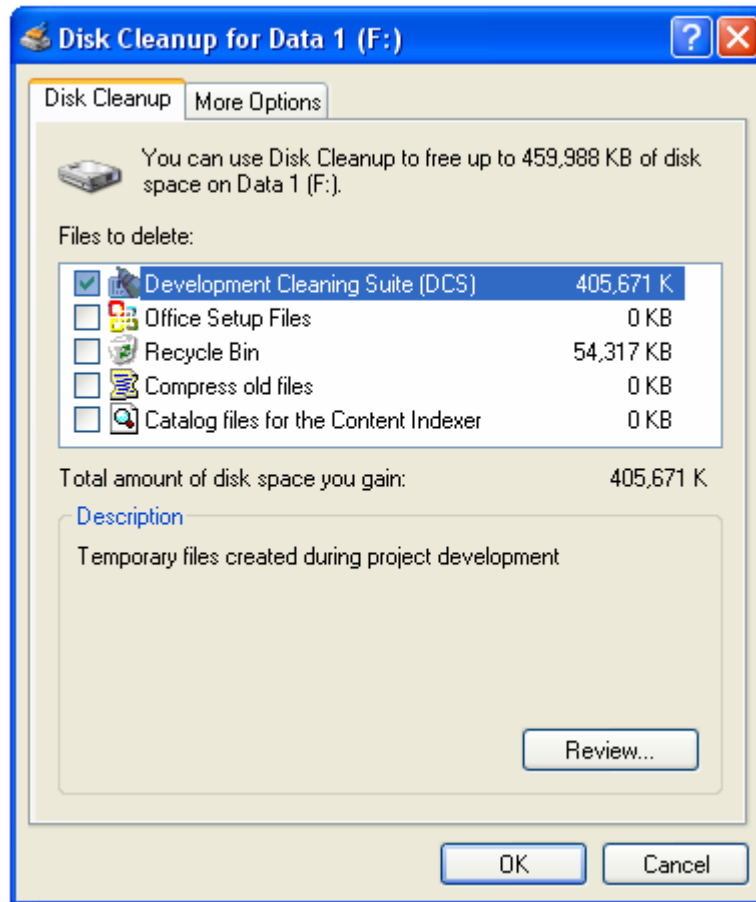
This will present the following dialog, from which you select the drive you would like cleaned.



When you click the “OK” button, all registered handlers will be requested to scan for files that can be purged. The currently active handler is displayed as the progress bar advances. The following screen shot shows DevClean as the active handler.



Once all handlers have completed their scan, a summary of results is presented. The next screen shot shows a sample summary result.

