



OTTAWA

PC NEWS

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ARTICLE

Windows 7 End of Life—Contingency Planning II

by Alan German

In Part I of this series of articles (see the [February newsletter](#)), we noted that Windows 7 reached end-of-life status on January 13, 2015 but will receive extended support until January 14, 2020. A contingency plan was suggested which involved trying out, and possibly installing, a Linux distribution as a replacement operating system. This article will show you how to create a Live-disk with which to boot and try out Linux!

There are lots of Linux distros out there but, for our present purposes, we will settle on Linux Mint 19.1 Cinnamon which is the latest release of this software. Mint is a derivative of Ubuntu Linux. Ubuntu is a well-known distro in its own right, with excellent web-based support provided by its user base. Because the packages are so similar, almost all of the solutions applicable to Ubuntu can also be used with Mint. However, the choice of Mint is largely due to its use of the Cinnamon desktop environment. As we will see, while this is somewhat different from the Windows 7 desktop, there are many similarities which will ease the transition to Linux.

One additional choice that we have to make is to download either a 32-bit or 64-bit version of the Linux distro. Obviously, this will depend on the computer architecture on which Linux is to be installed. For the present article, our test unit is to be a Dell Inspiron 6400 – a machine from the dark ages – that currently has Windows Vista installed. The CPU is a Centrino Duo T7200,

which is a 64-bit chip, so we can install 64-bit Linux Mint. (But, if you are not sure about your particular machine, the 32-bit version of Linux Mint will work just fine on 32-bit or 64-bit systems.)

Let's use Google to search for Linux Mint. The first hit will probably be "Linux Mint: Main Page". Next, select "Download" which will take us a set of links for various versions of Mint 19.1 – Tessa. We will select "Cinnamon 64 bit" and go to the next page where various download mirrors (file servers) will be listed. Clicking on the link for any download mirror will result in the file `linuxmint-19.1-cinnamon-64bit.iso` being downloaded.

Next, we need to burn this ISO file to a bootable disk. Note that the ISO file has a size of 1.9 GB so the bootable medium must be large enough to store the unpacked files. A 4 GB USB drive, or a DVD, may be used for this purpose, depending on which medium can be used to boot the target computer.

My test machine is capable of booting from a USB drive or a DVD, however, my preference is to create a bootable USB as this will boot faster and the USB drive can eventually be reused. I use Rufus (https://rufus.ie/en_IE.html) to create the bootable USB drive. The program's operation is very simple. It is only necessary to select the target USB drive as the "Device", and the downloaded ISO file as the "Disk or ISO image". All of the other default entries are sufficient to create the bootable disk.

Had I needed to create a bootable DVD, my choice would have been to use Ashampoo Burning Studio Free (<https://tinyurl.com/y85gf6uh>) using the setting "Disk Image – Burn Image".

We now have a "Live-disk" with which to run Linux Mint. The Live-disk is fully contained. We can boot the Linux operating system from this disk, which will load the desktop environment, and allow us to use all of the included applications. And, all of this will occur, without making any changes to the hard disk on our computer. So, it really is a case of try before you "buy"!

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Next Meeting: **WEDNESDAY, March 13th, 2019**

March Raffle

Courtesy of Glasswire, we have a license for their namesake program.

Elite Edition Glasswire is a sophisticated firewall product that shows who or what your PC is talking to. It allows you to detect malware, badly behaving apps, and bandwidth hogs, then block their connections. It warns you of network related changes to your PC that could indicate malware. Glasswire can also alert you when new unknown devices join your WiFi.

For a review of Glasswire, see <http://opcug.ca/Reviews/GlassWire.html>

Glasswire Elite edition can be installed on up to 10 computers.

Tickets are \$1 for one, \$2 for three, or \$5 for ten.

Coming Up...

NOTE: The March and April meetings will be held in one of the back rooms at the church, **not the main sanctuary**. Signs will be posted at the main entrance.

