PRODUCT REVIEW

herdProtect   *by Chris Taylor*

According to Sophos, a U.K.-based security firm, there are over 250,000 new, unique pieces of malware *per day*. That is tough for anti-malware companies to deal with.

Consider the delays in getting protected from new malware. Your anti-malware vendor must get a sample, develop a signature to identify it, and get updated signature files delivered to you. Then think of whether you ever received an email that claimed "your package could not be delivered" and urged you to see an attached file for details. It was probably a new piece of malware spammed to the world for a couple of hours. The attacker's aim is to infect

your computer before your anti-malware company can get you an update that will block it.

Defence in depth remains the best way to deal with the possible failure of any one security layer. Anti-malware remains important, along with firewalls, anti-spyware, patching for security vulnerabilities, and caution.

Major anti-malware vendors are changing their products in the face of rapidly spreading malware. One way is to take a hash, which uniquely identifies a file in (typically) 64 bytes, of any file downloaded from the Internet and send the hash in real time to the anti-malware vendor.

The vendor can then try to match the hash to the hashes of known malware. This can help detect new malware before you get updated signature files.

Knowing my anti-virus vendor might not be first to detect any particular new malware, I have used the free service VirusTotal.com to test an unknown file for malware against many anti-malware engines. *Fig.1 – VirusTotal.com* shows the results of such a scan. Note that I don't think Sophos (one of 5 anti-malware engines to detect this particular sample) is necessarily better than AVG (one of 52 engines that didn't detect it.) The next new malware on the Internet could have a different vendor picking it up first. The point is that there's great value in having multiple anti-malware scanning engines examine files.

Fig.1 – VirusTotal.com

SHA256:	8e5845e0e3a203ddecf8fb6bfa252e8913da3f73f4d6681984d5b1c8d7892422		
File name:	live-842000_12-17-2014-PE-E.zip		
Detection ratio:	5 / 57		
Analysis date:	2015-02-24 15:41:32 UTC (0 minutes ago)		

Antivirus	Result		Update
CAT-QuickHeal	(Suspicious) - DNAScan		20150224
K7GW	Trojan (700001211)		20150224
Qihoo-360	HEUR/QVM20.1.Malware.Gen		20150224
Sophos	Mal/Generic-S		20150224
Tencent	Win32.Trojan.Downloader-pdf.Auto		20150224
ALYac	✔		20150224
AVG	✔		20150224

Next Meeting: WEDNESDAY, September 9th, 2015

September Raffle

For the September raffle, we have a really special prize – a 7" Android tablet computer!

The UbiSlate 7Ci Android tablet runs Android 4.2.2 (Jelly Bean) and weighs only 320 grams. It boasts a 7" TFT touchscreen, a 1.0 Ghz Cortex A8 processor with HD video co-processor, 512MB memory and 4GB internal storage (expandable with a micro-SD card to 32GB). Equipped with WLAN WiFi 802.11b/g/n connectivity, miniUSB, built-in microphone, headphone jack, built-in speaker and a front-facing camera. The UbiSlate 7Ci will meet the average user's needs in mobile connectivity.

For details see http://ubislate.ca/product.php?prodid=1

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.

Don't miss out on your chance to win this terrific raffle prize!

Coming Up…

➤**Wednesday, September 9th, 2015**
Speaker: Colin Smith
Topic: Microsoft Surface and Windows 10 – Better Together

Colin and David will talk about Surface, deployment & provisioning, the Windows Store, Improving the user experience, and what's new in Windows 10 to enhance the Surface experience.

Colin Smith is the Manager of the Microsoft Consulting Practice at Cistel Technology Inc. and is a frequent author and presenter. He has over 20 years of experience deploying Microsoft-based solutions with a focus on mobile, desktop, and data center management.

David Smith is an IT consultant who specializes in Windows infrastructure. As the co-host of the Surface Smith's podcast David spends much of his time with Colin learning about the Microsoft Surface, and Windows 10.

