PS4 Graphics APIs & Shader APIs

Graphics API	Graphics Programing	General Purpose Programing

"Wrapper" API
−Resembles DirectX and OpenGL without sacrificing efficiency
−Production viable – mostly just pass−through to low level API
−Full source code is provided

Shaders
-Uses new **PlayStation Shader Language (PSSL)**
-Much better utilization of the low-level hardware than existing shader languages
-Very similar to HLSL
-Allows features **beyond** DirectX 11 and OpenGL 4.0

Compute
-Fully supported by **PlayStation Shader Language (PSSL)**
-Asynchronous, fine-grained compute that runs simultaneously with graphics
-Allows features **beyond** DirextX and OpenCL

Low level API
−Builds draw, dispatch, and command buffers to feed to the GPU
−Much lower level than DirecX and OpenGL, but not quite driver level
−Similar to PS3 and PS Vita graphics libraries
−Enhanced performance by bypassing costly DirectX limitations and bottlenecks

Assembler Level

Assembler Level

Driver level (Register Level)

GPU Native ISA

PS4 GPU Core