→Wednesday March 13, 2019

We will hold our **AGM** (~15-20 min) after which we will have the following speaker:

Speaker: Lawrence Patterson, OPCUG

Topic: Multi-Factor Authentication

Multi-Factor Authentication, why is it more than just a password, when is it beneficial and why it may not be the answer to everyone's security concerns. Join Lawrence Patterson (ISSO, ITIL & 2 decades supporting peoples' personal / professional technology needs) as he reviews why multi-factor authentication has become an important security tool, examples what is available (as you may be already using it) and just as important, separate the FUD (fear, uncertainty and doubt) between what is being sold and what is currently practical.

For meeting updates and additional details, visit <http://opcug.ca/regmtg.htm>.

Did you know that the February meeting was canceled due to severe weather?

If you were caught unaware of the cancellation, you will want to subscribe to our Announcements list and be alerted of such cancellations or important changes. For instructions on how to subscribe, see <http://opcug.ca/GoogleGroups.html>.

You can always check the OPCUG website before attending a meeting, but it may not be updated in a timely manner whereas an announcement will be sent immediately upon knowledge of an event.

April 10, 2019

Topic: Basic digital photo editing using free software

Speaker: Linda Buske

May 8, 2019

Topic: Effective backup strategies

Speaker: Alan German and Chris Taylor, OPCUG

June 12, 2019

Annual Pizza Night and Presentation (TBA)

Oct 9, 2019

Topic: Members' Favourites

Speakers: Lawrence Patterson, Bob Walker (& Bob Herres), Alan German, Chris Taylor, OPCUG

2019 CALENDAR

Meetings	Date	Time and Venue
OPCUG General Meeting	Wednesday, March 13 th	7:30 p.m. at the Riverside United Church, 3191 Riverside Drive, Ottawa. Parking is free. OC Transpo bus #87 stops nearby. Visit http://opcug.ca/regmtg.htm for directions.
Q&A Session	Wednesday, March 13 th	Immediately following the OPCUG General Meeting.
Beer BOF (Wing SIG East)	Wednesday, March 13 th	10:00 p.m. (after the Q&A) at the Riverside Pub, 3673 Riverside Drive. Turn left onto Riverside Dr. from the Church.

CLUB LIFE

Review of OPCUG 2018 Financial Records

I reviewed the Treasurer's financial records for the year 2018, and found them to be in good shape.

The dollar amounts agree with those in the Treasurer's financial report submitted to the board.

I made some suggestions to improve transparency.

There were a few minor errors with the reporting of some transactions. These were dealt with to my satisfaction by the Treasurer.

Thanks to Alan German for a job well done.

*Richard Aylesworth,
February 2019*



OPCUG SiteFinder

Users of the club's web site might have noticed a change in our Android-app offerings. In particular, rather than providing both portrait and landscape versions of the Android app that will connect directly to our web site, there is now a single app to download – SiteFinder.apk.

The new app will handle both portrait and landscape orientations on your smartphone, and it also supports zooming of the display window.

Since this app is not posted to the Play Store, Google is very likely to warn you against installing "third-party" apps. But, rest assured, you have downloaded the APK file directly from OPCUG's web site so it is perfectly safe. However, you need to install the app through a process known as "sideloading".

Essentially, this means telling your phone's security system that it is OK to "Allow installation of apps from unknown sources". All this means is that the source is unknown to Google, it's not unknown to you! The specific manner in which this setting needs to be modified is dependent on your model of smartphone and its version of Android. You may be able to navigate to Settings – Security – Unknown sources to find the toggle. If not, check your phone's user's manual or seek specific instructions through a web search.

Download **SiteFinder** from our Home page at opcug.ca.

