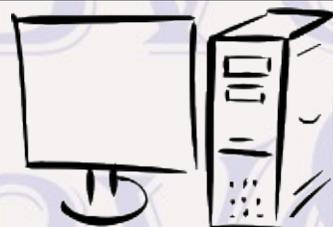# Bits & Bytes

Arkansas' Premier Computer Club

December 2018 v3

Bella Vista Computer Club - John Ruehle Center
Highlands Crossing Center, 1801 Forest Hills Blvd Suite 208 (lower level), Bella Vista, AR 72715

Website: http://www.BVCompClub.org   Email: editor@bvcompclub.org

HOW TO FIND US

All meetings are on the lower level of the Highlands Crossing Center in Bella Vista. You may use entrance A on the West side or entrance C on the South side and take the elevator or stairs to the lower level. Turn left (West) to reach the General Meeting room, right for the John Ruehle Training Center. Additional information is on our web site.

MEETINGS

Board Meeting: December 10, 6:00 pm, John Ruehle Training Center

General Meeting: December 10, (2nd Monday), 7:00 pm, Community Room 1001.
Program: **M**ike Whited, Senior VP and Sales Coordinator for Arvest Bank, will present the latest information on security scams, the Arvest "GO" mobile app, and other topics.

Bring a guest! New Members and Guests are always welcome at the General Meeting

Genealogy SIG: **Correction: No meeting in December** (meets 3rd Saturday other months).

January Program Topic:
"Latest Info on Security Scams, Arvest GO Mobile App, & Other Topics", Mike Whited, Arvest Bank.

HELP CLINICS

Saturday, November 3, 9am – noon
Wednesday, November 21, 9am – noon
Saturday, December 1, 9am – noon

Help clinics are a free service held in the Training Center for BVCC club members

Bring your tower, laptop, tablet or smartphone for problem solving.

CLASSES

"Slow PC? Let's Upgrade or Buy New"-- Wednesday, December 12, 9am - 11am

"Computer Security for Regular People, Part 1" – Justin Sell, 1.5 hrs
Tuesday, January 15, 6:30 – 8 pm
Part 2 will be offered again on
3rd Tuesday in February, 6:30 – 8:30pm.

Registration for classes required: Contact Grace: email to edu@bvcompclub.org, text 469-733-8395, call 479-270-1643, or sign up at the General Meeting on September 10. Classes are **free to Computer Club members** and are at our John Ruehle Training Center. **Check the monthly calendar and announcements for any last minute schedule changes at http://bvcompclub.org**   .

MEMBERSHIP

Single membership is $20; $10 for each additional family member. Join by mailing an application (from the web site) with check, or complete an application

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GRAPHICAL DISK USAGE ANALYZERS

By Cal Esneault, Co-Editor, Workshop & SIG leader,
Cajun Clickers Computer Club, LA
July 2018 issue, Cajun Clickers Computer News
www.clickers.org
tsa70785 (at) gmail.com
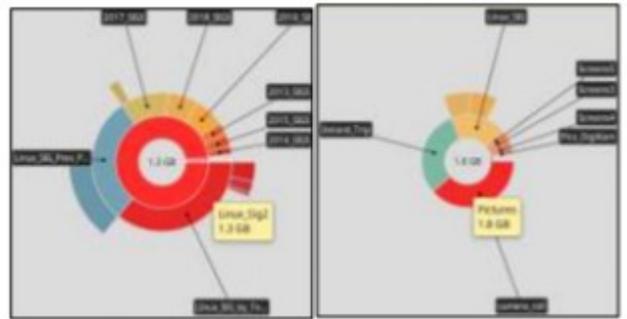*Reprinted by permission from APCUG.*

If you use a Linux distribution based on GNOME (such as Ubuntu or Linux Mint), included software should have a program called Disk Usage Analyzer which gives a menu-driven, graphical representation of file usage on any disk drive. This application, originally part of gnome-utils, has been stand-alone since GNOME 3.4, and its original name was Baobab (like the tree).

