

Tip of the Week – Getting Printing Right

During the week I had a call from a client who was having trouble printing a large booklet. There were a number of problems: the first was that his printer would not print.

I have a standard procedure for printers which are not printing (and for computers which are not computing): turn the printer off, remove the power cord, wait thirty seconds, replace the power cord then switch the printer back on so I can do a test print from the computer. I did this and the printer printed the test print using the paper in landscape format (horizontal) rather than in portrait format (vertical).

This was easy to solve but it still left the main part of the problem: the booklet would not print properly.

Printing Booklets

Printing booklets is an excellent way to get a large amount of information into a small, easy-to-distribute form. If you use a desktop publishing program to create the booklet you would often use a smaller paper size (A5 instead of A4) so that you could print two A5 pages side by side on each sheet of A4. This is what my client wanted to do.

His printer had other ideas. It had decided not to work so he rang me to make it straighten up and fly right.

After actually getting printed paper out of the printer (by doing a test print) I then had to get real work out of the printer. This involved working with both the desktop publishing program (which was Microsoft Publisher) and the printer to get the combination to print a booklet with its pages printed in the correct order on the correct side of each piece of paper.

This meant that the first and last pages had to be printed on the same side of the page with the last page on the left and the first page on the right. On the other side of the paper (and it's easiest if you do this with a duplex printer) you had to have the second page on the left and the second-last page on the right and both sides of the paper had to be the same way up. And, of course, all these pages had to fill their respective parts of the half-sheet of paper.

If you are finding it hard to visualise all this you might like to take a sheet of paper and fold it in half so that you have a small four-page booklet. Now number the four pages as you would read them if it were a booklet or a birthday card. Now unfold the paper and see where each page has to fit.

What I Did

In the process of getting this correct I had to change settings in both Microsoft Publisher and in the printer's settings area, and these settings had to match so that everything came out as needed.

I managed to do all of the following:

- Get four pages of the booklet on each side of the sheet of paper
- Get two pages of the booklet on each side of the sheet of paper but the wrong pages
- Get one page on the booklet on each side of the sheet of paper
- Get the correct two pages on each side of the sheet of paper but the second side was upside down so not working as a booklet
- Get the correct two pages on each side of the sheet of paper but the pages were printed at about two-thirds size

I think that this was all the mistakes that I made before I eventually got the printer to produce a complete booklet with pages 1 & 32 and 2 & 31 together on one sheet of paper, pages 3 & 30 and 4 & 29 together on the next sheet of paper with all the rest in sequence. A

loud cheer went up from the assembled throng as my client realised that he would be able to get his booklet out in time for the function this weekend.

It just goes to show what can go wrong when you try to do an apparently simple job! It also shows the results which you can get if you do not give up at the first hurdle!

Leave Instructions For Next Time

All this was caused by the previous secretary quitting the post unexpectedly. The previous secretary was unable or unwilling to let anybody else into the magic incantations needed to get the printer producing the needed results. To ensure that this problem did not rear its ugly head in the future I decided to leave behind instructions for the setup of both the printer and Microsoft Publisher.

Now I could do this in one of two ways:

- A long and complicated set of instructions which would make no sense to anybody next time this document needed to be printed
- A set of screen dumps showing the needed settings for the printer and the program

This was simple if you do it the second way: all that you need is a way to get a screen dump which you can copy to a Microsoft Word document. Windows has an easy way to copy the contents of one window at a time so all I had to do was create a new Word document then display each of the settings for the printer and each of the settings for the program. Once a setting had been displayed it was simple to get a screen dump: just press *Alt + Print Screen*. (Sometimes this key is shown as *Prt Scrn* just to confuse you!)

Pressing *Alt + Print Screen* copies the top window to Windows' clipboard: a special place in Windows which holds one item of information. When you copy something to the clipboard you automatically replace the previous contents.

Next go to your Word document and *paste* the contents of the clipboard to the document. I do this using the keyboard shortcut: *Ctrl + V*. You will see the image of the window appear on the Word document's page.

Repeat this process as often as needed to make your new instructions for printing the job next time you need to do it.

When The Internet Does Not Work

A client rang to say that her internet had stopped working that afternoon. This was a surprise, to say the least, because I have never heard of that happening before. One obvious possibility was that she had forgotten to pay her bill, but that was very unlikely knowing the person involved.

A mystery was in the unfolding!

What I Found Out

I walked in to be met with a very distraught young woman. She needed her internet access for work so this lack of internet was, at the very least, really inconvenient. Once before I had found that her modem router had been turned off at the wall and that had, of course, meant that she had then lost her internet. This was not the case on this occasion so I had to go digging more deeply.

To Be Checked

I then checked all the obvious things. Her modem router was plugged in and switched on: this was obvious because all the lights were working.

I then used my mobile phone to check to see that the WiFi signal was working and that I could use it to get onto the internet. There was an excellent signal, as you would expect at that range, but I could not get on because it was encrypted and she could not remember the password. I tried to get on to the internet using her laptop computer and found that it was so slow that it appeared to be not working.

When I say that her internet speed was slow, I mean that she could download about 100 bytes (or characters) in a minute. Now this is slow! A normal slow connection would download about 20,000 bytes in a second so about 1,000,000 bytes in a minute. I could check this by opening *Control Panel » Network and Sharing Centre* then clicking on the connection to display the *Network Connection Status*. This told me the number of bytes sent and received so I was able to count them one by one (instead of the usual ten thousand or so per second) and work out that her connection was downloading at an unusually slow rate.

This suggested that there was a problem with the modem router.

I asked my client for the cord which came with the modem router and, fortunately she had kept it. This meant that I was able to connect her computer to the modem by wire to see if the speed was any faster. Fortunately it was, so it appeared that the problem was in her modem router so, before spending \$100 of her money I changed the settings in the router so that we knew what the WiFi password was. This meant setting a new password (usually a simple task with most modem routers because their menu system is obvious.)

WiFi Password

Setting, or resetting, a WiFi password in a router is usually easy, especially when you have physical access to the router and you know its password. This router did not have a password so it took me some time to get in while I checked on the internet for the default password for this model of router. Having found the default password it was easy to reset the WiFi password and use my phone to check the download speed.

I had already found that the download WiFi speed using her computer was slow so the problem could have been in the router or in her computer. It is pointless replacing the router if the problem is in the computer so, when I discovered that web pages were glacially slow to load in my phone, I was relieved.

It was now time to buy a new router then attach her computer to it. While I was getting her new router she could use the internet by attaching her computer to the internet using her smart phone and its internet connection. This is called *tethering* and, if done using WiFi, is called a *hotspot*. It meant that she had internet access even if the method was not ideal.

Conclusion

There are many reasons why an internet connection can be slow. Sometimes the reasons are obvious: a wire is broken or not attached, the power has gone out, a bill has not been paid, etc, so you need to check all these possibilities before fixing the wrong one.

In my client's case a new modem router was just what was needed. I discovered that, despite having a three-year warranty most modems and routers fail within eighteen months. Perhaps you could take this up with your supplier but in her case the modem router was some five years old so well past its use-by date!

Further Information

Nothing this week.