# Lecture No. 10

Disk management

Disk Cleanup and Disk Defragmenting

After the installation and optimization of Windows, it is time to clean up the unnecessary files of the hard disk. Deleting the unnecessary files, followed by a defragmentation of the hard disk improves system performances significantly. Do not expect miracles, but every small improvement is important. Because some files are secured, it is not always easy to delete files. But there are still a lot of files which can be deleted safely to create additional free space.

Disk Cleanup

There are a lot of files stored on the hard disk during the installation of Windows and programs, some of them can be deleted safely afterwards (like the folder **Windows old** with the files of the old Windows installation and the history of the browser). Most of these files can be deleted using the **Disk Cleanup** tool. **Disk Cleanup** is available by right clicking the Windows partition (the C: partition in most cases) in the Windows Explorer and select **Properties**, tab **General**, button **Disk Cleanup**. On the first tab select all categories of files (except the **Office Setup files**, these can still be of use later on) and delete them by clicking **OK**.

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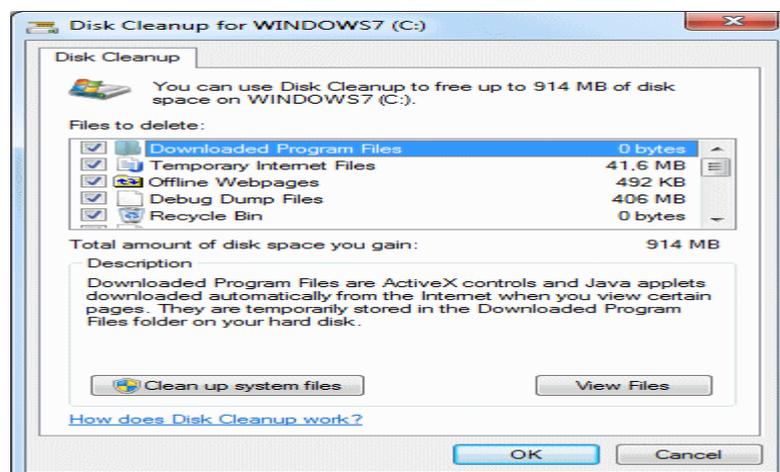
Deleting,manually

The content of the following folders can be deleted manually as well (for most it is necessary that the folder options are set to show hidden and system files by the item **Folder Options** in the control panel, tab **View**). The most important folders with files to be deleted are on the following locations:

C:\Users*loginname*\AppData\Local\Microsoft\Windows\Temporary Internet Files
C:\Users*loginname*\AppData\Local\Microsoft\Windows\History
C:\Users*loginname*\AppData\Local\Temp
C:\Users*loginname*\AppData\Roaming\Microsoft\Internet Explorer\UserData\Low
C:\Users*loginname*\AppData\Roaming\Microsoft\Office\Recent
C:\Users*loginname*\AppData\Roaming\Microsoft\Windows\Cookies
C:\Users*loginname*\AppData\Roaming\Microsoft\Windows\Recent
C:\Windows\Temp

ATTENTION: The history of the Internet Explorer browser can be deleted better from the item **Internet Options** of the control panel, tab **General**, sub **Browsing history**, button **Delete** .

Defragmenting the hard disk

Before imaging the Windows partition, it is wise to defragment this partition first. A partition which is fragmented contains many files which are split up in fragments. This happens when the first available free area to store a file is not large enough to store the whole file. The remaining part is saved on the next available free area, which goes on until the whole file has been written to the partition. Because larger files take more space to save, they probably will be more fragmented. If the fragmented files are used frequently by the system, it will take relatively a lot of time to read them which will delay the processing. Defragmenting the hard disk will defrag those files which can improve the system performance significantly.

By default, defragmenting takes place daily as a background task. Because defragmenting has a low priority, it is normally not noticed by the user. When the automatic defragmentation is disabled (or the computer is switched off at the moments defragmenting is planned), it is also possible to start the defragmenting manually by the start menu, **All Programs, Accessories**, **System Tools**, sub **Disk Defragmenter**. For each partition the percentage of fragmentation is shown. Select a partition and click the button **Defragment disk** to start defragmenting the partition manually. If desired, the defragmenting can be scheduled weekly or monthly and partitions/disks can be ruled out.
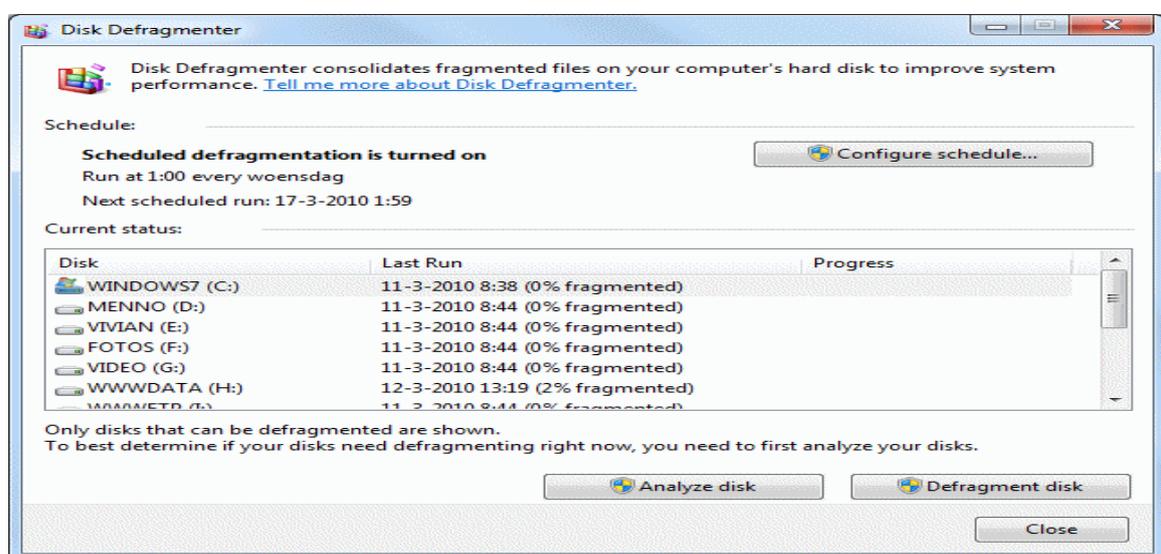
ATTENTION: The Windows defrag tool works fine and even better than other defragmenting tool, therefore there is no need to install additional defrag tools! When alternative tools are used, deactivate the scheduled fragmentation by the button **Configure schedule**, option **Run on a schedule (recommended)** to prevent file being moved continuously.