

Homework 2 Report

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# The OpenGL Shaders

在這次的作業中，我將三種效果寫在分別的shader中，而每種效果又有各自的vertex shader與fragment shader，故宜共有六個shader file，統一放在CG\_HW2/Shader目錄下。其中的三個vertex shader是完全相同的，這三種效果實際上都是利用fragment shader來實作。

Vertex shader的功能較單純，最主要就是將vertex的位置進行transformation以及projection。我是分別將view matrix以及model matrix以uniform的方式傳給shader，因為在計算normal matrix時需要用到model matrix。計算fragment座標的部分也是時坐在vertex shader中，由於我是在world space中進行lighting的計算，所以需要先將座標轉換到world space。在vertex shader中計算出頂點的world space座標後，OpenGL會先將此座標進行內插在傳到fragment shader，也就是fragment的實際座標。

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# Phong Shading

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# Dissolving

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