The screenshot shows the OPCUG website with the following elements:

- Header:** OPCUG logo and "Ottawa PC Users' Group" title.
- Navigation Menu (Left):** Meetings, Membership, Q&A Presentations, Q&A, Resilient, Newsletters, Executive, Honour Roll, History, Presses, Local Shows, Google Groups.
- Main Content:**
 - Welcome message: "Welcome to the Ottawa PC Users' Group (OPCUG). We are a not-for-profit organization located in Ottawa, Ontario. Our motto is *Users Helping Users*, a task we have undertaken for more than 35 years."
 - Meeting info: "The OPCUG operates 3 Google Groups for disseminating and sharing information. [Here's how to sign up.](#)"
 - Next Meeting(s): "We have moved! As of September 2018, we meet at the Riverside United Church near Mooney's Bay."
 - Wednesday March 13, 2019
 - NOTE: The March and April meetings will be held in one of the back rooms, **not the main sanctuary**. Signs will be posted at the main entrance.
 - We will hold our **annual AGM** (~15-20 min) after which we will have the following speaker:
 - Topic: Multi-Factor Authentication
 - Speaker: Lawrence Patterson, OPCUG
 - Multi Factor Authentication, how is it more than just a password, why is it recommended, how is it implemented and what are its limitations.
- Newsletter:** "The February issue of the newsletter is now available." Includes a thumbnail for "PC NEWS" and links to "Download PC News, February 2019" and "Read our previous newsletters".
- Footer:** "Download our App for Android" button with a red arrow pointing to it, and social media icons for Facebook and Twitter.

PRODUCT REVIEW

Printing File Listings in Free Pascal by Alan German

In the previous two articles in this series we have seen how to run the Free Pascal Compiler (FPC) natively, in a command window, and also in Lazarus, an integrated development environment (IDE). Now it's time to see if we can do some (almost) useful programming using Free Pascal.

One of the programs I developed many years ago using Turbo Pascal was named FileList. Its purpose was to read program source code files and print them out in a paginated format, with a header documenting the name of the source code file, and a page number to keep track of multi-page listings. The final version of this program accepted a list of source code files and printed a copy of each file in turn.

Today, of course, printing a source code file is a trivial task for a modern word processor where page margins, headers and footers, can all be customized to achieve the desired look. And, printing multiple files in batch mode is also fairly easy using a macro. So, why bother to resurrect a Pascal program to do the same thing? Well, because we can of course! Or, at least we can try...

The essence of the original Turbo Pascal FileList program was to read a line from the source code, send the line to the printer, and increment a line counter by one. The line counter variable kept track of how many lines had been printed on any one page and, once the desired page length had been reached, other code performed the "magic" of setting up a new page header which included the source file name and the page number. The Pascal code extract to read and write the source code file was as follows:

```

FileList Version 1.0
Listing of file <FILNAMIN.PAS>
----- Page 1
procedure FilNamIn(var filename: str14; extension: str3);
{Author: Alan German}
{Version : 1.0 }
{
This procedure reads a file name and provides a default
extension if no extension is supplied as input from the
keyboard.

The default extension is supplied as a parameter in the call
for the procedure.

The filename is returned as a text string which includes the
drive (if specified) and the extension.

Using the example of a default extension of .DAT, the
procedure call takes the form:
      FilNamIn(filename, 'DAT');
}
var
len: integer; {length of filename string if required}
begin
  {read in the filename string}
  read(filename);

  {if there is no period in the filename string then insert a
  period and the default extension after the filename}
  if Pos('.',filename)=0 then
    begin
      len:=Length(filename);
      Insert('.'+extension.filename,len+1);
    end;
end;

```

```

{print a page of the file}
while (nlines<62) and (not EOF(Fil)) do
begin
  readln(Fil,line);
  writeln(Lst,line);
  nlines:=nlines+1;
end;

```

Note the relative simplicity (remember these were the days of DOS!) of reading a line of text from a file (Fil) and writing the same line to the printer (Lst).

