A Little Bit On Fire

Horribly Done by James Devan
2 Ways I Will Cover

- Hypervoxels (from book)
- Volumetric Lighting
- Pros and Cons Covered Later
Volumetric Lighting Fire

Render done by me
Setting Up the Scene

- Positioning the light.
- Make use of coordinate system
- Place light at coordinates (0,-1,0)
- Set orientation (0,-90,0)
Light Properties

- Open light properties
- Activate vol lighting
- Click vol lighting options
- Open VIPER
V.I.P.E.R

• Versatile
• Interactive
• Preview
• Renderer

• Allows preview of individual lights
Setting a Texture

- Back to Vol Options Panel
- Click “Edit Texture”
- Now in Texture Editor

- Set to “Procedural Texture”
Using the Texture

- Set type to Multi_Fractal
- Back to Vol Options
- Click “Texture Only”
- Only texture is visible by light
- Boost Luminosity up to 500%
Adding Falloff

- Back to Texture Editor
- Set falloff to 25% on Z axis
Stretching The Fire

- Click the scale tab
- Using a 3:1 ratio looks best
- Set x scale to .5 and y to 1.5
Adding Some Color

• Choose add layer
• Select gradient from the menu

• Set the initial point alpha to 0%
Adding Color Continued

- Click on the bar to add 2 more points
- Go back and set the values to .25, and .65
- Make final point alpha 100%
- Add an orange color
Now Onto Hypervoxels
Getting Started

- Make a new scene
- Under "items" tab click "add"
- Add a null object
- Name it "flame1"
Setting the Scene

- Click on the light
- Set orientation (0,0,0)
- Set camera position (0,10,0)
Setting Hypervoxels

- With fire1 selected
- Click item properties
- Click “deformations” tab
- Click displacement
- Choose HypervoxelsParticles
Activate Hypervoxels

- Choose “Scene” tab
- Under tools choose Hypervoxels
- Select fire1
- Click “activate”
Starting to Look Real

• Set “object type” to volume

• Set particle size to 3m
• Under “shading/basic” tab
• Select an orange color
• Set Luminosity to 200%
• Set Opacity to 75%
• Set Density to 100%
• Set Thickness to 80%
• Set Smoothness to 42%
Fiery Hues

• Click “T” next to color
• Make gradient layer
• Set Input to Texture Value
• Add following 6 points
  • 1: P=0, C=0,0,0
  • 2: P=9, C=11,7,5
  • 3: P=44, C=131,83,63
  • 4: P=75, C=253,207,100
  • 5: P=92, C=253,221,134
  • 6: P=100, C=254,247,197
Now to the Explosion!

- Under the “hypertexture” tab
- Set texture to FBM
- Set frequencies to 6
- Contrast to -50
- Texture amplitude to 33%
- Texture effect to “billowing”
- Effect speed to 25%
The Pros

**Vol Lighting**
- Short Render Time
- More Realistic

**Hypervoxels**
- Easier to make
- More options
<table>
<thead>
<tr>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vol Lighting</strong></td>
</tr>
<tr>
<td>• Can only be seen from certain angles</td>
</tr>
<tr>
<td>• Limited options</td>
</tr>
<tr>
<td>• Only visible in cone of light</td>
</tr>
<tr>
<td><strong>Hypervoxels</strong></td>
</tr>
<tr>
<td>• Longer render time</td>
</tr>
</tbody>
</table>