Computer files are organized into "tree" structures which have directories (folders) and sub-directories (sub-folders). A simplified example is shown to the right. We can examine the size of each folder individually to see space used. To get a better feel for larger sections, programmers have developed a variety of graphical representations. The Baobab approach use a series of rings (each ring is another directory level) where ring size depicts file storage usage. Below is a screenshot of one of my Linux systems. Using the left-hand pane, you can select any sub-folder for more detailed review
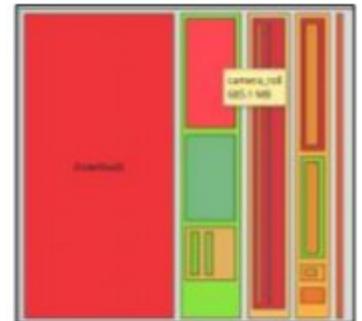
This display not only shows general usage, but it also gives you an idea of the structural fragmentation of your hierarchical arrangement. As you click on different sub-directory rings, the text will change to show those areas in more detail.
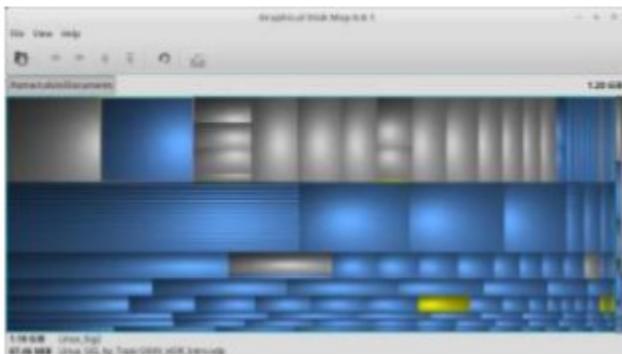
Selecting large portions can at times be overwhelming. Below are two examples where the left-hand panel was changed to select sub-folders.

As well as this "ringmap" display, the information can be displayed using a "treemap" chart (see on right). This works well to find areas using a lot of space, but it requires lots of "clicking" to determine what you are really looking at.

There are many other graphical tools to check you disk usage. For example, GdMap (see below) is an even more sophisticated treemap tool
.

Similar tools are also available for Mac OS and Windows. Try one out and improve the efficiency of you disk storage.

WINDIRSTAT – A DISK USAGE ANALYZER FOR WINDOWS

By Joel Ewing, President, Bella Vista Computer Club
President(at)bvcompclub.org
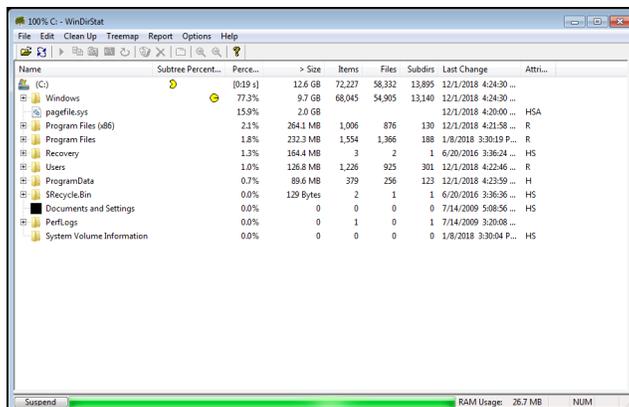December 2018, Bits & Bytes
www.bvcompclub.org

A July 2018 article by Cal Esneault on "Graphical Disk Usage Analyzers" for Linux inspired this article, which describes WinDirStat, one of the more popular similar tools that are free on the Windows platform.   WinDirStat started as a porting to Windows of the open source KdirStat application on Linux. It can be obtained as a Windows setup.exe installation file from https://download.cnet.com/WinDirStat/3000-2248_4-10614593.html and also from https://www.fosshub.com/WinDirStat.html . It can also be downloaded as a zip file from https://sourceforge.net/projects/windirstat/ . The zip file can be expanded and the program executed from a directory without going through a formal "installation". It is advertised to work on all supported versions of Windows as well as many older versions of Windows as far back as Windows 95.

