



SpaceSniffer

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Find lost space on your disks the easy way.

Welcome

*"There was so much free space on this disk... why no space left?
Where did I waste all this wonderful free space?"*

If you feel this is a deja-vu, SpaceSniffer may help.

In few words:

- Gives you an idea of where big files reside on your disks, even network paths
- Fast and easy to use, simple interface
- No useless bells and whistles, only what's needed to help you find your files
- Lets you easily search with file masks (*.jpg, *.txt...), by file size (>1mb...), file age (<3months...), attributes (archive, hidden...) and combinations
- File tagging
- Gives access to the Windows files/folders popup menu
- Reacts to external disk modifications, keeps always in sync, warns you about external modifications by elements blinking
- Intuitive navigation with animated zooming effects, even during the scan process
- Multithreaded scanning engine with smart caching system to minimize disk access
- Lets you focus and complete the scanning on a zoomed portion of your disk even if the master scan is in progress
- Can scan NTFS Alternate Data Streams if needed
- Customizable interface: geometry, colors, behaviors
- It doesn't clutter your registry, only a plain XML configuration file
- It's portable, no installation required, just put the executable somewhere and let's go. You can keep it in your flash key ready to be used.
- It's FreeWare or, better, DonationWare.

"Hei! Look there! A lot of old 10+Mb JPEGs!"

"Oh! That old 2Gb database backup! Better moving it out of the way!"

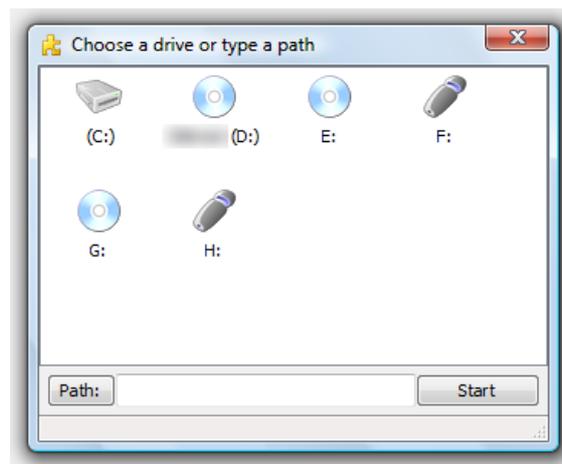
"What is this biiiig folder? Oh, that's the O.S. folder. Better leaving it in place, eheh"

Sound interesting to you? So... let's go on!

Start the application

The main window of the application appears and a smaller dialog (the start dialog) will ask where you want to scan. You can choose one of your disks or type a path. The path can be a local path or a network path. It works well also with Samba shares.

Then, press the Enter key or click the Start button.



the start dialog

If you typed in a path and that path does not exist, an error message will appear. If everything is ok, the scan process begins.

An alternate way to locate the path to scan is to press the Path button on lower left of the dialog. This will open the O.S. Folder browser. When you select a folder in the folder browser and confirm, the selected folder path will be copied into the path field. Then press Start to begin.

It is possible also to drag a folder on the dialog. This will copy the dragged folder path into the path field. Then press Start to go. You can drag only one folder at a time into this dialog.

If you want to drag more than one folder you can close the dialog and drag many folders directly into the main window. This will automatically start as many scan views as the number of dragged folders.

For your convenience, the dialog is easily usable also with keyboard. If you want the dialog to close, then press `ESC` key. When you are in the main window, the `CTRL+N` shortcut will reopen the start dialog.

Ok, that was pretty easy. Let's go on.

The scanning process

The scan progress will be displayed on the main window. This is a real time display of the scan operation. As you can see, a lot of rectangles appear on the screen.



the sniffing process

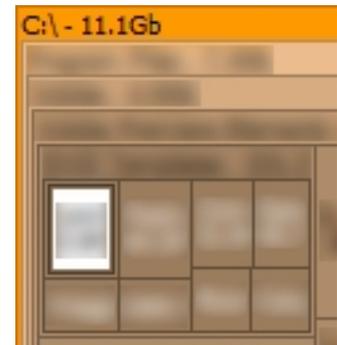
Each rectangle represents a folder or a file (generically an element). The folder elements shows other elements into them, recursively. A limit has been set to the display recursion, to avoid graphic cluttering. You can change this limit as you wish with CTRL + and CTRL - shortcuts or with the toolbar buttons.

