



TDP x-Ray 2.1 Pro!

User Guide

August 1, 2007



www.tdp.cz

1 What is TDP x-Ray?

TDP x-Ray is a visual tool intended for disk space administration. It has been designed to simplify the work with high-capacity data storage containing millions of files.

TDP x-Ray displays a clear graph representing the disk image*, from which you can clearly and immediately recognize folders and files occupying the most space. In the graph, you can filter and display selected files meeting specified criteria (the file name or type, time period, in which the respective file was modified or created, a user name). The **User Statistics** mode allows checking how much space individual users take on a disk.

To easily visualize the entire disk space, a special “sunburst” graph is used, which is a round diagram with multiple levels. The graph levels correspond with the structure of the selected disk or folder. The size of specific parts corresponds with the size of the respective file or folder in comparison with the other files on the disk. The largest files and folders take the most space on the screen, which makes them easy to identify. Part colors are selected so that two adjacent colors always differ.

Directly from the graph, files or folders can be placed into the trash bin or removed entirely, opened and viewed in the Explorer or opened in an associated application, or it is possible to view the Properties information window.

Any displayed data, which means those that you can see in a graph at a specific moment, can be exported and subsequently reloaded (for example, at a different workstation). You can browse through the imported data graph or you can apply filters on it. You can also work with exported data in a table processing application.

*) In this document, a “disk” means any data storage accessible from a workstation disks, network disks (Novell, NT bundles), disk arrays, virtual disks, CD/DVD, Flash disks, ZIP®[®], Jazz®[®], memory cards, diskettes, etc.

1.1 Features

- Clear round graph displaying the occupation of the space on a disk
- Large files or folders can be identify immediately
- Optimized for large disks with millions of files
- Graph displaying the size of files / folders or user-based utilization of space
- Possibility to filter and display in a graph only files with a specific name, date of creation / modification or files created by a specific user
- Easy movement within the folder structure of a disk immediate information about the occupation of a specific part of a disk

- Possibility to open a file in the Explorer or to view properties directly from a graph
- Deleting files / moving them into the thrash bin directly from a graph
- Searching for a file on a local or network disk using the Browse function, which displays the tree structure
- Launching TDP x-Ray with a parameter, which is the path to a folder on a local or network disk
- Quick thrash bin emptying directly from the application
- Possibility to register TDP x-Ray with the Windows context menu upon using the “x-Ray It!” command, TDP x-Ray shall open on the required folder
- Quick and anti-alias graph views accelerated by hardware
- Launching TDP x-Ray without parameters shall open a folder viewed last time
- Proportional and top-ten mode of the graph
- Full-screen mode
- Quick review of the structure of a folder under the cursor

2 License Information

- Software is licensed always for a single user, which obtains the exclusive right to use the software on a single device (PC, server, flash disk, diskette) at any given moment.
- If a company uses the software, one license must be purchased for each user (or a multi-license must be obtained).

3 Installation

For installation and operation of the TDP x-Ray application, the respective workstation must meet requirements specified below:

3.1 HW and SW Requirements

- Graphic card with OpenGL with a 64MB memory (or more)
- The memory utilization depends on the number of examined files (for a 100 GB disk with 100,000 files, you need memory of about 15MB)
- Approximately 500KB of space on a disk for the application + approximately 1 to 10 MB for cache (depending on the number of files on the disk - 10MB corresponds with approximately 180,000 files). You can choose not to use cache (see “Configuration”)

- MS Windows 2000 SP4 or Windows XP SP1/SP2

The installation is quick and simple. After launching the xRaySetup.exe file, the installation wizard opens. Then, you need to agree with the license terms and conditions, to select a folder for the installation and decide whether to integrate the “x-Ray it!” command into the Windows context menu (see “Context Menu”). The installation takes only a few seconds.