With the decreasing cost of mechanical hard drives up to about 6TB capacity and the decreasing cost per GB for larger drives until you get above that range, there is perhaps less concern about finding what files and directories consume the most
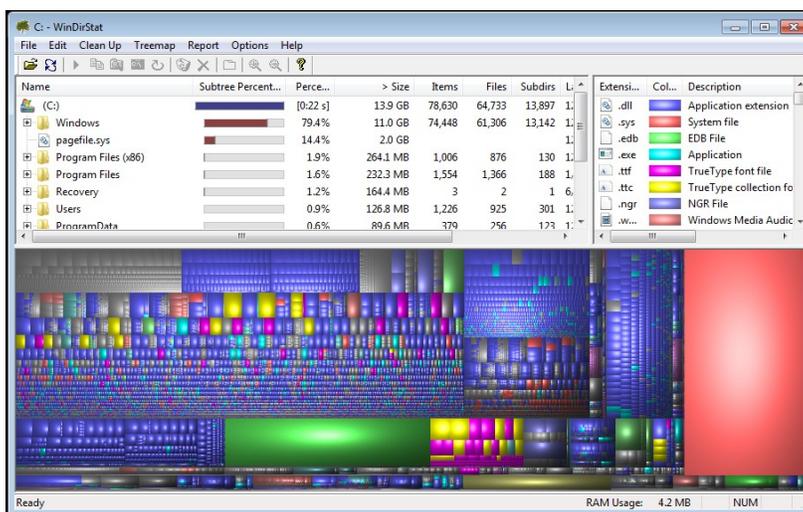
space. An individual is unlikely to tax the capacity of today's mechanical hard drives without a large number of video files or many virtual machines; but there could be a desire to reduce disk space-in-use by unnecessary files just to reduce the time to make disk image backups of your system.

On the other hand, solid state hard drives have no inherent cost advantage for higher capacity drives, and solid state drives greater than 500GB typically cost more per GB, not less. If you are using one of those as your hard drive, there can be more motivation for understanding what files and directories are consuming hard drive space.
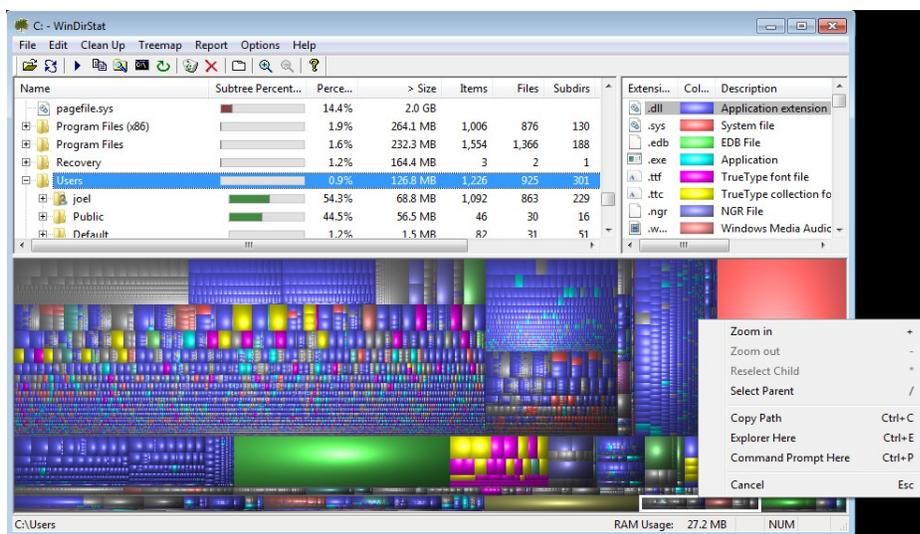
When WinDirStat is started on Windows, it first asks which drive(s) should be analyzed. You can select "All Local Drives", or select a specific drive partitions, like "C:" . The program will then start to analyze all the directories on the selected partition(s). This process may take many seconds. While it is proceeding, the cumulative statistics on the high-level directories will be displayed, and those drives and directories that are still being analyzed will have a little Pac-man icon in motion. The "C" drive was selected for the example to the right.

When the analysis is complete, the directories will be displayed in order of decreasing disk usage and a visual display will show by color and size of rectangular cushions the largest consumers of space. The graphic display is arranged so that each directory, and each sub-directory under that, is represented by a rectangular area in the display containing one or more rectangular "cushions". The area of each cushion is proportional to the amount of disk space used by that entity.

If you select a particular directory in the top part, the corresponding area in the large graph at the bottom will be outlined; or if you select a cushion in the graphic display, the corresponding directory will be highlighted. This system is a lightly used test system so the actual amount of "User" data is rather small, as illustrated by the small white rectangle on the bottom right of the graph when the Users directory was selected. If you right click on that area of the graphical display, you have a number of options, like to zoom in on just the Users directory space.

Doing that, and then selecting the largest rectangle in the resulting display shows that the largest single file under Users is a sample movie file Wildlife.wmv that came with Windows 10.

This tool may or may not reveal any files that you feel safe in deleting, but it should at least give a clear visual indication what kinds of files and directories are consuming significant disk space on your system.

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