Elements change in size proportionally to the real size of the file or folder.

Note: This type of graphical representation is called *Treemap* and was invented by Ben Shneiderman, a Professor in the University of Maryland. So, the bigger the element on screen, the bigger the folder or file on disk. *It's in-too-tive.*

If you want to examine an element in deep, just left mouse click once on it, and you will start digging. You can dig into folders until you reach a file element (displayed in a different color).

If you wish, you can zoom into a folder element by double clicking into it. This will expand the folder to the entire view, showing more smaller elements previously hidden because of the smaller size. When you start zooming in and out you will notice that the navigation keys (back and forward, like a web browser) activate. You can go back and forth by pressing them or by BACKSPACE and SHIFT+BACKSPACE shortcuts.



folder nesting

Note: The previously shown navigation shortcuts are active only when the filter field is not focused.

Navigation

You can navigate the disk structure by the tool bar buttons.



In order:

- **New view (CTRL+N):** opens a new scan window. SpaceSniffer lets you open more windows and watch different parts of your disks. If you open more than once the same view (or part of it), the disk will be scanned only once. SpaceSniffer features a smart caching system that links also to the disk event system of the O.S. So if something changes outside the application, SpaceSniffer will be aware of it and will reflect the change into the view.
- **Go back (BACKSPACE) + Go forward (SHIFT+BACKSPACE):** When you navigate the disk structure by zooming in and out, all locations you traverse are kept in memory (like an internet browser). So you can go back and forth as you wish.
- **Go upper level (CTRL+UP):** will zoom out by one folder level, until you reach the view root.
- **Go to home (CTRL+HOME):** will zoom out at the root point of the view (the disk drive or the specified initial path)
- **Perform a new master scan:** While scanning, the button lets you to stop the process. While not scanning, the button lets you start another scanning process.
- **Performs a new scan of the zoomed view:** When you are on the view root the button is disabled. When you are in a zoomed folder, you can start a secondary scan process to force the scanning of the selected folder. The purpose is to avoid waiting for the termination of the master scan to be sure the zoomed view is complete. Only one active zoomed scan process is permitted for each view. If you want to focus on another part of the structure and the secondary scan is in progress, you must stop and restart it.
- **Less detail (CTRL -) + More detail (CTRL +):** Will dig less/more into the display structure. Note that the currently selected folder/file element will always be shown, to avoid you a lot of annoying zoom in/out operations.
- **Show free space (CTRL+F):** will show an element that represents the free space of the selected drive. This option will work only if you select a drive (or type a drive path) and not with typed paths that are not drives.
- **Show unknown space (CTRL+U):** similarly to the preceding option, this will show

unknown space. Unknown space is space that SpaceSniffer is aware of, but has not examined yet. While the scanning process goes on, the unknown space will diminish letting space for the examined items. Similar to free space, unknown space will not be displayed if the root path is not a drive. Sometime after the scan completes, some unknown space is still visible. This is due to the inability to scan some protected folders.

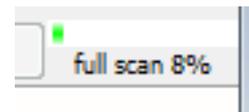
- **Donate:** Press this to connect to the donation page. Please support this software, let me know that you like it by donating something. [Thank you in advance.](#)

The viewable percent bar

When zooming in and out you may notice a small green bar on the left side of the view. This small green bar will show you how much of the entire structure is currently showing. If you go to the view root, the bar will fill the vertical space entirely. If you zoom in, the bar will diminish its height, because you are displaying less and less disk space as you keep zooming in.

The progress bar

Another item you can notice is the progress bar in the upper right side of the view. This will show you the scanning progress. Since the total size to be scanned is known only if you select a drive, the progress bar is shown only if you select a drive path. In all other cases, a simple message will be displayed.



full scan in progress

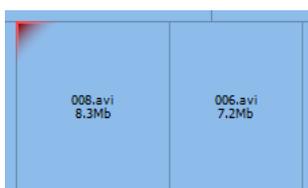
The tagging system

If you want to track files before doing them anything else you can tag them. There are four different tags: red, yellow, green, blue. Simply hover the mouse on a file and press **CTRL+1** for red tag, **CTRL+2** for yellow, **CTRL+3** for green and **CTRL+4** for blue. By pressing the same key again you clear the tag (it's an on/off switch).

