DirectX

DirectX is freeware designed for computers using Windows and other Microsoft platforms such as Xbox, as well as with the company's smartphones and tablets. The package includes many Application Programming Interfaces (API's) designed specifically for more powerful and more portable graphics applications for purposes ranging from CAD/CAM to computer gaming.

API's are software building blocks. They control the way software packages interact with each other, the user and with hardware. Thus, they enhance program portability as well making it possible to develop programs more rapidly and efficiently. DirectX has been so successful and widely accepted that the "X" in Xbox comes from the "X" in DirectX.

All the new versions of Windows include DirectX as a component. In addition, any game or program that you attempt to play will come loaded with the DirectX version it needs and it will be fully capable of installing it. In any case, if visualization and graphics are important parts of your computing life, it's important to have the latest version that your system will accept, as each succeeding package does a better job of enhancing your total visual experience. It's simple and easy to determine what version of DirectX your computer is using. In Windows 8, type dxdiag in the Run Dialog box, then press enter, and the result will appear. The process is similar with XP, Vista and Windows 7 machines.

Key components of DirectX have included DirectDraw, DirectInput, DirectSound, DirectPlay, and, perhaps most notably, Direct 3D. DirectDraw plays an important role in rendering 2D images, DirectInput interfaces efficiently with I/O devices, DirectSound coordinates images with sound, and DirectPlay is for communications.

Direct 3D is even more important now than before, and is the starring player in DirectX 12, which will be the next version of the package. This newest version of DirectX will include a powerful new version of Direct3D, which plays a critical roll in getting the most out today's most powerful graphics processing units (GPU's). It will also streamline the CPU's job, and will more effectively exploit modern multi-core processors to their fullest potential. And, by minimizing demands on the CPU's resources in communicating with the GPU, computing resources are freed for other critical tasks. It is expected that this new version will not only support gaming on Xbox, but also on smartphones and on PC's. Targeted hardware include Qualcomm, Intel, Advanced Micro Devices and Nvidia

This added efficiency is especially important when games are played on smartphones. In the mobile arena, CPU efficiency translates into lower power drain on batteries, and, that means more playing time for you between recharges.