Regrettably, FPC does not appear to handle today's laser printers with anything like the same straightforward approach. Instead, from what I discovered, it is necessary to use a Tstring object (a sort of "string array") to store multiple lines of text which can then be "painted", as a block, onto the printed page.

In fact, I used multiple Tstring variables. An "aLines" variable was used to initially store the lines of the page header, while a "bLines" variable stored all the lines of text from the source code file. The trick was then to combine the two Tstrings by appending a fixed number of lines of the source code from the bLines array to the page header in the aLines array. The completed aLines array then formed a single page of the file listing and could be sent to the printer.

The process was then repeated by re-initializing the aLines array with the page header, adding the next sequence of lines of source code, and sending the next complete page to the printer, and so on until the bLines array was exhausted.

The page header was essentially created with the following code snippet:

(Continued on page 5)

Free Pascal (Continued from page 4)

```

aLines.Free;
aLines := TStringList.Create;
aLines.Add(' ');
aLines.Add(' ');
aLines.Add('Filelist Version 2.0');
aLines.Add('Listing of file');
aLines.Add('_____');
aLines.Add(' ');
aLines.Add(' ');

```

The source code file was read into the bLines array using:

```

bLines := TStringList.Create;
bLines.LoadFromFile('test.pas');

```

Counters were used to keep track of the lines of source code that had to be printed on any given page and a for loop was used to append these to the page header:

```

For J := FirstJ to LastJ do
begin
  aLines.Add(bLines[J-1]);
  I := I + 1;
  count := I;
end;

```

Finally, a procedure call was made to print the completed page:

```
PrintStrings(aLines);
```

The PrintStrings procedure included settings for the page margins, and a calculated line height based on the available print area and the number of lines to be printed.

If all of the above sounds complicated – believe me – it is! I had to do a lot of web surfing in order to understand a little of what Tstrings are all about, and to find sample code for the PrintStrings procedure. And, that doesn't include figuring out which items have to be included in a "uses"

declaration in order to make everything work. (For example, printer4 Lazarus is one of the items that must be present in the uses statement before anything will print!)

So, while going back in time, and re-visiting a little of the Pascal programming language was fun, my bottom line is that the process is too time consuming to recreate my old Turbo Pascal program(s) in full in Free Pascal. Setting up LibreOffice Writer to print my Pascal source code programs took mere minutes, while wading through the vagaries of FPC and Lazarus to develop my test program took hours.

So, if you have a hankering to try Pascal programming, the Free Pascal Compiler and the Lazarus IDE are readily available for you to use. But, if you need to work on a heavy-duty programming task on today's machines, I suspect that there are much better tools available to do the job. However, this is not to say that there won't be a steep learning curve on any other programming language that you choose!



Word Tables Part 2 of 3

By Lawrence Patterson lawrence@opcug.ca

WORD TABLE BASICS & DON'T PANIC?

Great, we've shaken off our fears in trying something new and ready to make our Word documents punch into the readers' psyche to get your message out.

Once we plan out the document layout, separate from the content (you must think of these as two separate functions of your document) we start with a simple Insert Table function "Insert", "Table" and select the expected columns and rows.


Ok, I can see the sweat on your brow already, but keep it cool, just select the number of rows and columns that you think you'll need to get started. Any selection can be easily adjusted.

Let's start with 3 columns and 4 rows. Right away you're presented with a three evenly spaced columns to fit your page and 4 single line rows.

Next type in your information, using the Tab key to move from one cell to another (Note: "Ctrl+Tab" will allow you to indent within a cell.)

Note: as with all Office dynamic menus your cursor must be in the Table to allow the "Table Tools" menu to become visible.

At this point you typically find yourself saying I don't have enough columns. Easy, go to "Table Tools", "Layout", "Rows & Columns" and there you can "Insert Left" or "Insert Right". Checking out the tools you'll see how easy it is to insert or delete rows and columns

Once you have your information in place,  comes the formatting. Select your entire table by going to the top left and clicking on the and selecting "Table Tools", "Design" to select "Shading", "Borders" and "Table Styles" to automate the complete Table layout.