Wednesday, October 14th
Speakers: Shelley Robinson & Andre Dalle
Topic: Your ISP & Privacy

Changes in Canadian law (and corresponding judicial decisions) have influenced what ISPs must or may share with individuals alleging copyright infringements or the authorities investigating criminal activities. Shelly Robinson (Executive Director) and Andre Dalle (System Administrator) will discuss these issues insofar as they pertain to the National Capital Freenet as an Internet Service Provider.

Wednesday, November 11th
Speaker: Art Hunter (B.Eng.(Mech), Ph.D. (Aero))
Topic: Windows 10 - An End-User's Evaluation

Art Hunter began his career in the development of Telesat Canada's Anik A and the Hermes communication satellites. In the '80's, he became the NRC's Project Manager for the remote manipulation arm (Canadarm) for the Space Shuttle. Art has developed hardware, software, drivers and firmware since the mid-80s and has worked as a consultant for many Canadian companies in their R&D programs. Art continues to be an avid computer enthusiast, regularly evaluating new software and is familiar with the instabilities of software development.

With Microsoft poised to release Windows 10 later this summer, many users will be eager to know what's under the hood in Microsoft's newest operating system. Art Hunter, long-time computer enthusiast, has been using various incantations of the Windows 10 Preview since its inception and will be among the first to upgrade when Microsoft releases the new OS commercially.

2015 CALENDAR

Meetings	Date	Time and Venue
OPCUG General Meeting	Wednesday, September 9th	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, September 9th	Immediately following the OPCUG General Meeting.
Linux SIG	Wednesday, September 9th	Immediately following the OPCUG General Meeting.
Beer BOF (Wing SIG East)	Wednesday, September 9th	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).

PRODUCT REVIEW

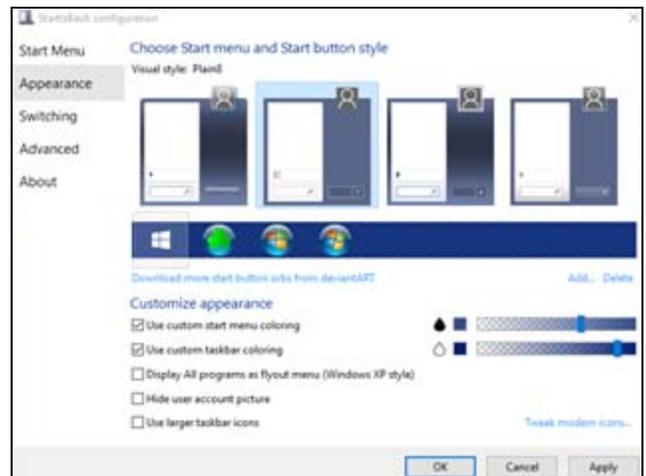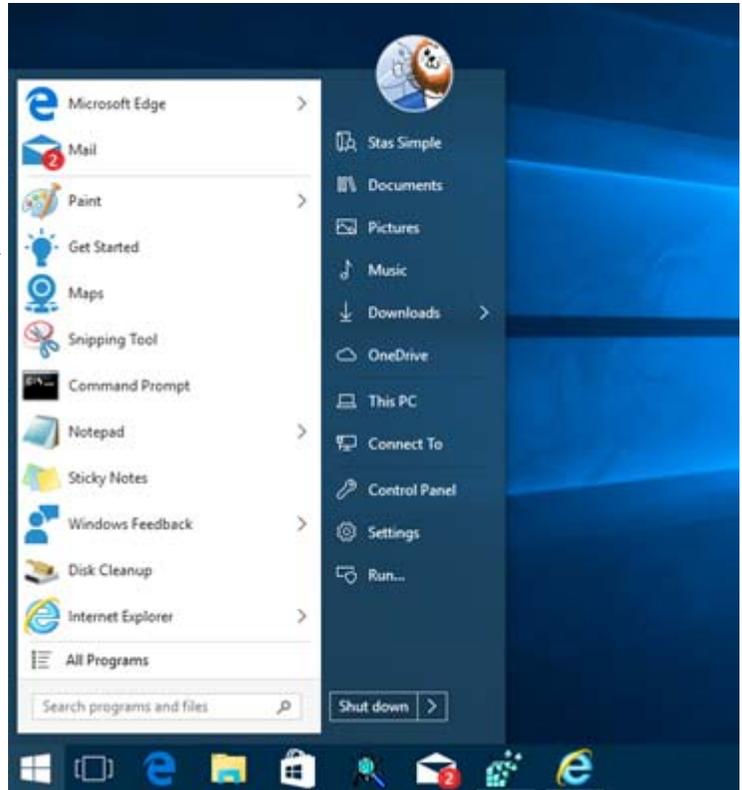## StartIsBack : Easing the Transition to Windows 10 *by Jeff Dubois*

