



PRODUCT REVIEW

Rich Copy *by Alan German*

Recently, I needed to copy a folder, with several hundred sub-folders, and many thousands of individual files, from one external USB drive to another. While I expected this process to take some time, even when using USB 3.0, what I didn't expect is that I wouldn't be able to get it started.

It seemed simple enough; grab the source folder, drag and drop it onto the target drive. However, when I did this – nothing! That's right – no files being copied, no error messages – nothing!

A little research on the Internet suggested that perhaps one or more of the files being transferred was corrupt and that, if this were to be the case, Windows wouldn't give any warnings. In fact, Windows wouldn't do anything, which was certainly my experience. I'm not sure if this is a feature or a bug. The issue was identified several years ago, but it hasn't been fixed. It must be a “feature”!

The suggested solution is to use Rich Copy. This little-known program is one of those hidden gems, created by a Microsoft employee (Ken Tamaru in this case), released to the public with no support, and (seemingly) subsequently abandoned.

Fortunately, an article on TechNet Magazine extolling the virtues of this software is still posted on the web (<http://preview.tinyurl.com/c2sxyn>), as is a link to download the last release (see the **Bottom Line** at right).

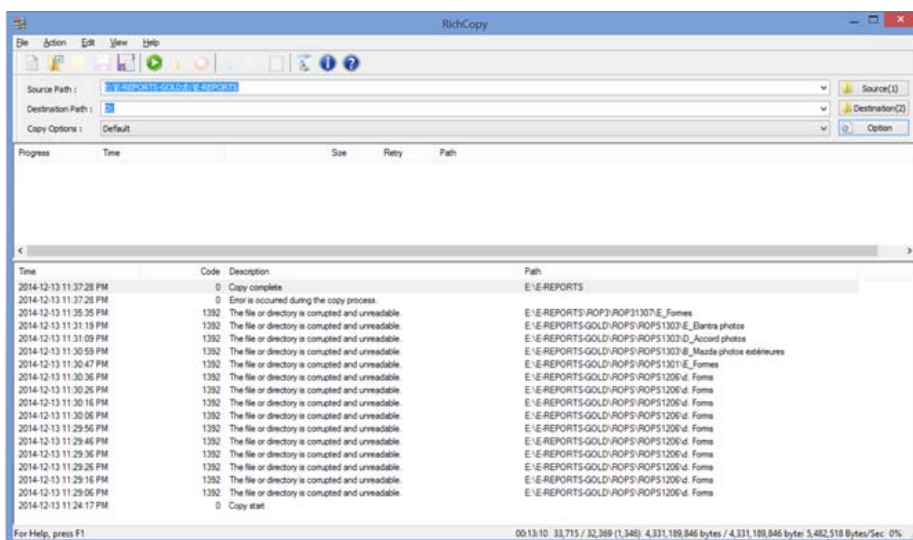
In particular, Rich Copy is a multi-threaded application so selecting multiple threads for directory search, directory copy, and file copy can greatly reduce file transfer times. Other features include the ability to specify default folders, move files rather than copying, and copying based on security settings, file size, or date-time stamp.

The program certainly worked its magic in my particular case. Most of the files were transferred successfully, while a number of corrupt items were identified in an on-screen log. Running chkdsk fixed all the corruption issues, which were related to indexing rather than file content.

So, if Windows ever refuses to copy a folder, but won't tell you why, give Rich Copy a try.

Bottom Line:

Rich Copy (Freeware)
Ken Tamaru
Microsoft Corporation
<http://tinyurl.com/6doxyq5>



Rich Copy is simple to use. Specify the source path for the folder(s) to be copied, the destination path for the target drive, and press the green “Copy Now” icon. However, there are also a number of options that can be selected for the copy process.

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March Raffle

For the March raffle, we have a **CD Stock Piggy**.

One touch glide-out storage drawer lets you access your DVDs quick and easy. A modern design with adorable color is an ideal way to store up to 60 CDs; CD-ROMs; and DVDs. Equipped with non-skid pads to avoid scratching of desk surface. Using only one quarter the size and weight of Jewel cases, CD sleeve is a convenient and space-saving way to store your CDs.



Tickets are, as always, a good deal at \$1 for one, a great deal at \$2 for three or the unbelievable bargain of \$5 for ten!

Coming Up...