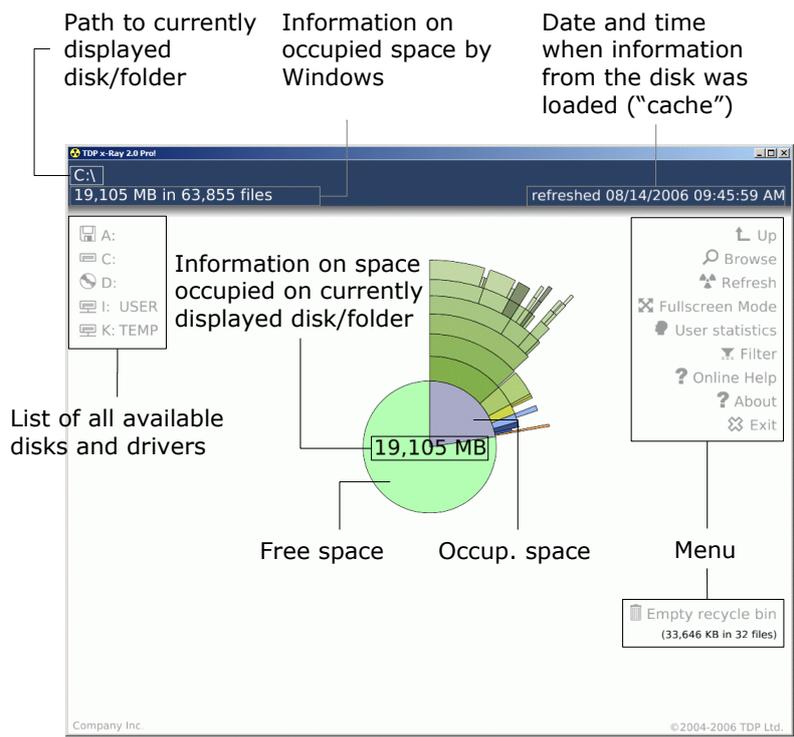
3.2 Uninstallation

You can uninstall TDP x-Ray by selecting the **Uninstall** option in the Windows menu (Start ⇒ Programy ⇒ TDP x-Ray → TDP x-Ray), or by launching the file `uninst.exe`, which is located in the folder, to which x-Ray was installed (default location: `C:\ProgramFiles\xRay`).

4 Controls

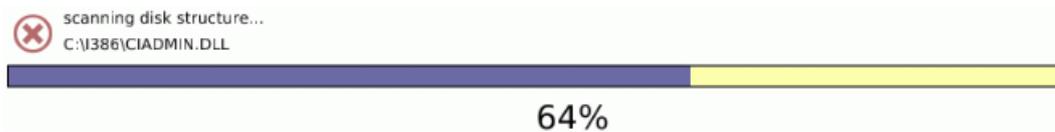
TDP x-Ray is launched in the standard way from the Windows menu (Start ⇒ Programy ⇒ TDP x-Ray → TDP x-Ray) it shall open on the disk viewed last time. To open the application directly on a specific folder, use the **x-Ray It!** command integrated into the Windows context menu (see “Context Menu”) or launch TDP x-Ray with a parameter the path to the required folder (the parameter for the ProgramFiles folder: `xray.exe C:\ProgramFiles`)

Description of the Application Window Sections



The first step is selecting the disk to be scanned from the list of available disks and drivers in the left part of the application (you can also use the **Browse** command, see below). TDP x-Ray then begins to scan the content. The graph is gradually updated and redrawn. Reading the structure of the entire disk can take several minutes, depending on the size and speed of the disk.

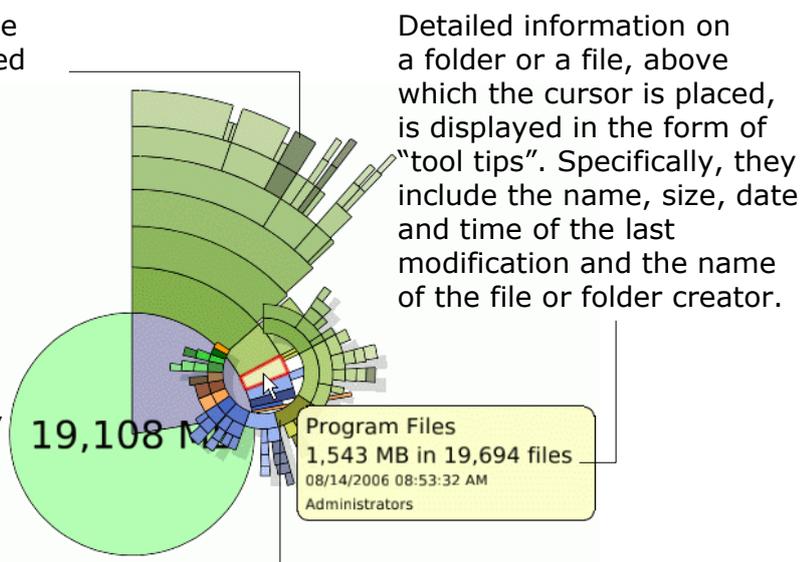
The scan progress can be seen in the progress bar at the bottom part of the window. Scanning can be interrupted by pressing **[Esc]** or by clicking on the **Stop** icon on the left, near the information text above the indicator.



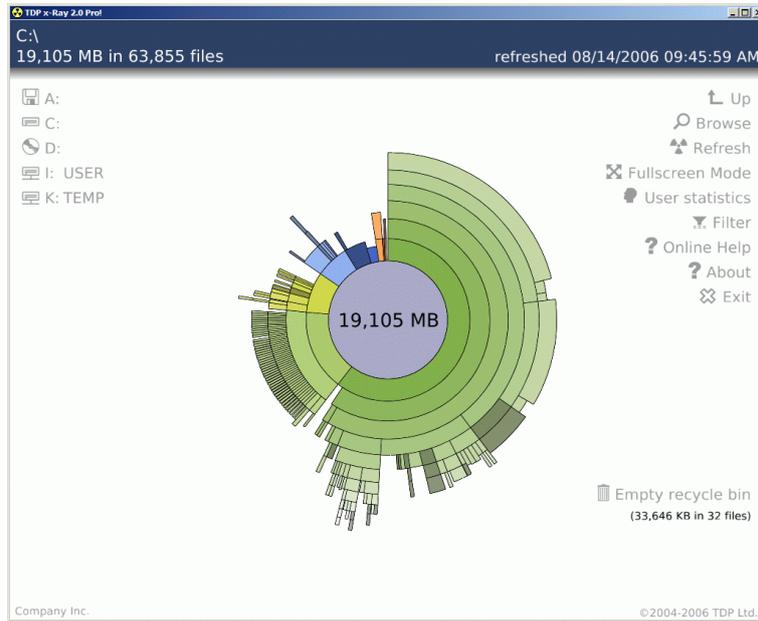
To speed up the process of the graph redisplay, loaded information on the respective disk is saved into cache memory. Information on the date and time of the last scan of the currently selected disk is displayed in the upper right corner of the window. The text color indicates the period between the current date and the date of the last loading: White current, Yellow older (about 12 hours), Red old (about 24 hours, or the x-Ray application removed a file / folder). Cache is updated always upon using the **Refresh** function. The content thereof is stored into %TEMP%\xray You can choose not to use cache in the configuration file (see "Configuration").