You'd pretty much have to be living in a cave not to have been exposed to all the hype about Microsoft's release of Windows 10 and how Windows 7 (and later) customers can receive a free upgrade. If you've become accustomed to the Windows 8 and 8.1 UI, then the transition to Windows 10, though not without change, will be somewhat easier than those who decide to make the switch from Windows 7 to Windows 10. A number of writers have characterized Windows 10 as representing a "return to the Start menu". Having once sat through *Return of the Killer Tomatoes*, I can unequivocally state that it was, in no way, a qualitative improvement over the original. I feel a similar polite unenthusiasm towards the Windows 10 Start menu. It is an improvement over the atrocity of Windows 8 and, arguably, that of Windows 8.1, but if you're a Windows 7 user, unfamiliar with Microsoft's new UI, I remain unconvinced that the Windows 10 Start menu is either an improvement or a return. Not surprisingly, there are a plethora of *Start Menu Replacement programs* which are readily available to fill the void left by Microsoft's decision to so radically change the UI in the first place. The emergence of Windows 8 brought with it a number of free third-party start menu replacement programs including ViStart (http://lee-soft.com/vistart/), Start Menu 8 (http://www.startmenu8.com/index.html), Pokki (https://www.pokki.com/), Classic Shell (http://www.classicshell.net/), and Start Menu Reviver (http://www.reviversoft.com/start-menu-reviver/) to name just a few. Without undermining the value of free and open source alternatives, there are

occasions where affordable third-party pay applications offer the best solution. StartIsBack, in my view, is one such program and one which PCWord, in a Lincoln Spector article entitled *The Best Windows 8 Start Menu Programs* asserts that "StartIsBack should be your first choice". Not only does StartIsBack look almost identical to the last official version of Microsoft's start menu, but it behaves like the Windows 7 start menu as well. StartIsBack places both recent and pinned applications onto the start menu and the familiar Search box is present as you're accustomed to allowing quick access to indiced files and email.

Highly configurable, StartIsBack allows a host of options including control over menu hotkeys, switching between the Microsoft Start Screen and traditional Start Menu, as well as appearance options. At the very affordable price of $2.99 for a single license key, $4.99 for a 2-key license or $9.99 for 5-key license, StartIsBack is certainly worth installing and evaluating for the free 30-day period.

Courtesy of the folks who created StartIsBack, we have a 5-user license pack for StartIsBack which will be given as a door prize at this month's meeting.

Send an email with JavaScript *by Jocelyn Doire*

We have seen several articles and presentations on how to create simple web pages, but when Jeff Dubois asked me to create a web page for his "Technology Rescue Initiative", I thought no problem, I've already done it a number of times already for our silent auctions; but then he suggested to have an email link for each of the items, well, that I knew was going to be a bit of a problem, but also an opportunity to expand my skills.

All web pages use HTML to add elements to the page like headings, paragraphs, links, images, and so on. Most web pages also use CSS to embellish the content like selecting fonts, colours, spacing, and so on. In my case I needed to add a third layer to customize those email links, and for that I needed to use JavaScript. It has been a very long time since we have seen any programming info in an OPCUG newsletter, I hope this article won't turn off too many people.

I had a number of objectives:
1) it's easy for spammers to harvest email addresses from a web page, so I needed to obfuscate the address to hide them from the spammers, but not from the users.
2) each email needs to be customised to include a descriptive subject and a description of the selected item.
3) there are a lot of items, so the code needs to be fairly efficient and easy to customise for each item.