➤ March 11th, 2015

Topic: Members' Favourites by OPCUG members:

- Jeff Dubois: *Kodi Enhancements: Streaming Live TV Content*
- Chris Taylor: *Photo to book*
- Alan German: *web site WYSIWYG*

May 13th

Topic: VoIP (Voice over IP)

Speaker: Jeff Dubois (OPCUG) and Fred Ennis

June 10th

Annual Pizza Night + Speaker (*TBA*)

February Prize Winner

Gail Eagen was the winner of the Microsoft Wireless 800 Desktop raffle prize at our February general meeting.

2015 CALENDAR

Meetings	Date	Time and Venue
OPCUG General Meeting	Wednesday, March 11 th	7:30 p.m. Auditorium of the Canada Aviation and Space Museum, 11 Aviation Parkway. http://casmuseum.techno-science.ca/en/index.php
Beginners' SIG	Wednesday, March 11 th	Immediately following the OPCUG General Meeting.
Linux SIG	Wednesday, March 11 th	Immediately following the OPCUG General Meeting.
Beer BOF (Wing SIG East)	Wednesday, March 11 th	10:00 p.m. (after all other SIGs) at Liam Maguire's, St. Laurent Blvd. at Innes Rd.

Please note that unless otherwise noted, SIGs meet at 9:00 p.m. (immediately following the OPCUG General Meeting).

CLUB LIFE

OPCUG President Receives Civic Award

The Mayor's City Builder Award "is a civic honour created to recognize an individual, group or organization that has, through their outstanding volunteerism or exemplary action, demonstrated an extraordinary commitment to making our city a better place today and for the future."

On November 8th, 2014, Chris Taylor delivered his 200th presentation at the Orleans Branch of the Library through the OPCUG's partnership in the Library's Community Events Program. The OPCUG's Executive felt that 8 years of dedicated service in this initiative was deserving of special recognition so, as a consequence, put forth Chris' name as a candidate for the Mayor's prestigious City Builder Award.

Not surprisingly, Elizabeth Thornley, Program Development Manager for the Ottawa Public Library was pleased to submit a letter in support for the nomination. Will Bulmer, Special Assistant to Mayor Watson, contacted Chris last week to advise him that his name had been selected to receive this Award.

The City Builder Award was presented to Chris Taylor on Wednesday, February 25th, in a ceremony in Council Chambers at the beginning of the regularly scheduled session.

Video archives available at:

<http://ottawa.ca/en/city-hall/your-city-government/watch-or-listen-city-council-meetings/city-council-webcasts-live-and>

Congratulations, Chris Taylor, for a job well done!

Chris' Speech:

Thank you to the Mayor and Council for this great honour.

I would not be standing here today if it were not for a lot of other dedicated people who do such wonderful work;

- My fellow and former board members and others of the Ottawa PC Users' Group who work tirelessly to freely share their computer knowledge with others.
- As well, the Community Events coordinators throughout the Ottawa Public Library system who do such great work to bring more than just books to the citizens of our great city. They have always gone out of their way to make it easy for us in the Ottawa PC Users' Group, and others, to put on presentations on a wide variety of topics.

A colleague told me if I was paid for all the time I put into sharing, I would be a millionaire. But the reality is that if I had to pay for the knowledge others have freely shared with me and the enjoyment I've had sharing what I know with others, I would be flat broke. Thank you.

The OPCUG would like to give big thanks to the [Ottawa Public Library](#) and the [Ottawa Public Library's Community Events Program](#) folk... Elizabeth Thornley, Mark Gelsomino and Shayna Keces. There's a [media release](#) on their website about Chris' award.

There was also a radio [interview](#) at [CBC Ottawa Morning](#) by [Julia Sisler](#), during a library [presentation](#) on "[Protecting Your Computer](#)" done at the [Carlingwood Branch](#).



Ottawa Mayor Jim Watson, Chris Taylor, College Ward Councillor Rick Chiarelli, February 25th, 2015
Images property of the City of Ottawa. Displayed with permission.

PRODUCT REVIEW

“Restoring” a hard-disk image to an SSD *by Alan German*

A friend was thinking of buying a new laptop and really wanted it to have a solid state drive; however, the manufacturer's pricing for this option was considerably more than it ought to have been, especially given today's prices for SSD's. My suggestion was to buy the off-the-shelf machine, with a 1 TB HDD, and simply replace the hard drive with an SSD. The 1 TB drive could then be dropped into a USB drive enclosure and used as backup/extra storage. “Fine,...” my friend said “...go right ahead!”