Darker shades indicate files or folders modified a year ago or earlier

When moving the cursor above a folder, a mini image of the given folder graph is displayed.



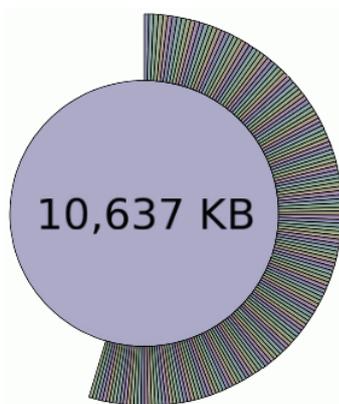
By clicking on a section representing occupied space, the graph is redrawn, displaying files and folders around the full circle i.e. in more detail. By clicking on the graph center, the initial picture is shown displaying both the free and utilized space.



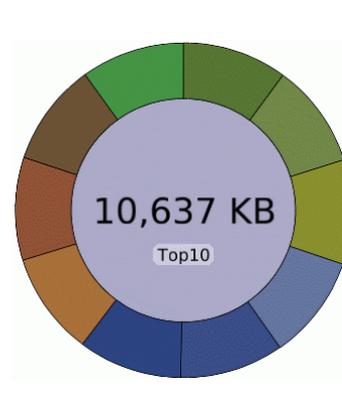
Detailed view of occupied space

4.1 Viewing the Graph in the “Top Ten” Mode

TDP x-Ray can display the content of the current location in two modes: proportionate (default) and “Top Ten”. The size of parts in the proportionate mode is related to all other files. In the top-ten mode, only the ten largest subfolders or files are displayed with each folder. This is convenient if you wish to view a folder containing many files of similar size, as TDP x-Ray displays only files with a specific limit size or larger and, in the proportionate mode, nothing could actually be displayed in the case of such folder. You can switch between the proportionate and “Top Ten” modes by pressing **T**. After switching on, the “Top Ten” mode is indicated by the Top10 mark in the center of the graph.



Proportionate view



“Top Ten” mode view

4.2 Mouse Controls

- By moving the cursor above the graph, details on the respective file or folder are displayed.
- Left mouse – click – go to the folder
- Left mouse – double click – open the file in an associated application
- Right mouse – click – display the context menu (see below)
- Roll – moving within the folder structure of the disk (down = to the root folder)

4.3 Context Menu

The TDP x-Ray application allows launching some functions from the context menu directly above the selected part of the graph without the necessity to display the respective file or folder in the graph in detail. You can also use the context menu to open the selected folder in the Windows explorer (to open a file in an associated application), to display the folder **Properties**, or to move it to the trash bin or to remove it entirely. The context menu appears when clicking the right mouse above the respective section of the graph; the context menu offer differs depending on whether the section represents a file or a folder.

Folder

Zoom	Zoom	- View a detailed graph of the folder (left-clicking on the respective graph sections has the same effect)
Rescan	Rescan	- Reloads information on the occupied space from the disk
Explore	Explore	- Opens the folder in the Windows Explorer
Recycle	Recycle	- Moves the folder into the trash bin
Delete	Delete	- Removes the folder completely (<i>Note: It cannot be recovered using standard means!</i>)
User statistics	User statistic	- Displays a graph by User statistics with the folder (see “User Statistics / Files”)
Filter	Filter	- Displays the filter dialogue window; after the selection is made, it is applied to the selected folder
Import	Import	- Opens a window for the selection of a file to be imported (this option is available only if the context menu is displayed above the graph center!)
Export		
Export to CSV		
Properties		

- Export** - Offers the option to save the graph into a file, which can be reloaded and displayed by TDP x-Ray (see “Graph Export / Import”)
- Export to CSV** - Offers the option to save the graph into a CSV file
- Properties** - Displays the MS Windows Properties window of the respective folder

Soubor



- Open** - Opens the file in an associated application
- Recycle** - Moves the file into the trash bin
- Delete** - Removes the file completely (*Note: It cannot be recovered using standard means!*)
- Properties** - Displays the MS Windows Properties window of the respective file

4.4 Explorer Context Menu

The Explorer context menu (if right-clicking on a folder) includes the “x-Ray it!” item after the installation. This item allows displaying a selected folder in the TDP x-Ray application upon a single click (unless the application is already open, it shall launch).

Note: To make this function available, you need to permit the respective command in Windows upon installation (set as default).