With **CTRL+0** you clear the tag on all filtered files in the zoomed view. This means that the reset is applied on files starting from the zoomed area (files outside the zoomed area are left untouched) and only for files that satisfy the filtering rules. So, if you have tagged files that are hidden due a filtering rule, then they are left untouched.

Since the tag clearing is applied on filtered files, it's impossible to use it while filtering is in progress (a warning message is displayed) because the effect can be unpredictable.

The **CTRL+digit** combinations works always, also if the filter box has the focus. If you are sure that the filter box is not focused, you can also use the simpler 1, 2, 3, 4, 0 key.



Tagged and untagged file

By tagging a file you put a temporary "bookmark" on it. This lets you continue navigating the disk structure and be sure to find each tagged file by filter, for example. The tag is temporary: This means that when you close all the views that work on a given disk or folder path the tagging is lost. Nothing is stored on disk, everything is kept in ram.

The filtering system

If you are interested only in particular types of files, you can type something in the filter entry field, as shown below. Then press the Enter key or click the Filter button.

Filtering by file mask

It is possible to filter the view by file mask. Masks are defined with special characters "?" and "*". The question mark character means "a single character", while the asterisk character means "some characters". It's possible to type also a complete file name if you know what are you looking for. By placing a pipe character "|" in front of file mask you negate it and this becomes an exclusion filter.

Example: by typing *.jpg and pressing the Enter key, only JPEGs files will be displayed.

Example: by typing |*.jpg and pressing Enter key, everything but JPEGs will be displayed.

Filtering by file size

You can look for files bigger/smaller than a given file size. The syntax of the search string is ">" (or "<") character, followed by the size and the measure unit.

Available measure units are:

- **b:** byte
- **kb:** kilo byte (1024 b)
- **mb:** mega byte (1024 kb)
- **gb:** giga byte (1024 mb)
- **tb:** tera byte (1024 gb)

Example: by typing >100kb SpaceSniffer will show only files bigger than 100kb.

Filtering by file age

It is possible to search files by their age (modification date). The syntax of the search string is similar to the previous one, but the measure unit is different.

Available measure units are:

- **seconds/secs/sec/s**
- **minutes/mins/min/m**
- **hours/hour/h**
- **days/day/d**
- **weeks/week/w**

- **months**/month
- **years**/year/y

Example: by typing `>1year` SpaceSniffer will show files older that 1 year.

Filtering by tag

If you want to find tagged files you can use the `:1..4` syntax (the colon is part of the syntax). Instead of `1..4`, for your convenience you can use `red, yellow, green, blue, all` or `r, y, g, b, a`.

By placing a pipe character `|` in front of tag filter you negate it and this becomes an exclusion filter.

Example: by typing `:1` or `:red` you filter red tagged files.

Example: by typing `:all` or `:a` you filter all tagged files.

Example: by typing `|:3` or `|:green` you exclude green tagged files.

Example: by typing `|:all` or `|:a` filter all but tagged files.

Note: *Since release 1.1.2.0, to accomplish to the need or many additional filters, a new syntax has been added for the tag filter. The new syntax needs that the filter starts with the `:tag:` or `:tags:` filter specifier, then you can specify one or more colors for filtering. For tag filtering, the old syntax is present for backward compatibility.*

Example: `:tag:1` or `:tag:r` or `:tag:red` filters red tagged files.

Example: `:tag:2` or `:tag:y` or `:tag:yellow` filters yellow tagged files.

Example: `:tag:3` or `:tag:b` or `:tag:blu` or `:tag:blue` filters blue tagged files.

Example: `:tag:4` or `:tag:g` or `:tag:green` filters green tagged files.

Example: `:tag:a` or `:tag:all` filters all tagged files.