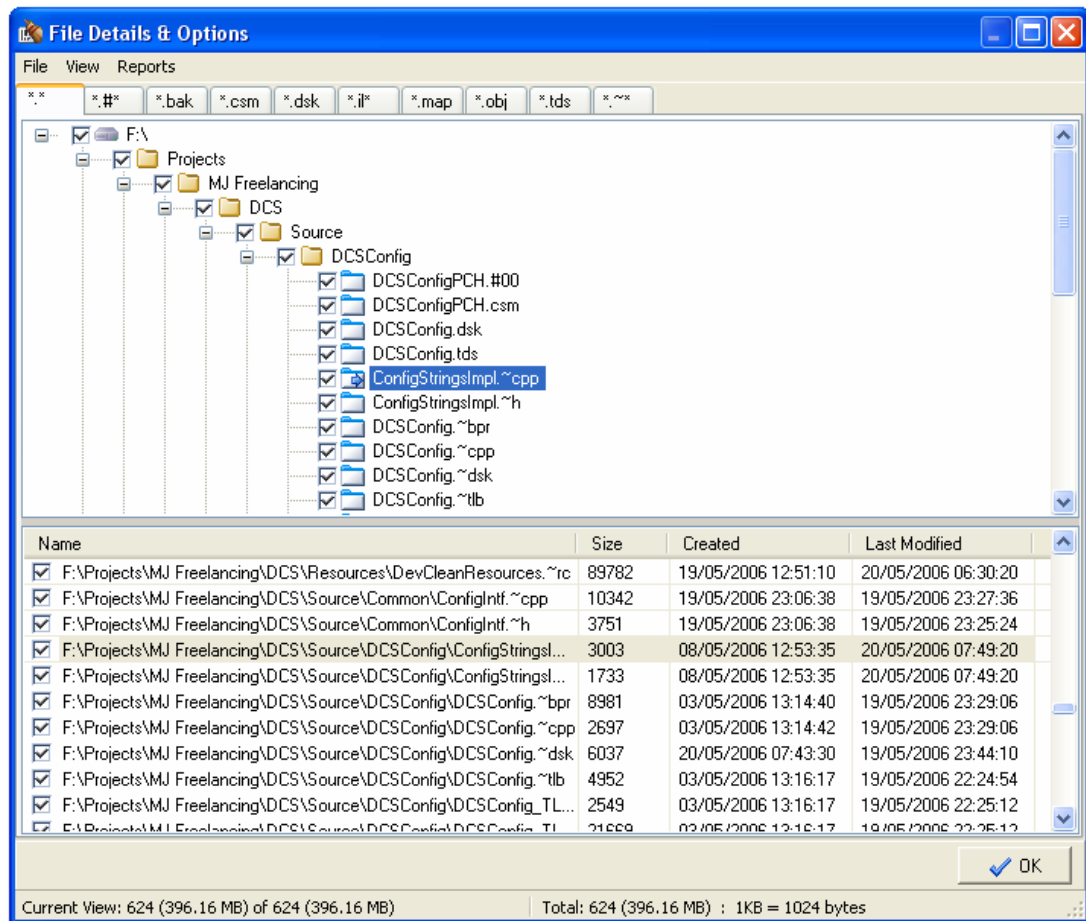


The summary dialog allows you to enable and disable the purge function of each handler. Prior to performing a purge, most handlers provide a way for you to review the files that are about to be purged. DevClean provides this functionality via the “Review” button shown at the bottom of the summary dialog.

The “Review” provides a comprehensive interface that allows you to confirm the files that should be purged. The information is presented in a “list” mode as well as a “tree” mode, both of which can be optionally synchronized.

The search results are filtered based on file masks that have been configured for the handler; a number of defaults are defined and further refinement can be performed using the “DCS Configurator”, which we’ll look at shortly.

A sample “Review” is shown on the following page.



The additional menu options allow you to:

- Synchronize the list and tree views each time a file is selected;
- Select / Unselect all files shown in the current view (file mask);
- Limit the folder depth displayed in the tree view;
- Enable / Disable the “auto expand” nature of the tree view;
- Show / Hide full file path information in the list view;
- Export the current search results to HTML (listing files that will and will not be purged).

The list and tree views also provide right-click menu options that allow you to

- Copy the selected file or folder path to the clipboard;
- Open the selected folder with Windows Explorer.

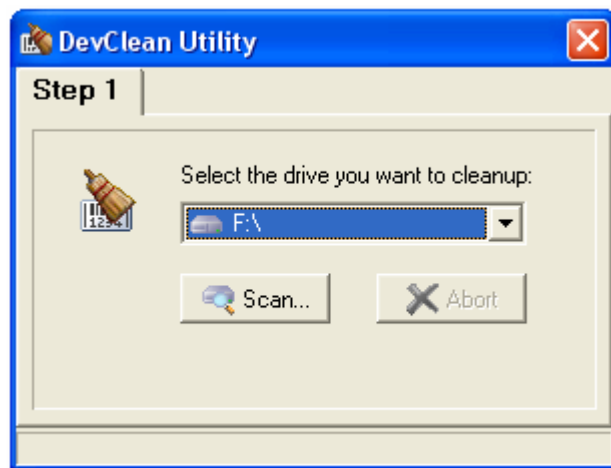
Let's now take a look at how DCSUtil utilizes the same cleanup handler (DevClean) and what makes it a better option than the standard Windows Disk Cleanup utility. We'll then end the discussion with a look at the configuration options available.

Using DCSUtil

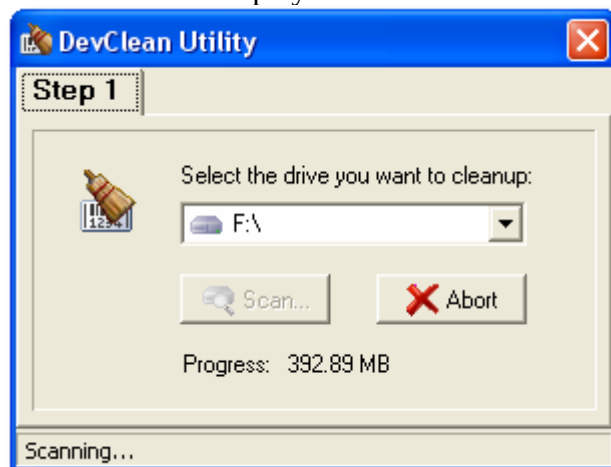
The DCSUtil application is an alternative to the Windows Disk Cleanup utility. DCSUtil provides the following additional benefits:

- The information provided is more detailed – and can be expanded as required by adding more interfaces to DevClean;
- Time is not wasted while waiting for other handlers to scan for files even though their purge option has been disabled;
- A scan can be easily re-started after reviewing the results and modifying the configurations options (such as excluding a folder from the search);
- The actual space to be freed is updated if you deselect files while reviewing scan results;

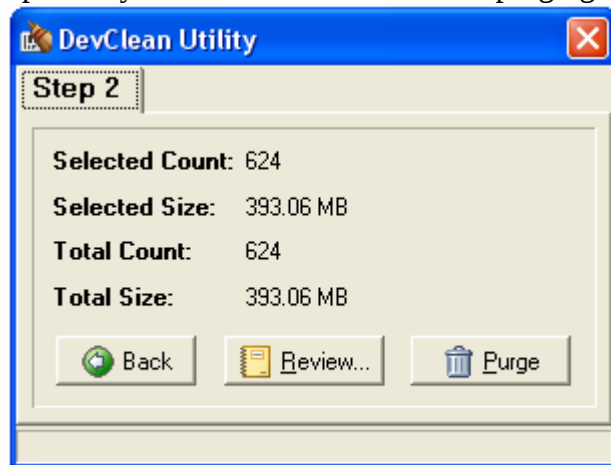
The process of purging files is very similar to the Windows Disk Cleanup utility as shown in the following series of screen shots.



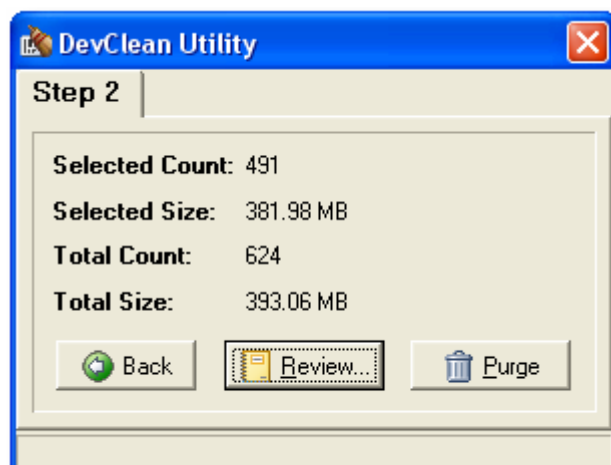
Scan results are displayed as files are located:



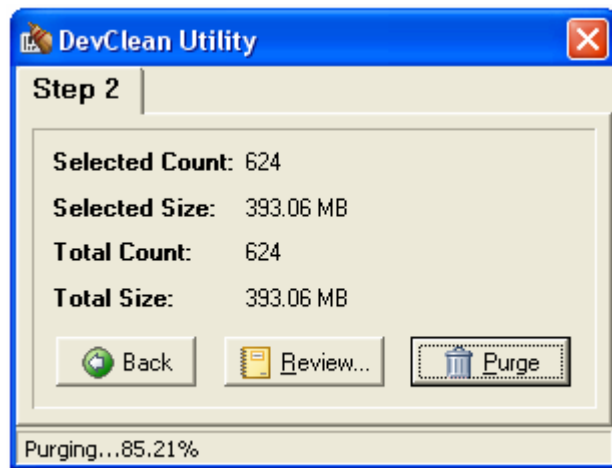
When the scan has completed, a summary of the results is displayed. You can optionally “review” the results before purging.



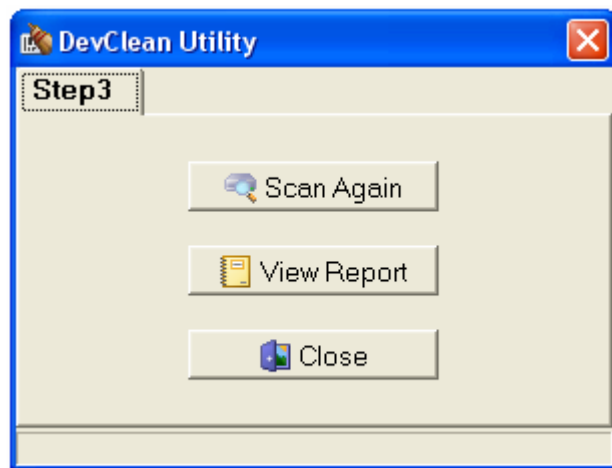
If you decide to “review” the results and de-select some of the files, the above summary is updated when you return. An example is shown in the following screen shot.