4.5 Keyboard Controls

Keyboard Shortcuts	
F1	Online help
F5/R	Refresh
F11	Switch between the window and full-screen display
T	Switch between the proportionate and top-ten modes
Esc/Backspace	Up by one level
N	Decreasing the number of viewed sub-folders
M	Increasing the number of viewed sub-folders (if possible)
↑	Enlarge Graph
↓	Reduce Graph

5 Menu

5.1 Up

Moving by one step towards the root folder on the disk within the folder structure.

5.2 Browse

Displays the “Browse For Folder” window with a tree structure, from which you can view the graph directly for any contained folder upon selection or upon indicating the network UNC path. In this way, you can view a graph even for a folder, which is not represented by any section in the initial graph because it is too small, which means the details on such folder cannot be displayed by clicking on it.



5.3 Refresh

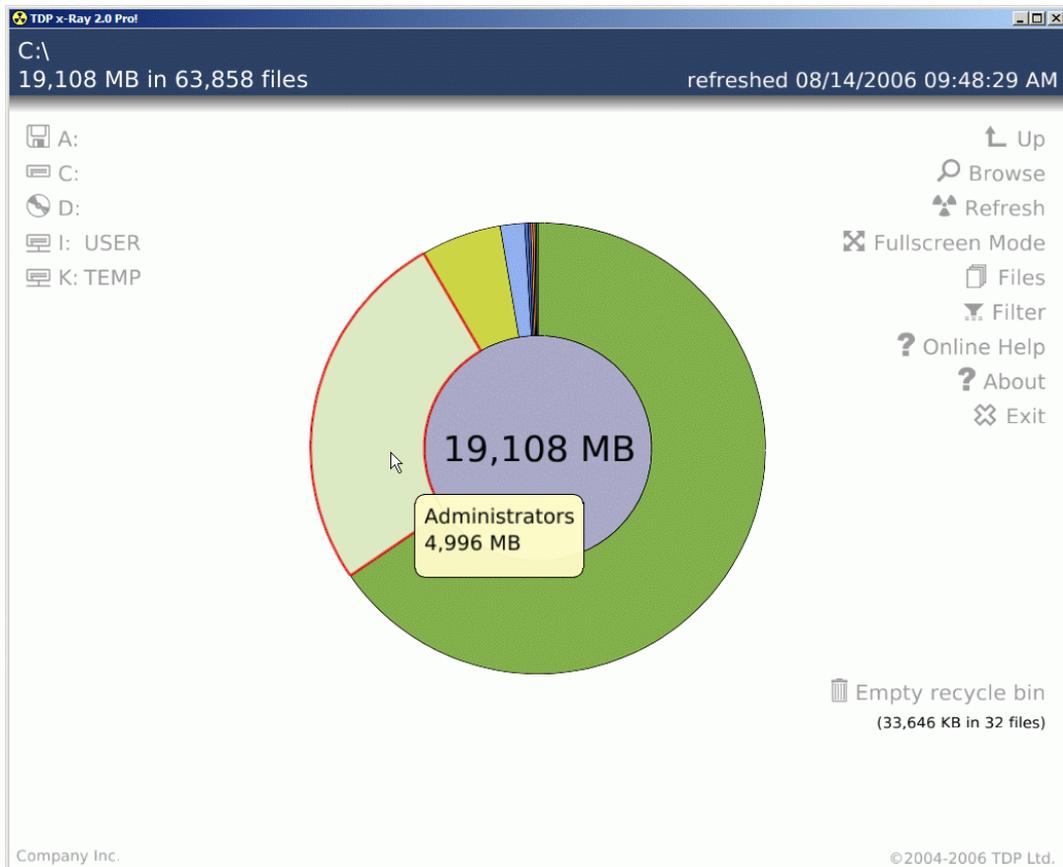
Reloads any updated information on the occupied space on the disk and re-draws the viewed graph based on such information. If any file is deleted using TDP x-Ray, the **Refresh** button begins to pulse in red. It means the viewed graph is not updated and should be scanned again. Upon using the **Refresh** function, the cache content for the respective disk becomes rewritten.

5.4 Full Screen Mode / Window Mode

Switches between the full-screen and the window views of the application (“window” set as default).

5.5 User Statistic / Files

Scans files in the viewed graph and re-draws the graph based on the user utilization or, respectively, based on the total size of files created by individual users. By clicking on **Files** you can switch to view the classic graph indicating the sizes of files and folders.