To achieve those objectives I need to write some HTML code to create the email link and some JavaScript programming to customize the link for each of the items offered.

To create an HTML email link, all I need is something like the following line, where the <a> is an anchor tag that indicates that what follows is a link, the "href" says where that link will go, the "mailto:" says it's a link to an email address, and finally the "click here to email" is some text to display for the user:

```
<a href="mailto:johndoe@example.com">click here
to email</a>
```

All JavaScripts start and end with:

```
<script type="text/javascript">
</script>
```

In order to make it harder for the spammer, I cut the email address into little pieces by creating multiple variables with the command "var" and assign them a piece of the address:

```
var addr1 = "mail";
var addr2 = "to:";
var addr3 = "johndoe";
var addr4 = "@example";
var addr5 = ".com";
```

I then assemble all those pieces with the HTML code and write them into my web page:

```
document.write('<a href="' + addr1 + addr2 +
addr3 + addr4 + addr5 + '">');
document.write('click here to email</a>');
```

Some old browsers can be confused by the JavaScript code, so the code is often included into HTML comments.

```
<!--
//-->
```

Here's the final JavaScript program to include an obfuscated email link in my web page.

```
<script type="text/javascript">
    <!--
    var addr1 = "mail";
    var addr2 = "to:";
    var addr3 = "johndoe";
    var addr4 = "@example";
    var addr5 = ".com";
    document.write('<a href="' + addr1 + addr2 +
    addr3 + addr4 + addr5 + '">');
    document.write('click here to email</a>');
    //-->
</script>
```

Note that the above program uses double quote and single quote signs, for example '<a href="', where the single quotes indicate a JavaScript text string, which contains an HTML code and the first double quotes indicating the beginning of an HTML link text string.

The second objective was to include a subject and description. For that all I need is to add "?Subject" and "&body" after the email address, plus the text I want, as shown in the following example:

```
<script type="text/javascript">
    <!--
    var addr1 = "mail";
    var addr2 = "to:";
    var addr3 = "johndoe";
    var addr4 = "@example";
    var addr5 = ".com?Subject=Subject Text";
    var addr6 = "&body=Item description";
    document.write('<a href="' + addr1 + addr2 +
    addr3 + addr4 + addr5 +  addr6 +'">');
    document.write('click here to email</a>');
    //-->
</script>
```

herdProtect *(Continued from page 1)*

While VirusTotal.com is an excellent tool for checking a single file, it can't be used to scan all files on your computer. Wouldn't it be great if there was a service that could efficiently scan all files on your computer using multiple anti-malware engines?

herdProtect from Reason Software is a free anti-malware service that does exactly that. It can scan all the files on your computer using 68 different anti-malware engines. The big ones are represented; Avast!, AVG, BitDefender, eSet, McAfee, Microsoft, Panda, Sophos, Trend, etc. All 68 are listed at the herdProtect web site.
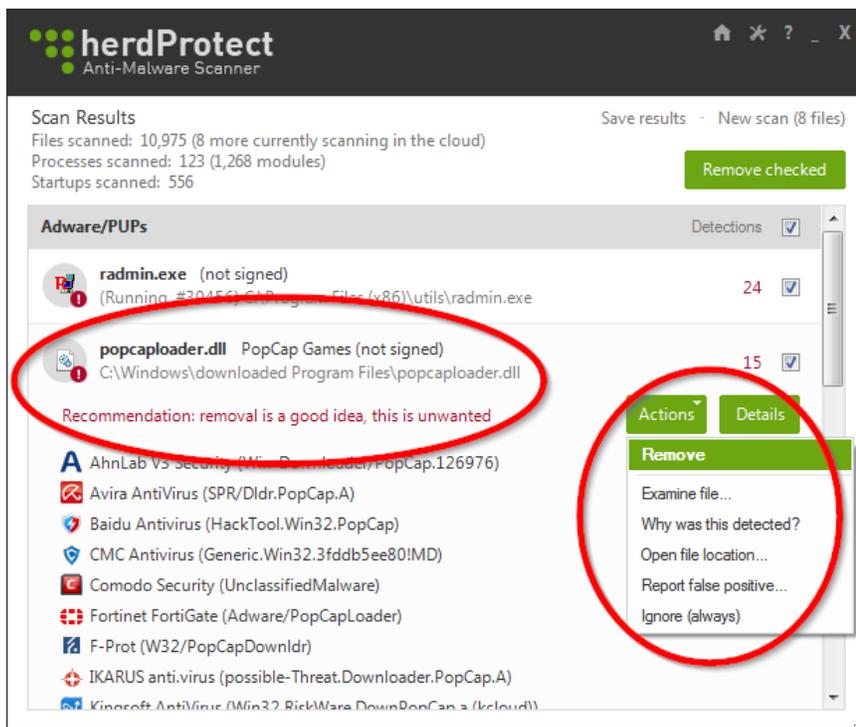

