Subject: opengl & tekstures
Posted by barpas on Thu, 23 Mar 2006 12:21:22 GMT

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has anybody working upp code with opengl using textrue ???
i tray to do it many times eg with nehe tutorials but it's not working ...

eg. i tray convert to upp 6 lesson for neht tutorial - everything semms to by ok file is open textrure is done but qube is white (non textured)

i don't understend

i use functions likie that:

```
AUX_RGBImageRec* OpenGL::LoadBMP(char *Filename)              // Loads A Bitmap Image
{
      FILE *File=NULL;                           // File Handle

      if (!Filename)                             // Make Sure A Filename Was Given
      {
          return NULL;                           // If Not Return NULL
      }

      File=fopen(Filename,"r");                   // Check To See If The File Exists

      if (File)                         // Does The File Exist?
      {
          fclose(File);                   // Close The Handle
          return auxDIBImageLoad(Filename);     // Load The Bitmap And Return A Pointer
      }
      return NULL;                             // If Load Failed Return NULL
}

int OpenGL::LoadGLTextures()        // Load Bitmaps And Convert To Textures
{
 int Status=FALSE;        // Status Indicator

 AUX_RGBImageRec *TextureImage[1];    // Create Storage Space For The Texture

 memset(TextureImage,0,sizeof(void *)*1);          // Set The Pointer To NULL

 // Load The Bitmap, Check For Errors, If Bitmap's Not Found Quit
 if (TextureImage[0]=LoadBMP("data/to.bmp"))
 {
 Status=TRUE;        // Set The Status To TRUE

 glGenTextures(1, &texture[0]);    // Create The Texture
```

```
 // Typical Texture Generation Using Data From The Bitmap
 glBindTexture(GL_TEXTURE_2D, texture[0]);
 glTexImage2D(GL_TEXTURE_2D, 0, 3, TextureImage[0]->sizeX, TextureImage[0]->sizeY, 0,
GL_RGB, GL_UNSIGNED_BYTE, TextureImage[0]->data);
 glTexParameteri(GL_TEXTURE_2D,GL_TEXTURE_MIN_FILTER,GL_LINEAR);
 glTexParameteri(GL_TEXTURE_2D,GL_TEXTURE_MAG_FILTER,GL_LINEAR);
 }

 if (TextureImage[0])        // If Texture Exists
 {
  if (TextureImage[0]->data)       // If Texture Image Exists
  {
   free(TextureImage[0]->data);     // Free The Texture Image Memory
  }

  free(TextureImage[0]);        // Free The Image Structure
 }

 return Status;        // Return The Status
}
```

in GLPaint() metod:

```
void OpenGL::GLPaint()
{
 StdView();
 glClear(GL_COLOR_BUFFER_BIT | GL_DEPTH_BUFFER_BIT); // Clear The Screen And The
Depth Buffer
 glLoadIdentity();        // Reset The View
// glRotatef(lookupdown,0.0f,0,0);
//glRotatef(sceneroty,0,1.0f,0);
glBindTexture(GL_TEXTURE_2D, texture[0]);
 glBegin(GL_QUADS);        // Draw A Quad
 // glColor3f(0.0f,1.0f,0.0f);      // Set The Color To Green
 glNormal3f( 0.0f, 0.0f, 1.0f);
  glTexCoord2f(1.0f, 0.0f);glVertex3f( szerokosc/2, -1.0f,-dlugosc/2);    // Top Right Of The Quad
(Top)
  glTexCoord2f(1.0f, 0.0f);glVertex3f(-szerokosc/2, -1.0f,-dlugosc/2);    // Top Left Of The Quad
(Top)
  glTexCoord2f(1.0f, 0.0f);glVertex3f(-szerokosc/2, -1.0f, dlugosc/2);    // Bottom Left Of The Quad
```

(Top)
 glTexCoord2f(1.0f, 0.0f);glVertex3f(szerokosc/2, -1.0f, dlugosc/2);   // Bottom Right Of The
Quad (Top)
...
 glEnd();

};

of course i use #include <GL/glaux.h>

help me please - what i'm dooing wrong????

Subject: Re: opengl & tekstures
Posted by unodgs on Fri, 24 Mar 2006 07:45:12 GMT
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I'm sure it is not connected with upp at all I use directx with upp and all textures are painted
without any problem . There must be something with your code...

