

Serious Errors

[5/16/04] Problem: Samples sometimes do not provide smooth animation.

Xoraxax reports a solution:

“I had the same problem with the Ch 7 example with the rotating cube. The motion was very jittery. Didn't believe it was my drivers though so I did some investigation.

In my case the problem was the floating point arithmetic. The duration between calls to Display was so short that it was pressing the limits of the float data type and resulting in an occasional negative time delta. Changing the datatype to double everywhere fixed it for me and results in smooth animation.”

[11/27/03] On page 220 there is an error in the third column of the ΔCBD triangle formula. The correct formula is:

$$\Delta CBD = \{(i + 1) \cdot numVertsPerRow + j - i \cdot numVertsPerRow + j + 1 \quad (i + 1) \cdot numVertsPerRow + j + 1\}$$

And this corresponds with the code in `Terrain::computeIndices`, which is correct.

[10/4/03] Vladik Shutoy and also jerjames pointed out an error on page 230, below the diagram, the text states that "if $dx < 1.0 - dx$ we are in the 'upper' triangle". This should be

If $dz < 1.0 - dx$ we are in the 'upper' triangle.

In other words, it should read as the corresponding code does on page 231 (the code is correct).

[6/26/03] It appears that the book printers run into trouble with underscores. I have found erroneously omitted underscores throughout the book. If you have any trouble getting a program to work where you copied out of the text, then first compare against the available source code. If that doesn't help, you can email book@moon-labs.com. Here are some specific examples of underscore errors:

- a. Page xxv, in the code block at the top of the page, the underscores are missing that prefix the member variables. The code block should be:

```
class C
{
```

```
public:
    // ...define public interface
private:
    float _x; // prefix member variables with an underscore.
    float _y;
    float _z;
};
```

- b. Page 364-366, in the sample program, underscores are omitted in the following symbols:

```
CS_HREDRAW, CS_VREDRAW, static_cast, WHITE_BRUSH,
WS_OVERLAPPEDWINDOW
CW_USEDEFAULT, WM_QUIT, WM_LBUTTONDOWN, MB_OK, WM_KEYDOWN,
WM_DESTROY,
VK_ESCAPE
```

Minor Errors

[8/28/03] Reported by Lombardi] Page 72, the very second to last line of the page in the bottom code block should be:

```
D3DVIEWPORT9 vp = {0, 0, 640, 480, 0, 1};
```

Note the added equal sign.

[8/28/03] Reported by Lombardi] Page 139, the first sentence under the three matrices should read:

To reflect a point across the yz plane, we simply take the opposite of the x-component.

[8/25/03] Reported by Michael Robinet] Page 71, the definition of aspect ratio has a typo:

aspectRation = screenWidth / screenHeight

It should be *aspectRatio* not *aspectRation*.

[8/25/03] Reported by Michael Robinet] Page 130, the last bullet in section 7.6 should read:

Alpha information can come from the diffuse component of the set material or from the alpha channel of the set texture.

Frank Luna

Introduction to 3D Game Programming with DirectX 9.0 Errata

[6/26/03] Page 20, in the homogeneous vector to 3D vector remap transformation

equation, $\left(\frac{x}{w} \quad \frac{y}{w} \quad \frac{z}{w} \quad \frac{w}{w}\right) = \left(\frac{x}{w} \quad \frac{y}{w} \quad \frac{z}{w} \quad 1\right) = \left(\frac{x}{w} \quad \frac{y}{w} \quad \frac{z}{w}\right) = \mathbf{x}$,

the last x should be in bold denoting that it is indeed a vector and not a scalar. It should be:

$$\left(\frac{x}{w} \quad \frac{y}{w} \quad \frac{z}{w} \quad \frac{w}{w}\right) = \left(\frac{x}{w} \quad \frac{y}{w} \quad \frac{z}{w} \quad 1\right) = \left(\frac{x}{w} \quad \frac{y}{w} \quad \frac{z}{w}\right) = \mathbf{x}.$$