Fig.2 – a PUP

I wondered how it would be possible to scan all your files using multiple anti-malware engines in a reasonable time-frame. The typical means of scanning files is to download an anti-malware engine to your computer and run it against all your files. I couldn't imagine doing this 68 times.

herdProtect takes a hash of all the executable files on your computer and

send the hashes to the herdProtect server where they are compared to the hashes of known files – good and bad. If no match is made, the file in question is examined in more depth to find out how it behaves. If required, the actual file will then be sent to the herdProtect server to be checked against all 68 anti-malware engines.

Once the scan finishes, which on my computer took about an hour, you are presented with a list of files that were identified as bad. You can click any line to get information about which anti-malware engines found the file to be infected. There are buttons to delete the file or to get additional details. (*Fig.2 – a PUP*)

I am happy to say that although the program flagged a few files on my computer, there was nothing I was overly worried about. I had two flagged as "Adware/PUPs" – PUP being "Potentially Unwanted Program". True enough for my copy of Remote Administrator – if I had not installed it, a remote control program would certainly be of concern. The other was a DLL

associated with PopCap Games. I play games at Pogo.com and some of them are PopCap Games. If I want to play them, I will have the DLL on my computer. The lesson here is to not rush and assume everything identified by herdProtect should be wiped from your computer!

I also had 9 files on my computer flagged as Inconclusive". In each case only a single anti-malware engine identified the file as a problem. This, and given that the files all came from trustworthy sources and had been on my computer for some time, were pretty certain signs that they were false positives. While herdProtect has some built-in smarts for detecting many false positives, it seems to have missed on these 9.

You will almost certainly run into cases where the scan reports "*xx* more currently scanning in the cloud". At this point the client software has uploaded copies of the files to the herdProtect servers where they will be analysed by all 68 anti-malware engines. The next time you run a scan, hopefully the files will have been checked and you will then know if the files are okay or not. I say *hopefully* because after weeks of use, there were always some files still "scanning in the cloud".

I did run into a strange thing. As I mentioned, herdProtect identified 9 of my files as *Inconclusive*, an assessment that can result from very few of the anti-malware engines identifying a problem. Eight were part of the program *DxO OpticsPro 10*, a well-known program for editing digital photos. The 9th was the *Camera Window* program distributed with just about every Canon camera on the market. For all 9, only a single anti-malware engine identified the file as problematic. Yet for all 9, when I uploaded them to VirusTotal.com, they were given a clean bill-of-health – including by the *exact* same engines that had declared them as bad in herdProtect.