Before doing anything drastic, a few preliminary steps were necessary. Firstly, I used Macrium Reflect to make a disk image of the original hard drive in the “as-received” condition. I used an external USB disk to store this image in order that it would be available for restoration should any of the subsequent operations go south.

Secondly, I made a rescue disk, in the form of a bootable USB drive, using the Windows Preinstallation Environment (PE) option. The latter is a mini-version of Windows that runs Macrium Reflect directly from the bootable USB and, most importantly, provides access to backup disk images stored on the external USB drive.

It should be obvious that a 1 TB disk image isn't going to fit onto a 250 GB SSD. Even though the 1 TB drive has much less than 250 GB of space in use, we still can't simply restore the disk image to the new SSD. At least, we can't do this easily.

Previously, I have worked around this issue using a bootable version of Clonezilla (see (“Cloning” a hard drive to a smaller SSD; Ottawa PC News, November, 2013) but, this time, I decided to see if I could use Macrium Reflect to both make an image of and transfer the hard drive's contents.

The web has mixed messaging about such a task. Some people simply say it can't be done, others insist that the Professional version of Macrium Reflect is required, while a third group suggests that the Free Edition can indeed be pressed into service to perform the task. I chose to take a run at the latter.

While I wouldn't have been able to restore the original 824 GB Windows partition onto the 250 GB SSD, the Windows partition was only using 64 GB of the assigned disk space. Consequently, it was necessary to shrink the partition (by simply reducing the amount of free space). I decided to shrink the partition to 120 GB, thus leaving lots of space for future software installation. The Disk Management utility (Control Panel – System and Security – Administrative Tools – Disk Management), when run as an administrator, made this process simple. Right-click on drive C:, select Shrink Volume, and choose by how much to shrink the partition.

In determining the final size for the Windows partition, it was also necessary to consider the other partitions present on the disk. In particular, the disk was set up as a GPT (GUID Partition Table) volume and had several hidden partitions in addition to that used by the operating system. These are essentially recovery partitions, containing the information used to reset the machine to its original (factory) settings should this become necessary. These data required a total of 26 GB of disk space. A further 16 GB was assigned to a dedicated data partition (drive D:). Thus, by reducing drive C: to 120 GB, even with these additional space requirements, there was still about 100 GB of available disk space on the SSD – left for future expansion (think Linux!)

(Continued on page 5)

“Restoring” a hard-disk image ... *(Continued from page 4)*

The final backup step was to make a new disk image of the resized hard drive. This image would be used to copy the now-smaller hard disk partitions onto the SSD once the latter had been installed.

Now it was time to get serious about switching the drives. Replacing the HDD with the SSD was quite simple, if a little nerve wracking. A YouTube video showed how to remove the screws from the back of the laptop in order to access the internal components. What the video didn't show was the “touchy” part where, once the screws were out, one has to pull the base away from the retaining clips. The base flexes as moderate force is applied, accompanied by unnerving snapping sounds as the clips release, until the base is fully detached. A few more screws; the HDD is removed, and the SSD inserted.

With the SSD installed, and the large Windows partition resized, you would think that restoring this smaller image to the new SSD would be child's play – wouldn't you? If so, think again! Macrium immediately indicates that it is unable to perform the restore operation with the error message “Not all partitions copied. Insufficient space”.

In our case, this isn't really because there isn't enough free space. The error message is telling us (or trying to!) that one of the source partitions starts at an offset greater than the size of the destination disk. This results from reducing the size of the Windows partition, but leaving the data partition (drive D:), and a “PBR Image” (recovery) partition, after the free space that we created, and near to the end of the disk. An article from Macrium's Knowledgebase indicates the specific problem: *“The ‘Copy selected partition’ option will always attempt to place the restored partition at exactly the same offset as source.”* Clearly, if one of the partitions would

end up beyond the last sector of the SSD, this won't be possible, and the error results.

However, the fix is very simple – if somewhat non-intuitive. Select just the initial partitions, up to and including the resized drive C:, and restore these to the SSD. Next, select the drive D: partition, and drag-and-drop this partition onto the unallocated space on the SSD. Finally, do the same for the PBR Image partition (I didn't try doing both of the latter operations at once.)

So, take special note of the drag-and-drop “trick” noted above. This can be the key to “cloning” a large hard disk to a smaller drive even after the larger disk has been “resized” to fit.