Example: `:tag:red+green-b` filters red, yellow but not blue tagged files.

Example: `|:tag:1,3,-red` starting pipe always negate the following filter.

Filtering by file attributes

The file attributes filter specifier is `:attr:` or `:attrs:` then you can type your attribute filter. The following attributes are available for filtering:

- **archive**/archi/arch/arc/ar/a: archive files
- **system**/sys/s: system files
- **readonly**/rdonly/ronly/rdo/ro/r: readonly files
- **hidden**/hidn/hid/h: hidden files
- **compressed**/comprsd/compr/cpr/c: compressed (by os) files
- **encrypted**/encrptd/encptd/enc/e/rypted/crypt/cptd: encrypted (by os) files
- **offline**/off/ol/o: offline files
- **temporary**/temp/tmp/t: temporary (os) files
- **notindexed**/notindx/notidx/noidx/nidx/ni: not indexed (by os) files
- **sparse**/sp: sparse files
- **alternatedatastream**/alternate/altern/alt/ads: alternate data streams, this filters works only if the "scan alternate data stream" option is active in configuration.

Possible combinations are similar to the `:tag:` filter.

Example: `:attr:archive+hidden`

Example: `:attr:+a-ro,h`

Example: `|:attr:temp`

Filter combinations

If you need to specify more than one condition it is possible by separating each condition with the ";" character.

Rules are:

- File mask and tag conditions are or-red together, excluding masks are and-ed together.
- All other conditions are and-ed together

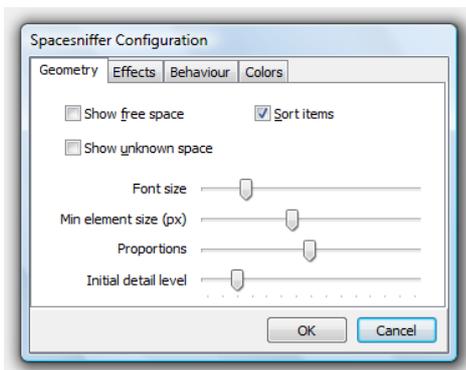
Example: `*.jpg;*.gif;>100kb;<6months` will show all JPEGs and GIFs bigger than 100kb and younger than 6 months.

Note: *You can change the filter string also during the scan process. The display will react to the new filter, but the process will always scan all elements. This is because you can change your mind and alter the filter string whenever you want. If you do that, a new scan is not required because the filtering is applied to the view and not to the smart cached data.*

Configuration

SpaceSniffer can be configured in behavior and aspect. The configuration is stored in a XML file stored in the same folder of the application executable. No registry messing. Just one single XML file.

Geometry tab



geometry configuration tab

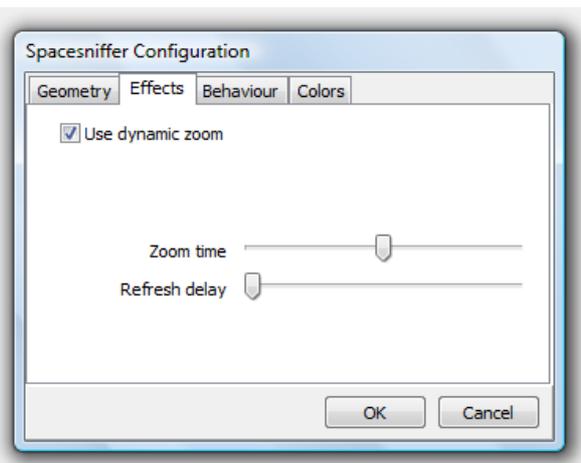
- **Show free space:** if set, auto activates the "Show free space" option on new views
- **Show unknown space:** if set, auto activates "Show unknown space" option on new views
- **Sort items:** if set, items are graphically sorted by size, so you can quickly see what's big
- **Font size:** lets you to set the graphical panel font size, to accommodate your monitor resolution
- **Min element size (px):** the minimum size in pixel an element must have to appear into view (notice that only relevant items appear into view, not

everything. This avoids display cluttering)

- **Proportions:** if you like a more horizontal or vertical layout for elements, play with this setting
- **Initial detail level:** this is the initial detail level used by new views when they're created. After creation, each view can be configured with its own detail level as preferred.