herdProtect *(Continued from page 5)*

I have no idea what to make of this.
For the Remote Administrator program (identified by 24 engines in herdProtect as *Adware/PUP*) and the PopCap DLL (identified by 15 engines in herdProtect as *Adware/PUP*), the results were more reassuring. There was only a single instance where an anti-malware engine in herdProtect identified the file as bad and the corresponding engine in VirsuTotal.com disagreed.
The idea of your executable files being uploaded to herdProtect's servers might raise some hairs on the back of your neck. As well, the very fact that the folks who run herdProtect now know all the programs you run on your computer may concern some. You might want to read the privacy policy on the herdProtect web site and decide if you want to trust them or not.
herdProtect's web site mentions *Protection Platform* which is "coming soon" and will "Scan and remove malware with real-time protection." To me, that is when things could get very interesting. If you could do away with your single-vendor anti-malware program and have *every* new program that arrives at your computer checked in real time against 68 anti-malware engines, *before* they get a chance to infect your computer … wow!
I can think of at least one instance where *Protection Platform* might be problematic. herdProtect depends on an active connection to the herdProtect servers. What if they are down or unreachable for any reason? Is all your anti-malware protection gone? Only time – and the release of *Protection Platform* – will tell.
herdProtect is developed by Andrew Newman, who was the co-founder and chief software architect for GIANT Company Software, makers of one of the most respected anti-spyware programs on the market in its time. In fact, Microsoft bought the company and used it as the basis for Windows Defender (which became Microsoft Security Essentials, and with Windows 8, Windows Defender again.) Newman plans on keeping all versions of herdProtect free. The program itself is ad-free. The web site has a few ads and they accept donations via PayPal.
I think herdProtect is very valuable as a second line of anti-malware defence on top of your currently installed anti-malware. It is available as a regular installable program as well as a portable app not requiring installation.

Bottom Line:
herdProtect v1.0.3.0
Free
Reason Software
http://www.herdProtect.com

... JavaScript *(Continued from page 4)*

Finally, the third objective is to make the code efficient and simple to modify. That's where I really had to search the internet, and it was not easy because I simply didn't know what words to search for, it's only when I searched for "JavaScript email" that I started to get useful information. One of my problems was to find out how to call a JavaScript from an HTML tag. It turned out to be easy (isn't it always the case once you know the answer...). What I needed was to add the keyword JavaScript into an href tag, like the following:
            <a href="javascript:...

The second problem was to avoid repeating the same code over and over. For that I had to move the JavaScript into the <head> section of the web page, which contains instructions for the browser which are not displayed, and to write the JavaScript code as a function, which I called "emailItem()", by adding the command "function":
            function emailItem(Item) {...}

where "Item" is a parameter passed to the function, which will contain the description of the item.

Finally the last piece of the puzzle was to get the JavaScript to call the email client when the user clicks on the email link, and once again it took me a while to find the info. It turns out that all web browsers have many internal variables that are available to the JavaScript code, including one called "window.location". That variable contains the URL of the location of the current web page, but if you write to it with a valid URL, then the browser will start a new web page with the address indicated by the URL. So, here's the final JavaScript program that adds a line to assign the internal variable "window.location" with the full email address:

```
<script type="text/javascript">
function emailItem(Item) {
var addr1 = "mail";
var addr2 = "to:";
var addr3 = "johndoe";
var addr4 = "@example";
var addr5 = ".com?Subject=OPCUG's Technology Rescue Initiative";
var addr6 = "&body=" + Item;
window.location=addr1 + addr2 + addr3 + addr4 + addr5 + addr6;  }
</script>
```

And here's the HTML code that will call the JavaScript program above when the user clicks on the email link, to be inserted with each item's description:
  Pre-auction rescue

That was my answer to the challenge I got from Jeff, but maybe you can do better, or have noticed some problems with the above code, if that's case, I sure would like to hear about it.

To see the code in real life, simply check the source code for the OPCUG's Technology Rescue Initiative at:
http://opcug.ca/public/history/Auction/2015/rescue.html

For an extra challenge to the interested reader, how would you include the CSS counter(item) into the email? The challenge here is to copy the value of the CSS counter into the HTML code, and to pass that info to the JavaScript program, that's all... :)

OPCUG Free Software Guide—Part 58
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.