5.6 Filter

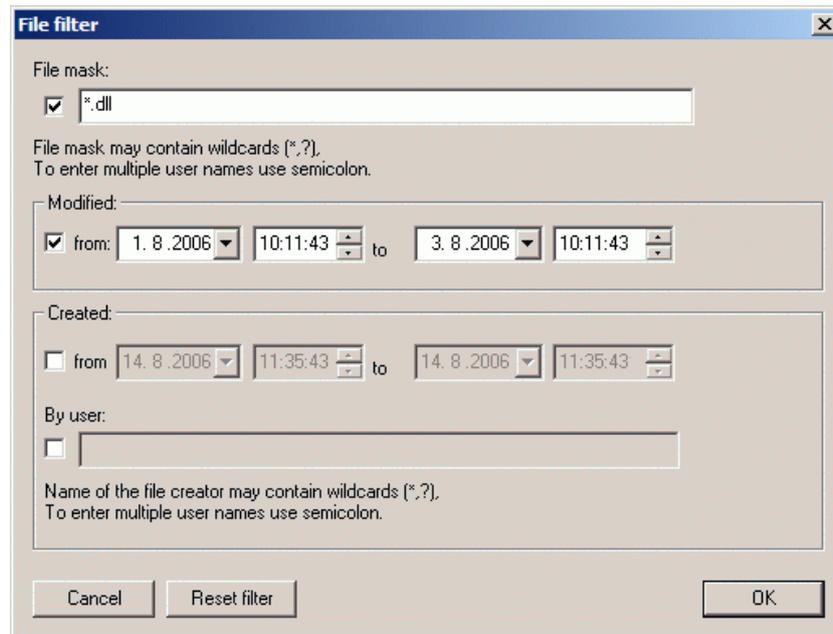
The **Filter** function can be used to filter the content of the graph and to view only files meeting the required criteria:

File Mask

Entering the name or a part of the name of the respective file; you can use wildcards:

- * for any number of characters (for example, *.dll shall find files with the .dll suffix)
- ? for a single character (for example, ?ray.exe shall find all files, the name of which begins with a single character before the ray.exe ending, such as “xray.exe”, “tray.exe” ...)

You can enter more parameters together separated by semicolon (*.dll;?ray.exe shall display files with the dll suffix and those beginning with a single character before the “ray.exe” ending).



Example:

Upon entering a file mask in the form of `*invoice*.do?`, the graph shall contain only files the names of which include the word “invoice” and the suffix of which consists of the letters “do” and one more character (`storno_invoice060719.doc`, `templateinvoice.dot`, `invoice.dov...`).

5.7 Modified

If the box is checked, files modified during the selected period shall be filtered.

5.8 Created

If the box is checked, only files created during the selected period shall be displayed. The date is entered by hand or by making a selection in a calendar, which shall open upon clicking on the rolling button in the date field.

You can also find files created by a specific user upon entering their name. Just like in the case of the file mask, you can use the wildcards (`*?`) and enter more user names separated by semicolon.

Note: On the NetWare bundles, you need to enter full user names in the eDirectory format (for example, `jdoe.obchod.tdp`) or use the wildcard (`jdoe`).*

If more than one criterion is entered together (File Mask, Modified, Created), the result shall be a selection of their meet, which means that only files meeting all criteria shall be filtered.

If a filter is used, a notice with the option to reset the applied filter shall appear in the bottom part of the window. If the filter is reset in the main window, the used parameters shall remain pre-entered in the “File Filter” dialogue window. A filter can be also reset

directly in the “File Filter” dialogue window by clicking on **Reset Filter** , which shall also empty the dialogue window boxes.

In a graph, to which a filter was applied, the information on the occupied space and number of files (displayed in the upper left corner of the application and in the graph center) specifies only the total size and the number of files meeting the filter criteria.

With some files, the user who created them is unknown (or this information has not been saved) (such as `pagefile.sys`). When displaying the graph using the **User Statistics** function, the **Unknown User** appears when the cursor is placed on the respective graph section. You can filter such files by entering the user name in the form of `[unknown]`.

Note: You cannot Delete (or Recycle) an entire folder from a filtered graph, but you can delete individual files.

5.9 Online Help

If the Internet can be accessed from the workstation, on which TDP x-Ray is launched, a Help page shall open in a window of the default browser.

5.10 About

A window shall appear containing information about the application and its license owner. If you use the trial version, the number of days remaining for the free trial shall be displayed as well.

5.11 Close

Closes the application.

5.12 Empty the Thrash Bin

Emptying the thrash bin.

Please note: Files cannot be recovered from the thrash bin using standard means!