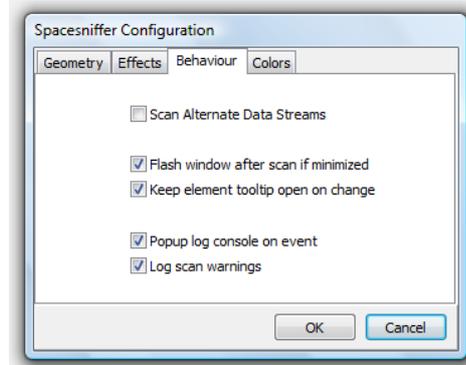
Effects tab

- **Use dynamic zoom:** dynamic zoom is a zoom effect that animates the layout during zoom effect. It needs more CPU power but looks better (IMHO). Standard zoom effect simply works with a precomputed screen shot that may also look nice and needs less CPU. It's a matter of taste.
- **Zoom time:** controls how long the zoom effect is.
- **Refresh delay:** controls the frequency of view display refresh. Higher the frequency the better the look, but slower the scan. Default is mid-way.



effects configuration tab

Behavior tab

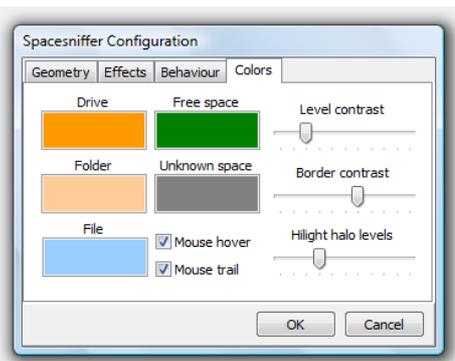


behavior configuration tab

- **Scan Alternate Data Streams:** enable NTFS ADS scanning. Slower.
- **Flash window after scan if minimized:** If you start a scan and minimize the window, at scan end then the window will flash in the task bar, to warn you.
- **Keep element tooltip open on change:** when active and tooltip is visible, if the mouse moves to another element the tooltip keeps visible and its content changes. When inactive and the tooltip is visible, a mouse movement to another element hides the tooltip. Then, you need to wait a moment for it to be visible again.
- **Popup log console on event:** if a relevant event happens, the log console will popup. You can also open the log console from the main window drop down menu.
- **Log scan warnings:** by enabling this option, you tell SpaceSniffer to log events when it cannot scan a folder or a file due to any reason.

Colors tab

- **Colors:** you can specify your preferred color for the drive, folder, file, free space and unknown space entities. Those are base colors, since they will be darkened to show nesting.
- **Mouse hover:** highlights an element when the mouse cursor hovers on it.
- **Mouse trail:** mouse leaves a fading trail over elements when it moves.
- **Level contrast:** Nestings are more or less noticeable because contrast of colors is more or less exaggerated.
- **Border contrast:** Elements borders are more or less noticeable.
- **Highlight halo levels:** When the mouse hovers on an element, this is highlighted. As the the halo levels setting increase, more parent elements are affected by the highlighting.
- **Mouse Hover:** Highlights the element under the mouse pointer.
- **Mouse trail:** Leaves an highlight trail on elements when mouse moves. If it's annoying to you, just deactivate.



