**An investigation into 3D – DirectX.**

Direct3D is the software (more precisely, a bundle of libraries and runtime files, commonly known as an Application Programming Interface (API)) used to create multimedia-type software.   
Such software comprises video games, CAD, and Graphical User Interface (GUI) for Windows applications, although DirectX is used across almost all Microsoft developed products.

To put platforms supporting DirectX into figures, -

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| Platform | Units sold |
| Windows | 200+ million |
| Xbox | 60+ million |
| Xbox 360 | 77.2 million |
| Windows Phone | 20+ million |

*Of these platforms, 9/10ths of them will be running DirectX to perform multimedia tasks.*

So the usage of DirectX is undeniably huge, reason why it is why it is important to see this side of the coin first, which brings me to my first statement – “*by the end of this investigation, I (and the readers) (should) hope to have attained a basic but solid knowledge of 3D imaging with DirectX, at both software and hardware levels and across many platforms.*

**The Investigation**

This investigation will comprise 3 main points, -

• **1 -** How program code is translated and interpreted by the various components to draw a 3D image to the screen.

• **2 -** How back-buffers work, and why they are the key element in displaying and rendering 3D drawings at a very high speed. (Faster than the 60 – 100Hz of the video card/monitor)

• **3 -** How 3D drawings/animations are built as a Win32 application.

Point 1 will mostly be illustrated by the artefact; it will be a windows application.