Next month, Table Tips & Tricks.

Take care,

Windows 7 End of Life *(Continued from page 1)*

To boot the live-disk, you will need to identify how to do this on your specific computer. Check the owner's manual for instructions, or search on Google for some appropriate advice. My Dell Inspiron simply requires pressing the F12 key as the machine is booting up. A temporary boot menu is displayed from which I can select to boot from the "USB Storage Device".

The boot process takes a little time as the operating system is loaded into memory. Some Linux commands scroll by on the screen, the Mint logo is displayed briefly and, finally, the desktop loads onto the display (see Figure 1).



Figure 1. Linux Mint desktop



Figure 2. Main menu

As shown in Figure 1, the default Linux desktop is somewhat Spartan. There are icons for a couple of file and folder locations ("Computer" and "Home"), and one labelled "Install Linux Mint". We will leave the latter icon untouched for now since this would commence the process of installing Linux Mint to our hard drive.

Along the bottom of the screen is a somewhat familiar task bar (termed the "panel" in Linux-speak). The main item of current interest is the green Mint icon in the bottom-left corner of the screen. As users of Windows might guess, this is Mint's "start" button that launches the system's main menu (see Figure 2).

When launched, the main part of the window has a list of software categories (i.e. All, Accessories, Graphics...), with the right-hand column listing the specific applications that may be launched from any given category. Clearly, with "All" selected by default, the list of applications is quite long. To focus in more sharply, let's select the Office category. Now the right-hand column will allow us to select from just the built-in LibreOffice suite of applications.

LibreOffice closely resembles Microsoft Office, albeit that the individual modules have different names. Writer is the word-processing program, Calc the spreadsheet, and Impress the presentation manager. All three modules function in a very similar manner to their MS Office counterparts – Word, Excel and PowerPoint. While the LibreOffice modules will use open-document format file types (odt, ods and odp) by default, they can also read and write Office files (doc/docx, xls/xlsx, and ppt/pptx). LibreOffice and MS Office are not 100% compatible but are close enough in both form and function for most purposes.

For basic Internet access, Linux Mint has both a browser (Firefox) and an E-mail client (Thunderbird) built in and ready to use. But, not so fast! Perhaps, when you booted up Linux Mint on your laptop, the "Wi-Fi Networks Available" message briefly popped up and then disappeared. Before you can use the browser, or set up your E-mail account, you need to establish a network connection. (Normally, this is done once and the connection set to establish itself automatically on boot-up from the hard drive.)

In the main menu (Figure 2), do you see the icons down the left-side of the window? The third one down looks like a couple of switches. This is the icon that will load the System Settings. From the latter window, navigate to Hardware – Network – Wi-Fi. Click on the name of your network in the list of Wi-Fi networks available and enter the appropriate password/phrase.

Now you can run LibreOffice Writer, surf the web using the Firefox browser, and check out any of the other available software that you would think you might use in Linux.

If everything works as advertised on your hardware, our next adventure will be to install Linux Mint in dual-boot mode alongside our current version of Windows. But, unless you feel brave (and want to double-click on that installation icon), you will have to wait for the next article in the series!

OPCUG Free Software Guide—Part 86

Compiled by Alan German

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.

Locate32

A desktop search engine that will find files and directories based on names stored in a database. Once file indexing of your hard drives has occurred, you can locate any desired file extremely quickly using the application's search form. The program is not meant to find text or specific data within files, but it has a primitive feature to do this.

Current Release: Version 3.1.11.7100

Web Site: <http://locate32.cogit.net/>



Greenfish Icon Editor Pro

A powerful, open-source, image editor with a clean and intuitive user interface. The program can be used as a general-purpose image editor, and provides professional features including layers and high-quality filters. It will also create icons, cursors, animations and icon libraries.