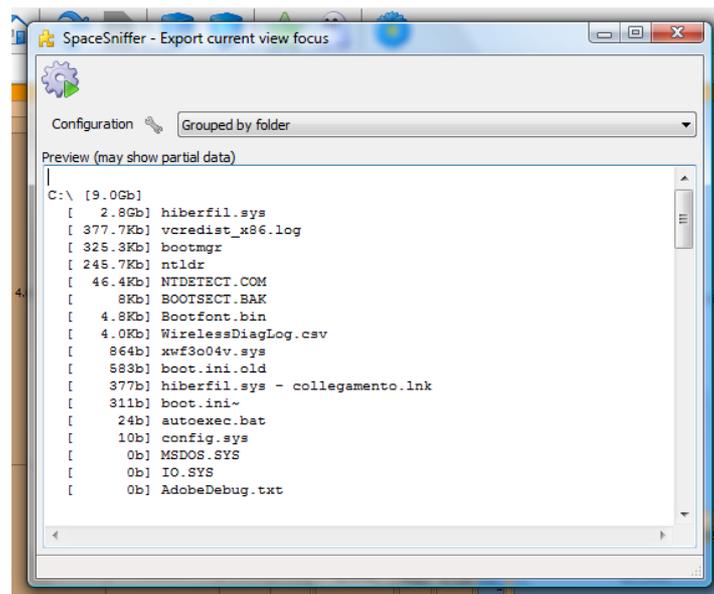
colors configuration tab

Export module

The export module is useful when you need to produce a report of the current filtered zoomed view. This means that only files starting at the current zoom level and shown by the filter rules are considered for the output. The report is outputted on file and its layout can be configured.

The export procedure is as follows:

- First of all, you isolate the files that you want to report by navigating and filtering the disk structure.
- Then you activate the export module by File/Export command.
- The export window shows. Then you can choose an export configuration from the drop down list. Some built-in configurations are provided for your convenience.
- After choosing the export configuration, the preview panel will display a short preview of the output. Notice that only the first files are considered for the preview production, so the preview will likely show a partial result.
- By pressing the export button on the tool bar you start the export procedure.



The export module

Note: The export module is configurable. You can customize it by adding more configurations and by customizing them with the built-in export language. Please refer to the *Export Customization* documentation for more information about customization.

Command prompt

You can start SpaceSniffer also through the command prompt. SpaceSniffer can understand some parameters commands. To view all the possibilities you can type in a command prompt:

```
SpaceSniffer.exe help
```

Or you can choose the "Command line help" in the "About" menu of the main window.

Examples: Let's explain how to drive SpaceSniffer through parameters:

```
SpaceSniffer.exe scan c:\
```

will start a single scan on drive c:\

```
SpaceSniffer.exe scan c:\;d:\
```

will start two scan views on respective paths.

```
SpaceSniffer.exe scan "c:\Program Files;c:\Windows"
```

you can type also a complete path, just consider that if the path contains spaces, all the compound paths parameter must be surrounded with "" chars.

```
SpaceSniffer.exe scan c:\ filter *.jpg;*.gif
```

the filter command will apply to the previous scan command. So this will scan the c:\ drive for JPEGs and GIFs.

```
SpaceSniffer.exe scan c:\ filter *.jpg scan d:\;e:\ filter *.gif;>100kb
```

got the idea?

Final notes

File handling

SpaceSniffer code works in read only mode. It is possible to access the Windows popup menu for a folder or a file by right mouse clicking on a view element. So, if you delete a file it's because you deleted it through Windows functions, not SpaceSniffer's. The only exception is when SpaceSniffer saves the configuration into his configuration XML file. If it's possible to save, then it will be done. On the contrary, no saving is performed and the program quietly accepts the fact.

Privilege request

Whenever possible, SpaceSniffer tries to get the Backup Operator privilege, that gives the possibility to examine protected folders. If the application can obtain this right or not depends on your privileges in the O.S. If it's not possible to get this privilege, the application still works but you'll probably notice that some unknown space will stay in the way also after the end of the scan process.

File system events

SpaceSniffer listens to file system events, so it can reflect changes made outside of the application. This feature may not be supported, depending on the O.S. and media type.

Internet connection

SpaceSniffer plays polite. It will never attempt to connect to the internet. The only exception are the "Donate!" option, that will open the donation page in your default browser and the "About Box" that contains a link to "www.uderzo.it". So, if SpaceSniffer connects to the internet, it's because you told it to do so.

Compatibility

SpaceSniffer has been tested on Windows 2000/XP/Vista/7 (32/64bit) systems.

Contact infos

If you want to contact me, please write to info@uderzo.it and specify the keyword `spacesniffer` in the mail subject. Remember to specify the keyword or your mail could be blocked by the antispam filter.

Donate

If you feel this software comes handy to you, please consider donating to the project. You can do so on the donation internet page by choosing the donation tool bar button or the "Donate!" option in the help menu. Thank you for your support.

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