

East SIG Report - June 2015

The June meeting commenced with Frank Mahar welcoming all members in the absence of Paul Woolard who is taking a well-earned break.

The first session commenced with Q&A with George Skarbek.

Q: I'm thinking about renewing my anti-virus program, which one do you think is the best?

A: You are obviously referring to a paid anti-virus program as the free ones you don't have to renew. You should have an anti-virus program and the paid ones are better than the free ones by 2 to 3 percent. Absolutely don't click on the "renew for the next 12 months" offer that is displayed. Take my Nortons AV for example, when it's time to renew a popup appears asking for \$80 to renew. The same software can be found for as little as \$30 by searching Google. When it comes time to renew, if you start to uninstall your AV a popup will appear and offer you a lower price, sometimes up to a third of the renew price.

Q: My PC is going slow, what can I do?

A: For the biggest improvement install a Solid State Drive (SSD), but this is expensive and requires a reasonable knowledge of computers. The reason your PC is going slower now is that more and more programs are starting up and being loaded into memory when you boot your computer. To stop unnecessary programs starting up you need to run msconfig (Win7) or Task Manager (Win8). From the msconfig "Startup" tab, disable programs you don't want to start automatically, such as Adobe Reader or Quicktime. All you are doing is stopping these programs loading into memory, you are not uninstalling them. Memory is the second most important facet of your PC, apart from your CPU speed, so having programs hogging memory to save seconds, should you choose to open that program, is going to slow down your PC.

Q: Are there programs in Windows that you shouldn't disable?

A: "Startup Inspector" is a very good program that advises which programs it is safe to disable. It will list all startup programs and rank those programs that are essential and should not be disabled, those that are not necessary, user's choice or unknown, the latter is for programs not in its database. You should not disable "Services" as Windows does a good job of controlling these.

Q: Do hundreds of pictures in a folder on your desktop slow startup?

A: The answer is no because the PC will not need to read what's in the folder until you open it.

Q: Where do I find "Startup Inspector" and msconfig?

A: "Startup Inspector" is freeware and can be found using Google. Msconfig is part of the Windows operating system. In Windows 7 you find msconfig by clicking on the Windows start button and type msconfig in the search box. Click on msconfig.exe when it appears and you will then see the Startup tab. Click on this tab to display all program that load into memory when your PC boots.

In our next session Dave Botherway explained the notification icon most Windows users will have noticed on their PCs in the last week. (Figure 1)

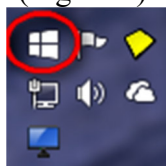


Figure 1

Microsoft recently announced that Windows 10 will be available free for all Win 7 and 8.1 non business PCs for a period of 1 year, from 29th July. Dave demonstrated what happens when you click this icon and what options you have when you do. When clicking on the icon in Figure 1 above, the window “How this free upgrade works” opens (Figure 2). By clicking on the link on the top right corner titled “Learn more on windows.com” you will be directed to a web page giving 21 FAQs on Windows 10. Click on this for more information on the free upgrade. Note this upgrade is a large 3GB download.

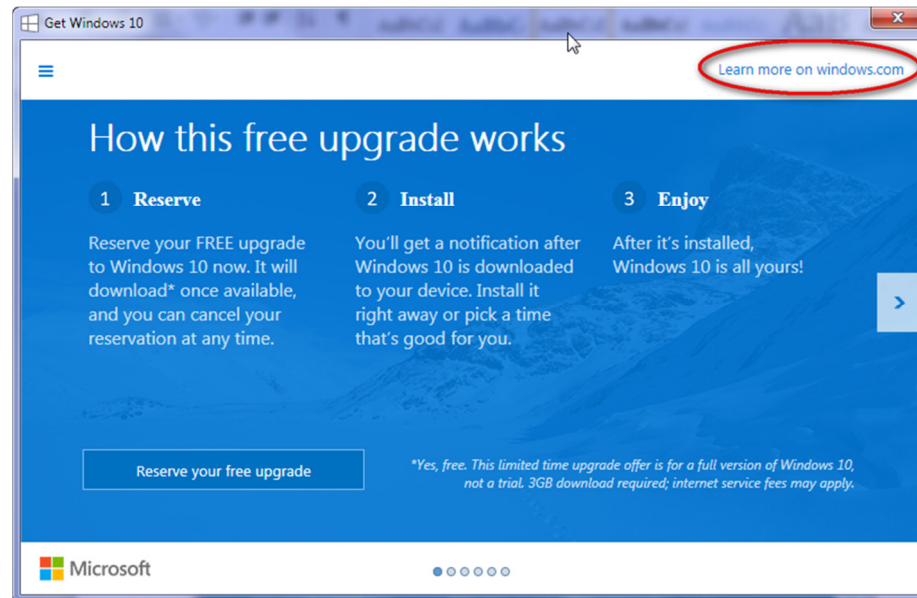


Figure 2

To proceed with the upgrade users can reserve their free copy of Windows 10 by clicking the “Reserve your free upgrade” button. By clicking this button extra components associated with the upgrade will be downloaded to your PC between now and the 29th July. Sometime after the 29th July the 3GB file for Windows 10 will be downloaded to your PC. You then have the option of when you want to install Windows 10, as you don’t need to run the upgrade straight away.

Upgraders have the option to upgrade or do a clean install. The clean install is preferred. When loading, Windows 10 will check if it has drivers necessary to run on your PC. George suggested at this time you turn on all your peripherals such as scanners, webcams, printers etc. to determine whether they will run under the new Windows. The free upgrade will last for 12 months but what will happen after 12 months is unknown. Some forums say there could be a yearly licence, others say Windows 10 will be free for life.