6 Exporting and Importing Graphs

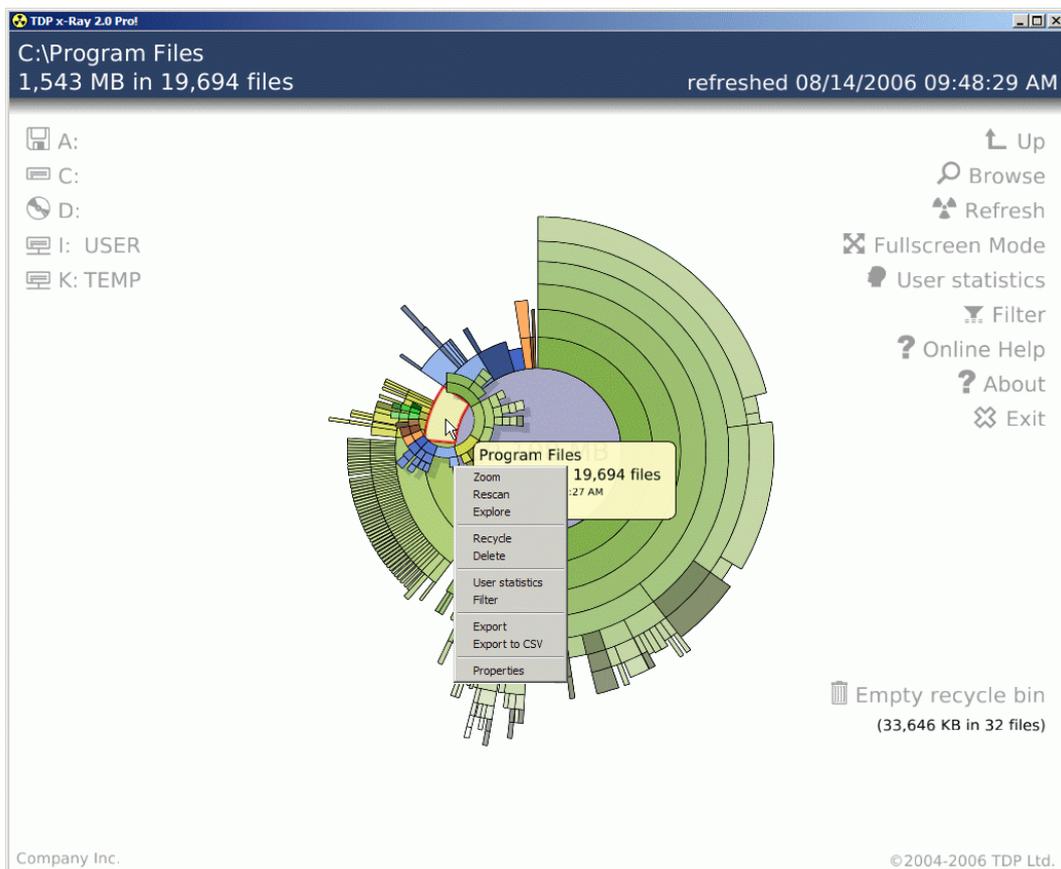
TDP x-Ray allows exporting data from the graph or a part of it and to reload them subsequently, for example, to browse through the graph on a different workstation.

6.1 Export

The Export function is available from the context menu. If you select it, the “Save as window” shall open to pick the location, to which a file with the exported data should be saved. When saving, the name of the file is offered containing the disk indication letter

(or the name of the folder if a part of the graph is exported only) and data in the format of `yymmdd`, i.e. `c_060727.xray` means a graph on the disk `C:\` exported on July 27, 2006. The specific exported part of the graph depends on the section, above which the **Export** function was activated. To export the entire graph, you need to click on the graph center for **Export** (representing the disk root). If the function is activated, for example, above a graph section representing the Program Files, a detailed graph shall be exported only for the content of this folder. If any filter is applied when using the graph export function, the filtered content only shall be exported.

To save information on the **User Statistics** into the exported file, the function must be activated and the export must be performed only after the disk is scanned (you can export also from a graph viewed by users). If you fail to do this, the information on users shall not be saved into the file and, upon the subsequent use of the **User Statistics** function in the imported graph, only the **Unknown User** shall appear.



Using the export function in this case shall export a detailed graph only for the content of the Program Files folder.

6.2 Export to CSV

This function allows saving information from the graph into a file in the CSV format, which can be further used, for example, in a table processing application (OpenOffice,

MS Excel, etc.). It is activated from the application context menu. Items to be exported include the path and the name of the file or folder, the size, the user name, the date of creation and the date of the last modification. If exporting a graph based on the **User Statistics**, the user name, the total size of the space occupied by the user files and the number of such files.

The export is not carried out recursively the information on contained folders and files are not exported, as disks may contain hundreds of thousands or even millions of files (i.e. potential lines in the exported file), and table processing application are able to handle only documents containing up to tens of thousands of lines.

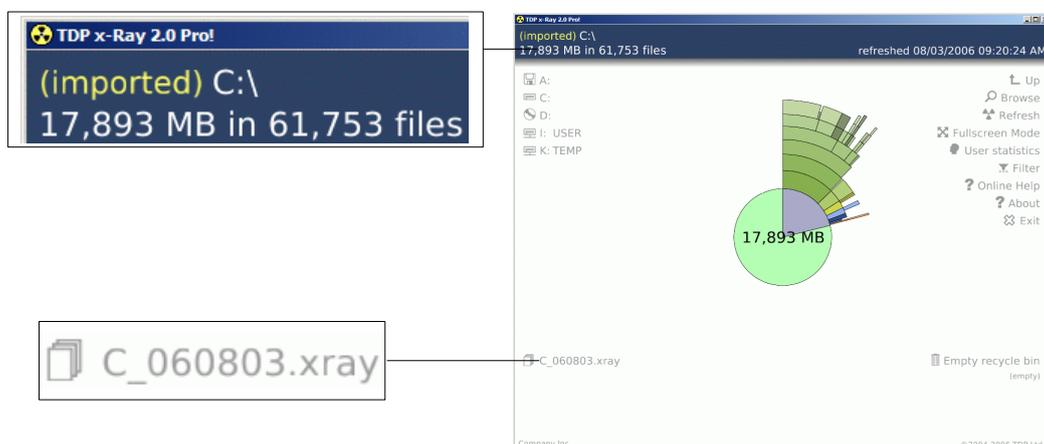
The specific exported part of the graph depends on the section, above which the **Export to CSV** function was activated. If the function is activated above the graph center (root), information on files and folders in the root folder shall be exported. If any filter is applied when using the graph export function, the filtered content only shall be exported.

