

Re: my shadow-mapped shadows are not fixed to the ground, they move with the camera?

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Source:

<http://www.tech-archive.net/Archive/Development/microsoft.public.win32.programmer.directx.managed/2008-06/ms>

- *From:* Richy <movieknight@xxxxxxxxxx>
 - *Date:* Sun, 15 Jun 2008 18:54:31 -0700 (PDT)
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I should mention that this is in D3D10 and using SlimDX.

Examples here:

http://austere3d.gallery.netSPACE.net.au/Unresolved/ERROR_1

On Jun 16, 10:43 am, Richy <moviekni...@xxxxxxxxxx> wrote:

I have implemented deferred lighting successfully but I am having an issue with shadow mapping. In my deferred rendering's material pass I output the world position xyz and the transformed z/w in the alpha, and then in my deferred shader that handles the shadows, I read the world position in for the pixel being processed, transform it to the light's point of view, and map this to the shadow map texture to get the depth at that point from the light's point of view. A typical shadow mapping technique. My shadows appear but there are lots of visual glitches that I've never had in the past (when I was not using deferred shading). For example, when I move the camera towards a crate that is casting a shadow on the ground, the shadow does not stay fixed but moves, and always stays ahead of the camera. When rotating the camera's pov, shadows slice in and out. I can't explain why, here is my code:

```
float lit;
float4 worldPosition = texDepth.Sample(g_samPoint, input.texcoord);

if(lightCastsShadows)
{
    float4 wpc = mul(float4(worldPosition.xyz, 1.0f),
l_viewProjectionMatrix);
    // convert screen coordinates to texture coordinates (0 to 1)
    wpc.x = 0.5f * (wpc.x/wpc.w) + 0.5f;
    wpc.y = -0.5f * (wpc.y/wpc.w) + 0.5f;
    float lightDepth = texShadowMap.Sample(g_samShadow, wpc.xy);
    float screenDepth = worldPosition.a;
    if((saturate(wpc.x)==wpc.x) && (saturate(wpc.y)==wpc.y))
    {
```

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```
    if(screenDepth > lightDepth)
    {
        lit= 0.0f;
    }
    else
    {
        lit= 1.0f;
    };
}
else
{
    lit=0.0f;
};
};
return lit;
```

Has anybody else encountered an issue like this when combining shadow mapping with deferred lighting? Any pointers would be appreciated, I'm getting bogged down on this and it's driving me nuts. Aaarrggh!

Richy