In the next session Stuart Bedford asked “Do computers make mistakes”. Stuart looked back in time at some of the significant computer failings. Members would probably remember back to 1994 where Intel’s Pentium P5 CPU had to be recalled due to an architectural flaw in the chip. It did make mistakes, but one statistically so unlikely to occur that most users didn’t opt for free replacement of their CPU when offered it. Here the computer did make mistakes, but were man made.

Stuart displayed the number 2,147,483,647 and said this number was the cause of computer mistakes in the following three events:

1. The Ariane 5 rocket launch from French Guiana on June 4th 1996 and subsequent explosion.
2. The Gangnam Style video on YouTube.
3. A Patriot missile launch on Feb 25th 1991 which failed to intercept an incoming scud missile in Iraq, with the death of over a hundred people.

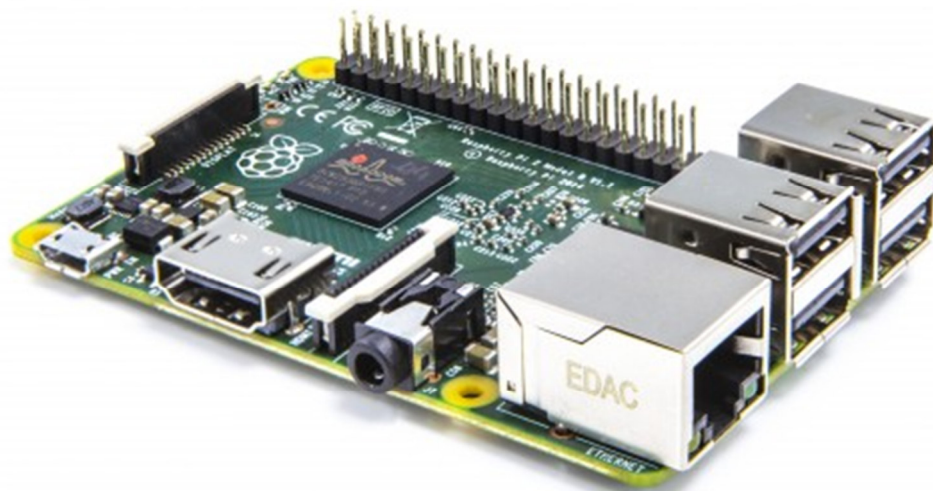
How is the number 2,147,483,647 related to these events? This number is the maximum number that can be stored in a 32 bit register. A number any greater will cause overflow errors:

1. The Ariane 5 rocket self-destructed costing hundreds of million dollars. The cause was due to incompatible software on board, where a 64 bit number was inserted into a 16 bit address. The error resulted in the computer telling the rocket to self-destruct. <https://www.ima.umn.edu/~arnold/disasters/ariane.html>
2. The Gangnam Style video crashed YouTube when the numbers of views exceed the number. YouTube now uses 64 bit numbers to record views.
3. The Patriot missile disaster resulted from an incompatible mix of hardware and software.

In part the mistakes were caused by storage (memory) in early computers being expensive. Processing speeds were slow so the early computers couldn't handle more memory even if it was available. The mistakes above resulted from software that hadn't been updated, so ultimately the mistakes were man made. In summary computers don't normally make mistakes.

After the break John Hall demonstrated the latest of his family of Raspberry Pi computers. John now has 4, the latest being a Model 2 as seen below

The following quote from Wikipedia best summarises the development of the Raspberry Pi. "*The Raspberry Pi is a credit card-sized single-board computer developed in the UK by the Raspberry Pi Foundation with the intention of promoting the teaching of basic computer science in schools.*" https://en.wikipedia.org/wiki/Raspberry_Pi.



Raspberry Pi 2

The Raspberry Pi Foundation aims to keep these programmable computers affordable, so price them at a low US\$30-35 (A\$40) each. The price has varied little since model 1, but improvement in performance and features have been significant.

The latest version a Generation 2 Model B has:

- 900MHz quad-core ARM Cortex-A7 CPU
- 1 GB DDR2 SDRAM (shared with GPU)
- 4 USB Ports
- Video output via HDMI (resolutions from 640×350 to 1920×1200)
- Video output via composite video via a 3.5 mm jack shared with audio out
- On-board storage via microSD slot
- On-board network 10/100 Mbit/s Ethernet (RJ45 port)
- Power via power adapter or 5 Volt via the microUSB
- The circuit board measures 85.6 mm × 56.5 mm and weights 45gram
- It does not come with a case but these are readily available on the internet from \$8.

The Raspberry Pi operating system is based on Debian Linux and will run various Linux distributions. In addition Microsoft will soon offer a free version of Windows 10 for the Raspberry Pi. This is the same version of Windows that runs on Windows mobile phones.

John uses his latest Raspberry Pi as a media centre running the Kodi media centre software. Kodi was formerly known as XBMC (Xbox Media Centre). John demonstrated the Kodi media centre to the group by displaying pictures and playing music and videos. At home the Raspberry Pi is connected to the TV through the HDMI input and displayed and operated on the TV screen.

By adding a camera module to a Pi (as it is affectional known), members of the Raspberry Pi SIG have used their creations to take still photographs, use as a webcam or as a car dash cam. The camera module is full HD (1980 x 1080) and cost only \$20 on eBay. John also showed a touch screen module fitted to a Pi that can be used to play computer games.

For those only wanting a media centre, “raspbmc” (<http://www.raspbmc.com>) is an operating system for the Raspberry Pi that runs the xbmc media centre. Raspbmc is recommended to those only wanting a media centre as it requires minimal to no installation.

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