6.3 Import

After right clicking on the graph center and selecting the **Import** function from the context menu, the Open window shall appear, in which you can select the file to be imported. You can import only files created by the TDP x-Ray application (with **.xray** suffix). The graph based on exported data can be also displayed upon double clicking on the exported file in the Explorer (unless the application is already running, it shall launch).

The fact that the currently viewed graph is loaded from a file is indicated by a yellow sign (Imported) in the upper left corner of the application. The date and time indicate the cache update period, or, in this case, the date of export. A reference with the name of the loaded file is indicated in the bottom left part of the application, below the list of disks. It allows switching between the “live” disks and the last loaded file.

You can use filtering with graphs from imported files just like with standard graphs. However, to use the **User Statistics** function, the respective user information must be exported (see “Export”).



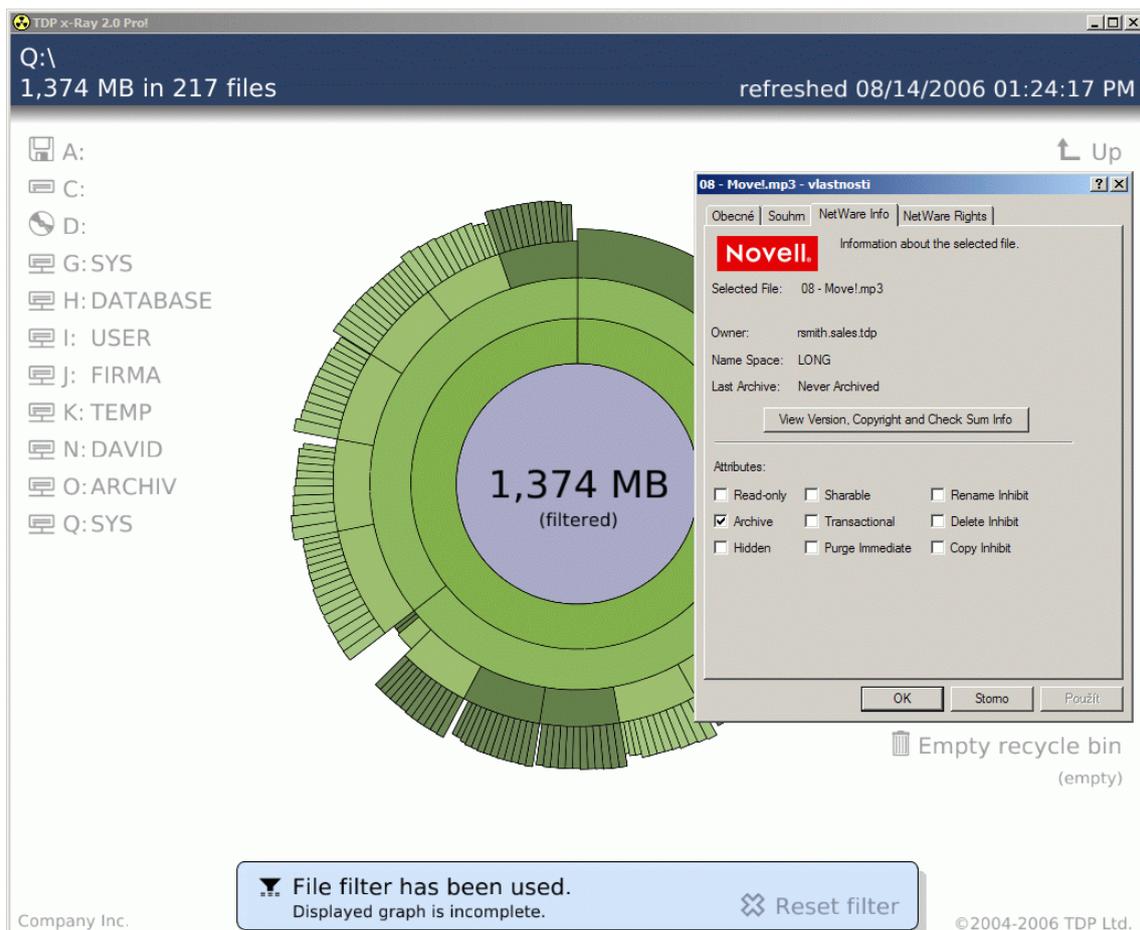
In an imported graph, you cannot use the Explore, Delete, Recycle, Properties and Open functions, as the displayed files and folders may not be accessible from the current workstation (the graph may also be old or can be exported from a different workstation).

If a filter was applied to the exported graph, this information is indicated in the bottom part of the window and the filter cannot be **Reset** (however, you can apply other filters).

Note: The Import option shall appear in the context menu only if the context menu is evoked upon clicking on the graph center.