Current Release: Version 3.6

Web Site: <http://greenfishsoftware.org/gfie.php>

Autohotkey

A free, open-source scripting language for Windows that allows users to easily create small to complex scripts for all kinds of tasks such as: form fillers, auto-clicking, and macros. Define hotkeys for the mouse and keyboard, remap keys or buttons and autocorrect-like replacements.

Current Release: Version 1.1.29.01

Web Site: <https://autohotkey.com/>

LLMS

Produce music with your computer by creating melodies and beats, synthesizing and mixing sounds, arranging samples and much more. Playback a number of instruments, samples and plugins with a typing or MIDI keyboard in a user-friendly and modern interface.

Current Release: Version 1.1.3

Web Site: <https://lmms.io/>

Day Planner

This program is designed for Linux to help you easily plan and manage your time. It can record details of appointments, birthdays and more, and can make sure that you remember these important events by displaying timely reminders.

Current Release: Version 0.11

Web Site: <http://www.day-planner.org>



NetSurveyor

This 802.11 (WiFi) network discovery tool gathers information about nearby wireless access points in real time and displays it in useful ways. The data are displayed using a variety of different diagnostic views and charts. Data can be recorded for extended periods and played-back at a later time or reports can be generated in PDF format.

Web Site: <http://nutsaboutnets.com/netsurveyor-wifi-scanner/>

MyHeritage Family Tree Builder

This powerful but free genealogy software with tree syncing is used by millions of people worldwide. Your past begins with your family tree and it's easy to build one with MyHeritage. The minute you create a family tree, we'll begin searching for you. Look forward to email alerts with *Smart Matches* and *Record Matches* revealing new family tree connections, records and newspaper articles about your ancestors. Add names, dates, photographs and stories and share everything with your family.

Web Site: <https://www.myheritage.com/>

GnuCash

Personal and small-business financial-accounting software, freely licensed under the GNU GPL and available for GNU/Linux, BSD, Solaris, Mac OS X and Microsoft Windows.

Designed to be easy to use, yet powerful and flexible, GnuCash allows you to track bank accounts, stocks, income and expenses. As quick and intuitive to use as a checkbook register, it is based on professional accounting principles to ensure balanced books and accurate reports.

Current Release: Version 3.6

Web Site: <http://www.gnucash.org/>



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 Riverside United Church, 3191 Riverside Drive, Ottawa. Parking is free at the church. OC Transpo bus #87 stops nearby. Details at <http://opcug.ca/regmtg.htm>.

Meetings are 7:30–9:00 p.m. followed by a Q&A Session until 10 p.m.

OPCUG Membership Fees: \$20 per year
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How to get the OTTAWA PC NEWS by e-mail



Here's how to get the OPCUG newsletter by email:

Create a Google Account

Any valid email address can be used as a Google Account. Pick an email address you want to use and browse to <https://accounts.google.com>. Click *Create account* and follow the instructions.

Make sure your new Google Account is functioning properly by going to <https://accounts.google.com> and signing in.

Sign up for the OPCUG Google Groups

Browse to <https://groups.google.com>. If you are not signed into your Google Account, click the *Sign in* button at the top.

1. In *Search for groups or messages*, type *OPCUG*. The top of the search results will show Groups matching OPCUG. Click on *See all 3*.

2. Click on *OPCUG-Newsletter*, then click the *Join group* button. In the resulting dialog box, you can opt to change some preferences, such as;

- If *My display name* shows as your email address you can change this to something like *firstname lastname*
- Email preferences can be changed to only send daily summaries or not email you at all when new postings are made (meaning you must manually check at the web site to see if there are any new postings)

3. Click the *Join this group* button.

4. You will then see the list of postings that have been made to the group. Click on any entry to see the actual posting.

More detailed instructions on how to join this and other OPCUG Google Groups are found here:

<http://opcug.ca/GoogleGroups.html>

There are no issues of the newsletter published in July or August.