Bottom Line:

Macrium Reflect Free Edition (Freeware)

Version 5.3.7256

Paramount Software UK Limited

<http://www.macrium.com/reflectfree.aspx>



PRODUCT REVIEW

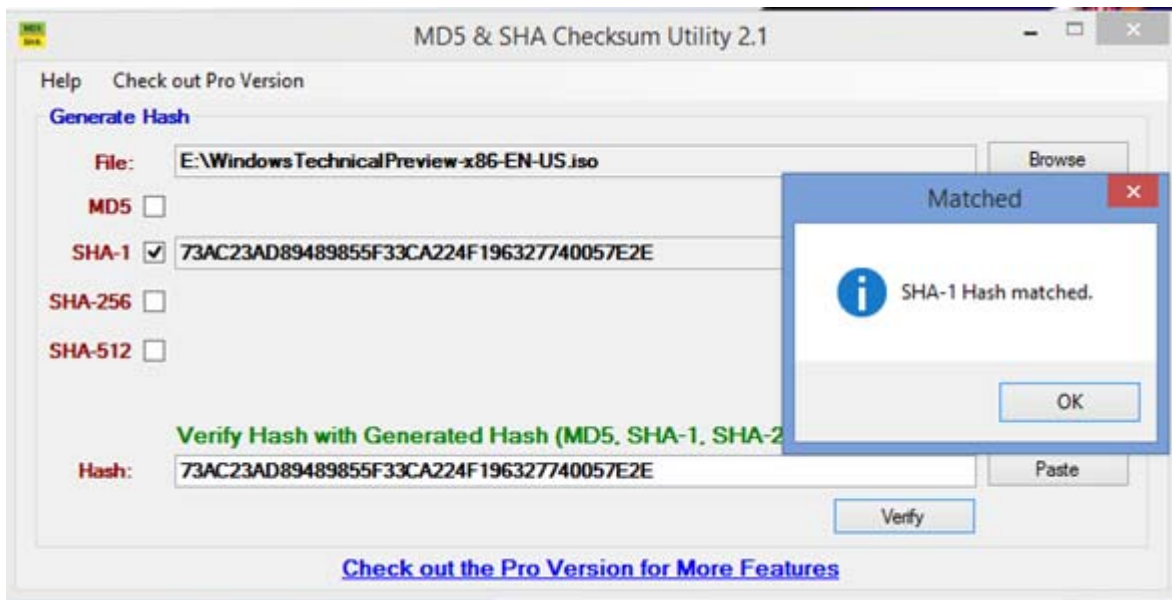
Checking Hash Sums *by Alan German*

Normally, I don't bother verifying files that I download to check that they are not corrupt. They are usually installation files for software, or PDF files (like OPCUG's newsletter!) My practice is to run the installation routine, or load the PDF file. If there's a problem, I will see an error message and then I just download the file again.

However, recently I have been installing a number of Linux distros – or trying to – and finding the odd ISO file that just wouldn't work. The problem here is that the downloads can be in excess of a gigabyte and, even with a high-speed connection, they take a while to download. And, then there is the time required to burn the ISO file to a bootable USB, and that needed for the installation. When the latter fails in mid-stream, after all that effort, one wishes that one had indeed checked the download!

So, when I decided to give the Windows 10 Technical Preview a try, since the download was almost 4 GB, I decided that it really would be prudent to check the file before trying to install it.

The process was simple, An SHA-1 hash value for the file was posted on Microsoft's web site. All that was then required was to run the MD5 & SHA Checksum Utility, specify the ISO file and check off the requirement for an SHA-1 hash, and wait for the utility to calculate the checksum for the file.



The downloaded hash was then cut and pasted into the box at the bottom of the program's window, the Verify button pressed and – voilà! - a successful file download was confirmed.

Bottom Line:

MD5 & SHA Checksum Utility (Freeware)

Version 2.1

Raymond Lin

<http://raylin.wordpress.com/downloads/md5-sha-1-checksum-utility/>

OPCUG Free Software Guide – Part 55

Compiled by Alan German and Jeff Dubois

This guide features an annotated list of free computer programs. The software mentioned has not been reviewed (except where noted) nor have any tests necessarily been conducted. Consequently, no guarantees are provided that the individual programs will perform as described. Rather the list of available software is provided for the information of our members who may find one or more of the programs useful.