Sumo Paint
Use this on-line image editor without needing to install anything to your computer. Open images and edit them in your browser. Save the resulting files to your hard drive or store them in the cloud.
Web Site: http://www.sumopaint.com/home/

ShieldsUP!
Are there any open ports on your router that shouldn't be open, or file shares over the Internet that you didn't know existed? Steve Gibson's ShieldsUP! will scan your system and show you how to operate in stealth mode - so the bad guys on the Internet don't even know that you're there!
Web Site: https://www.grc.com

AppCleaner
Remove obsolete files, including temporary files, history, cookies, internet logs, from 2000 software programs. Free- up disk space and optimize overall performance.
Current Release: Version 3
Web Site: http://client.updatestar.com/en/appcleaner

MPEG Streamclip
If your video editing needs are modest, this utility will let you cut, copy, paste, and trim files. The program will open and play most video files, and let you convert them to other formats for use on a wide range of devices.
Current Release: Version 1.2
Web Site: http://www.squared5.com/

FreeOTFE
Free, on-the-fly, disk encryption. Create one or more "virtual disks" on your PC/PDA. These disks operate exactly like a normal disk, with the exception that anything written to one of them is transparently, and securely, encrypted before being stored.
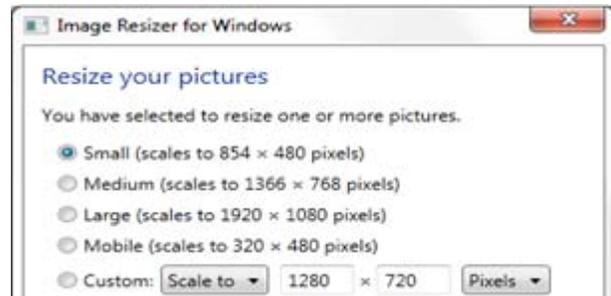Current Release: Version 5.21
Web Site: http://sourceforge.net/projects/freeotfe.mirror/

Image Resizer for Windows
This utility lets you resize one or more selected image files directly from Windows Explorer by right-clicking. Brice Lambson, the program's author, says: "I created it so that modern Windows users could regain the joy they left behind with Microsoft's Image Resizer Powertoy for Windows XP."
Current Release: Version 3
Web Site: http://preview.tinyurl.com/yfcp7gy

dupeGuru
Find duplicate files on your computer in minutes thanks to dupeGuru's fast, fuzzy-matching algorithm. You can filter the results in multiple ways, then delete, move, or copy the duplicate files.
Current Release: Version 3.9.1
Web Site: http://www.hardcoded.net/dupeguru/

StartUpLITE
Need an easy, and efficient way to eliminate unnecessary applications that start when you turn on your computer? By disabling or removing unnecessary entries, this utility can dramatically shorten your start-up time with just a few clicks of the mouse. Stop waiting and start computing.
Current Release: Version 1.07
Web Site: https://www.malwarebytes.org/startuplite/

Emsisoft Emergency Kit
The Emsisoft Emergency Kit contains a collection of programs that can be used without installation to scan for malware and clean infected computers. Extract the contents of the kit to a USB flash drive to create your own universal tool for scanning and cleaning infected PCs.
Current Release: Version 9.0.0.4700
Web Site: https://www.emsisoft.com/en/software/eek/

Treasure Treasure: Fortress Forage
Trixie and Troy need to combine their talents, think carefully, and blow things up to find all the treasures hidden in an abandoned castle.
Web Site: http://ishisoft.com/archives/56

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

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Linux / Open-Source SIG
    (vacant)

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How to get the OTTAWA PC NEWS by e-mail

Want to get the newsletter electronically? There are two formats available: plain text and Adobe Acrobat PDF. Simply send a message in plain text to **listserve@opcug.ca**. Leave the subject blank and in the body of the message, type: **subscribe NewsletterTXT** (to get the plain text version) or **subscribe NewsletterPDF** (to get the Adobe Acrobat PDF version).

To cancel e-mailing, send a message in plain text to **listserve@opcug.ca** and type: **unsubscribe NewsletterTXT** or **unsubscribe NewsletterPDF**

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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Within a couple of minutes you will receive a confirmation message from the listserver.

"Announcements" is a low volume list that the Board of Directors uses to get in touch with the membership. Subscribers can expect at least one message per month – the meeting reminder that goes out a few days in advance of the general meeting. Other than that, the only time it is used is when the Board feels there is some important news that should be brought to the attention of all members.