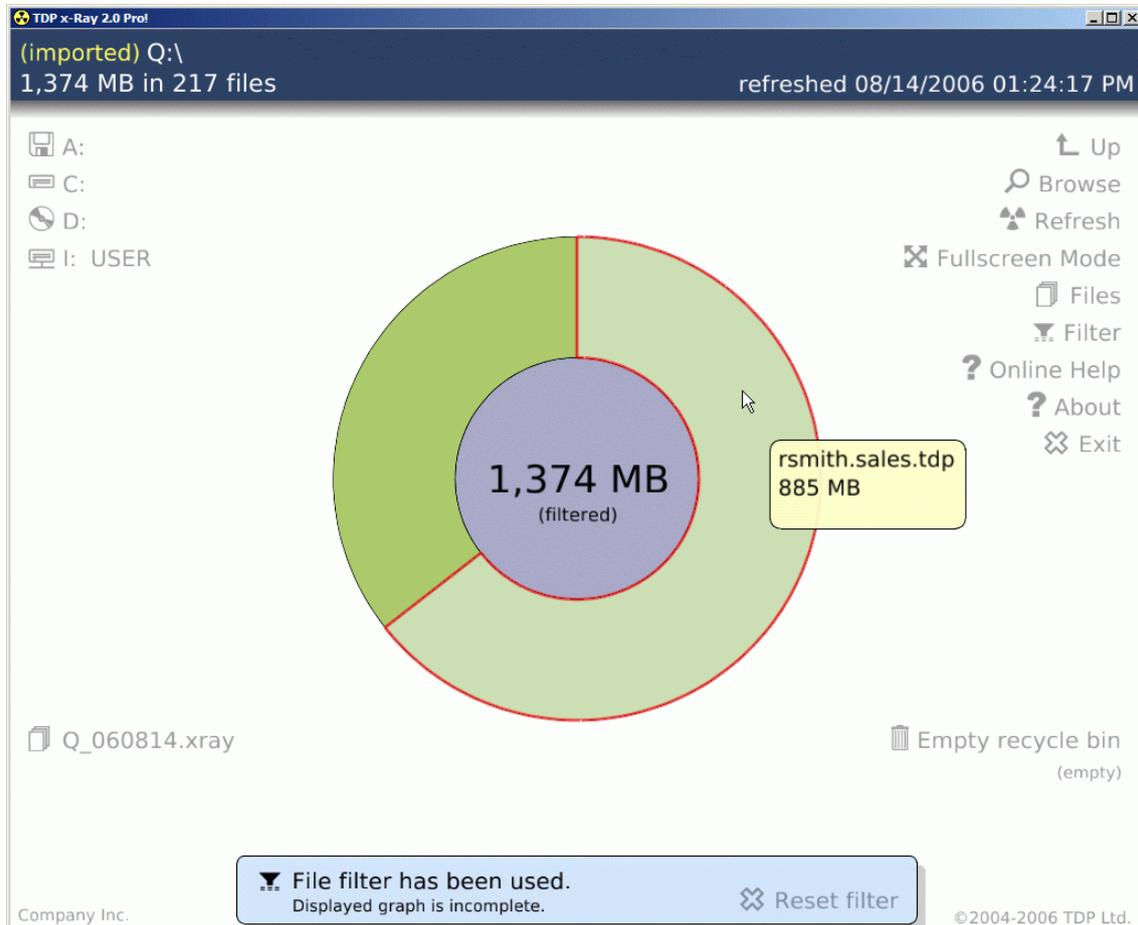
Example:

An administrator finds out that, files of users from the sales department occupy too much disk space on the network bundle specifically, they are mainly mp3 files, which should not be there at all. He can send exported graph data filtered for the business department (by entering the user name mask ***sales.tdp**) to the business department manager together with a notice on the revealed fact.



Without the necessity to be authorized to full search through the respective bundle (security risks), the manager checks the situation using the TDP x-Ray application. They can import the data received from the administrator, filter only files of the required type from the graph (***.mp3**) and review the data in the **User Statistics** view. It is

immediately clear from the result that users `rsmith.sales.tdp` and `jdoe.sales.tdp` have mp3 files with the total size of approximately 1.4 GB stored on the disk, which is abreach of the corporate regulations.



7 Configuration

Some features of TDP x-Ray can be set using the configuration file. A sample file with detailed comments called `xray.cfg.sample` is saved in the respective TDP x-Ray installation file (default location: `C:\ProgramFiles\xRay`)

The configuration file allows setting an automatic updating (refreshing) of a graph after a set number of minutes (no automatic refresh is set as default) or defining the cache update period in hours determining when it shall be considered old. 24 hours are set as default; if 0 is set, cache is not used.

Please note! – Forbidding the cache results in a dramatic slow-down during repeated displays of the graph (for example, after canceling a filter), as all data have to be reloaded again!!

For TDP x-Ray to follow the configuration file instructions, the configuration file must be located in the folder, from which TDP x-Ray is launched and must be named

`xray.cfg`. All performed and saved changes become apparent only after the application is restarted. If TDP x-Ray cannot be used due to modifications in the configuration file, the configuration file can be removed or renamed and the application can then be restarted.

Note: Only changes in the automatic refresh and cache period settings are supported. We recommend that you do not perform any other modifications (such as a change of the color scheme) all such potential changes shall be made at you own risk!

8 Application Web Site

You shall find any updated information on TDP x-Ray, including potential new versions to download, at:

<http://www.tdp.cz/products/xray.shtml>