PageDefrag

Using advanced techniques, PageDefrag provides what commercial defragmenters cannot. It will show how much fragmentation is in the paging files and registry hives, and allow you to defragment them. Issues with these files can be a leading cause of performance degradation related to fragmentation in the file system

Current Release: Version 2.32

Web Site: <http://preview.tinyurl.com/6fb3kqg>

WinUtilities Free Edition

This collection of tools lets you supercharge your PC's performance, enhance its security, tweak and optimize its settings, and customize and personalize your screens. There are cleaners, defragmenters, and optimizers for both hard drives and the registry. Other features include a memory optimizer, secure file deletion, recycle bin shredding, maintenance task scheduling and file recovery.

Current Release: Version 11.22

Web Site: <http://preview.tinyurl.com/ljo22d9>

USB Guardian

Whenever a USB device connects to your system, this program runs in the background to scan for and disable any files that would run automatically. This prevents malware from running without your knowledge. You can easily unlock trusted files through the program's interface and enable your USB drive to run normally.

Web Site: <http://www.usb-guardian.com/>

FastStone Image Viewer

This user-friendly image manager has a nice array of features that include image viewing, comparison, resizing, cropping, retouching, red-eye removal, colour adjustments, and the ability to create slideshows. It supports all major graphic formats such as GIF, JPG and PNG, and popular RAW file formats.

Current Release: Version 5.2

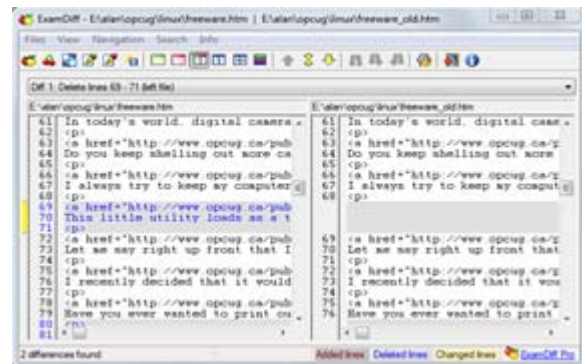
Web Site: <http://www.faststone.org/FSViewerDetail.htm>

ExamDiff

A freeware tool for text file comparison that is quick and very simple to use. A two-window display shows the contents of both files with any differences highlighted.

Current Release: Version 1.9

Web Site: http://www.prestosoft.com/edp_examdiff.asp



VideoPad

This is a fully-featured editor for creating professional quality videos in minutes. Drag and drop video clips for easy editing. Apply effects and transitions, adjust video speed, and more. Making movies has never been easier.

Web Site: <http://www.nchsoftware.com/videopad>

Password Safe

Using this password database utility, users can keep their passwords securely encrypted on their computers. A single combination unlocks them all.

Current Release: Version 3.34.1

Web Site: <http://sourceforge.net/projects/passwordsafe/>

Star Trek Online

Here, the Star Trek universe appears for the first time on a truly massive scale. Players take the captain's chair as they command their own starship and crew. Explore strange new worlds, seek out new life and new civilizations, and boldly go where no one has gone before!

Web Site: <http://store.steampowered.com/app/9900/>



OTTAWA PC NEWS

Ottawa PC News is the newsletter of the Ottawa PC Users' Group (OPCUG), and is published monthly except in July and August. The opinions expressed in this newsletter may not necessarily represent the views of the club or its members.

Member participation is encouraged. If you would like to contribute an article to Ottawa PC News, please submit it to the newsletter editor (contact info below). Deadline for submissions is three Sundays before the next General Meeting.

Group Meetings

OPCUG meets on the second Wednesday in the month, except July and August, at the 7:30 p.m. **Auditorium of the Canada Aviation and Space Museum**, 11 Aviation Parkway, Ottawa. Meetings are 7:30–9:00 p.m. and Special Interest Groups (SIGs) go until 10 p.m.

Parking is available at the museum for a flat fee of \$3 after 5pm. Limited street parking is available for free. Details at <http://opcug.ca/public/regmtg.htm>

OPCUG Membership Fees: \$25 per year
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(vacant)

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And if you decide you do not need the printed version mailed to you anymore, simply let Mark Cayer (membership chairman) know. He can be reached at general meetings, as well as by e-mail at Mark.Cayer@opcug.ca. You might want to wait until you have successfully received at least one issue electronically before opting out from the printed version.

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