At this point you can abort the purge and click “Back” to select another drive. Clicking the “Purge” button begins the process of deleting files. A sample screen shot is shown on the following page.



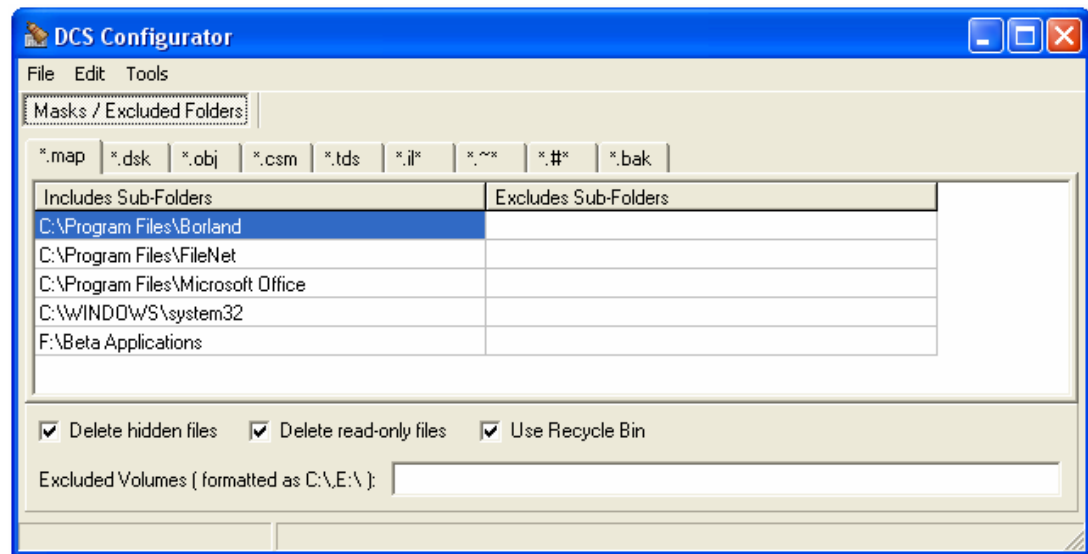
When the cleanup is completed you can scan another drive, view the purge report or close the utility, as shown below.



Next we'll take a look at the configuration options currently available.

Configuring DevClean

The configuration of DevClean is performed using the DCSConfigurator application.



PLEASE NOTE: The above configurator is not considered user-friendly (by me) and will, therefore, more than likely change while in the beta phase. Consequently, it is possible the format in which the options are persisted in the Registry may also change. Your input is important so please forward all comments and suggestions for improvement. I have listed a number of TODO items at the end of this document.

Using this configurator you can define one or more file masks to be used by DevClean. Each mask can also list folders that should be excluded from the search. Additionally, the folders can be marked as “Includes sub-folders” or “Excludes sub-folders”. This gives you very fine granularity in your filtering.

An overview of available features include the following:

- Add / Edit / Delete file masks;
- Add / Edit / Delete folders;
- Hidden and Read-Only files can be optionally deleted (all are included in the search);
- Files can be optionally placed in the recycle bin;
- Entire volumes can be excluded (speeds up Windows Disk Cleanup);
- DCSUtil can be launched to test the configuration

Current features / modifications being considered

- Allow dragging of folders from the 'review form' or explorer directly into the configurator;
- Import / Export the configuration to/from an external file;
- Add an advanced option to DCSUtil that allows the search / purge to begin at a specific folder (rather than the entire disk);
- In the configurator, group the folders listed for a mask by their volume;
- In the configurator, consider a virtual “*.*” mask that allows folders to be configured for – thereby preventing a user from having to define a folder in multiple masks;
- In the configurator, copy a folder into another mask;
- In the configurator, find a better solution to the presentation of the folder information. The current grid is totally obtrusive;
- A shell extension for Explorer that allows:
 - A folder to be added to the exclusion list for one or more masks (including the flag indicating if sub-folders are also excluded)
 - A scan / purge operation to be performed from the currently selected folder (using the currently defined options for that volume)

Your comments on the above are welcomed, along with additional suggestions for improvement and new features.