

East SIG Report – July 2017

The June meeting commenced with **Paul Woolard** welcomed members followed by Q&A conducted by **George Skarbek**.

Q: I'm thinking of building a new PC and thought I'd use an i5 CPU with 16 GB of RAM. I've been given advice by a friend who's a computer "expert", that I should go for an i3 and maximise memory to 32 or 64GB instead. What is your opinion?

A: Without knowing specific details, I think that's terrible advice. Look at what's slowing your current PC down, is it memory, is it CPU, is it the hard drive or a combination these.

Whatever components you plan to use, you must have a solid state drive (SSD). This is the single biggest factor that will make a PC faster. This is because most of the time when using your PC you'll be opening or closing things and that is where an SSD excels.

If you're only opening a few page Word document, web browsing or checking email, there's very little improvement if you have more than 4GB of RAM. There may only be a 3% to 5% improvement for 8GB of RAM. If you go for 16GB, in some cases it will actually slow you down.

Q: My current system has 8GB of RAM and recently I installed an SSD. Ever since then I keep getting messages that I'm running out of resources. When I look at my RAM usage I see that I'm using up 80 to 90% of my memory, so I assume I have to close something to free up memory?

A: Resources is different to memory. Your problem is unlikely to be caused by the SSD as it uses minimal resources, so it must be something else causing the problem. Open Task Manager and look at the Performance tab to see how much memory is being used. If Windows indicates it's running out of resources, open the Resource Monitor (bottom left in the Performance window in Win 10) and you can see what is using your memory. Make sure you have programs open when you go to Resource Monitor and look at the memory tab to see what program is using your memory. If you're running out of physical memory any programs you then open will have to page to disk and then page back again. Make sure you're not loading too many programs in Start-up as they will sit there and use up memory and your resources. If you get page faults it means the disk is too slow or you need more RAM. Resource Monitor is where you need to look to find what's using your resources and then kill that program.

Q: When you open Outlook and have a lot of files in your Inbox, do they all get loaded or are they only loaded when you click on them?

A: Only the headers get loaded into RAM when opening a mail client. If you have a 300 page document it's dormant and doesn't load anything until its open.

Q: With SSDs drives, SATA3 was the traditional connection to your PC's motherboard. I've noticed M.2, PCI and PCIe are now alternative motherboard connections. Are any of these connections better than the other?

A: M.2 is definitely better than the others due to its through put.

Q: What is M.2? Is it a SSD or a stick that goes on the motherboard?

A: M.2 is solid state memory that fits in a slot on the motherboard and is used instead of a SSD or hard disk drive. You can only use M.2 storage if your motherboard has a M.2 slot. The M.2 slot is small and the most commonly 22mm wide. M.2 drives also come in a number of different lengths the most common being 60mm, 80mm and 110mm.

Q: I find loading web pages agonisingly slow and wonder whether my ISP is the cause? I've run "speed test" and initially my download speed starts off at about 2 Mbps, but after a few minutes increases to 10 Mbps.

A: There's something else going on here and your ISP is only partially to blame. The location of the website and the number of people using that connection plays a part in the download speed. Not everyone going to a particular website is going to get their advertised download speeds, as it depends on the bandwidth available. The times you're likely to achieve your advertised speed is when downloading files from local servers. ISP's will often store common downloaded files such as virus updates or Microsoft patches on local servers. Other factors for slow internet speed are the distance to your exchange and the time of day. When children get home from school is often a time the internet will slow right down.

The first presentation after Q&A was on Window 10 issues by **Trevor Hudson**. Trevor played 3 short videos he's prepared titled "**Addressing Windows 10 Privacy Concerns**", "**Addressing Windows 10 Data Concerns**" and "**Addressing Windows 10 Upgrade Concerns**". These videos are available on YouTube and Vimeo by searching the above titles.

After a short break **Barry Horn** spoke to a number of Microsoft Excel spreadsheets he developed while working as a consultant. Barry emphasized some of the formulae, Excel features and actions he used in these spreadsheets. The spreadsheets themselves did not involve complex calculations, but were complex due their large size. Most comprised a large number of sheets requiring extreme care to ensure data was entered in the correct cells. A key feature of Barry's spreadsheets was therefore the use of the colour coding of cells to aid clarity and ease of data entry. Another feature of Barry's spreadsheets was to use colours for cells containing formulae. Barry protected these cells from being written to and showed how this was done. Where data was to be entered, Barry left these cells unprotected and uncoloured. This technique made it easier for other users to enter data in the correct cells. The first sheet of some of the multi-page spreadsheets displayed an index to subsequent sheets while others displayed a summary of the results of the data gathered in subsequent sheets.

Neil Muller