Subject: Re: opengl & tekstures
Posted by fudadmin on Fri, 24 Mar 2006 21:53:36 GMT
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Regarding textures. My guess that you placed your bmp files somewhere out of reach for you
exe...
And because the lesson example is programmed in a very stupid way you are not informed about
it

Advice No1. - in IDE "Build" menu open "Output Directory" and move or copy all *.bmp etc. files
which you are using in your app. In that case, you can use e.g LoadBMP("nehe.bmp") etc. or use
full paths to files e.g LoadBMP("D:\data\nehe.bmp")

Advice No2. - put PromptOK("step1"); as guards to check if your program came where you
expected.
e.g

```
    if (File)                              // Does The File Exist?
     {
          fclose(File);
```

```
        PromptOK("really opening DIB");                    // Close The Handle
        return auxDIBImageLoad(Filename);          // Load The Bitmap And Return A Pointer
    }
```

Subject: Re: opengl & tekstures
Posted by fudadmin on Fri, 24 Mar 2006 22:01:17 GMT
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Actually, more clever way would be like this

```
AUX_RGBImageRec* OpenGL::LoadBMP(char *Filename)              // Loads A Bitmap Image
{
    FILE *File=NULL;                      // File Handle

    if (!Filename)                         // Make Sure A Filename Was Given
    {
PromptOK("Where is your filename?!" );
        return NULL;                       // If Not Return NULL
    }

    File=fopen(Filename,"r");               // Check To See If The File Exists

    if (File)                          // Does The File Exist?
    {
        fclose(File);                   // Close The Handle
        return auxDIBImageLoad(Filename);      // Load The Bitmap And Return A Pointer
    }
    else PromptOK("Couldn't load "+ AsString(Filename) );
    return NULL;                       // If Load Failed Return NULL
}
```

Subject: Re: opengl & tekstures
Posted by mirek on Fri, 24 Mar 2006 22:19:01 GMT
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fudadmin wrote on Fri, 24 March 2006 16:53Regarding textures. My guess that you placed your bmp files somewhere out of reach for you exe...

BTW, exactly because of this, there is nice "hack" function GetDataFile function - when your .exe is started from TheIDE, GetDataFile("xxx") will return the full path to "xxx.x" inside your main package.

That way you can store you graphics files together with sources.

When started outside TheIDE (final version), GetDataFile returns the file from the same directory as is .exe places (very likely arrangement for your production files).

Mirek

Subject: Re: opengl & tekstures
Posted by barpas on Sat, 25 Mar 2006 00:22:56 GMT
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i'm sory but its not resolving my problem - i was thinging abaut it and debug it to look if i have a good pointer ...
pointer was good,
booth functions returns good status ...
but platform was white
(now it is colored)

if you don't belive me there is code of that in robot.cpp (topic abaut arrayctrl & edit) - i didnt sent a picture but you can use anything to test it

i think so eg the green "floor" should by textrued but isn't

i don't undestend wby - i do the same in mvc and working good
maybe i make misteak semewhere but maybe glaux don't work ok wiht upp???

Bartek

Subject: Re: opengl & tekstures
Posted by lindquist on Sun, 09 Apr 2006 23:35:20 GMT
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I'm not sure if you solved it or not, but you may just be missing a glEnable(GL_TEXTURE_2D); call.

The default GLCtrl is very minimal, and the default OpenGL state for GL_TEXTURE_2D is disabled.

Subject: Re: opengl & tekstures
Posted by barpas on Wed, 12 Apr 2006 14:36:59 GMT
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i have it in my code...
and problmem is not resolved ...

is here anybody who made upp application with opengl using textures ???

Subject: Re: opengl & tekstures
Posted by fudadmin on Wed, 12 Apr 2006 14:55:04 GMT
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barpas wrote on Wed, 12 April 2006 15:36i have it in my code...
and problmem is not resolved ...
is here anybody who made upp application with opengl using textures ???

I was trying your example and many others for 2 days... with all possible options. Then lost patience. Glut works but not U++...

I guess something wrong with OpenGLCtrl pixel format? descriptor?
or maybe some more inits required?

Because OpenGL returns errors at the very early stages of initialization if you check with its functions...
Just my guess.

Subject: Re: opengl & tekstures
Posted by fudadmin on Wed, 12 Apr 2006 15:02:03 GMT
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or could be buffers? I had found later some info on the net, but haven't tested...

Subject: Re: opengl & tekstures
Posted by lindquist on Sat, 22 Apr 2006 10:05:04 GMT
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I'm successfully using the GLCtrl with texturing.

Image img = PngEncoder::New()->LoadImageFile("texture/test.png");
PixelArray pix = ImageToPixelArray(img);

// pixelformat
GLuint chan,fmt,id;
switch (pix.GetBPP())
{
case 24:
 chan = 3;
 fmt = GL_RGB;
 break;

```
case 32:
 chan = 4;
 fmt = GL_RGBA;
 break;

default:
 Exclamation("Unsupported texture BPP ("+FormatInt(pix.GetBPP())+")");
 return false;
}

glGenTextures(1,&id);
glBindTexture(GL_TEXTURE_2D, id);

glTexEnvi(GL_TEXTURE_ENV, GL_TEXTURE_ENV_MODE, GL_MODULATE);
glTexParameteri(GL_TEXTURE_2D, GL_TEXTURE_MIN_FILTER,
GL_LINEAR_MIPMAP_LINEAR);
glTexParameteri(GL_TEXTURE_2D, GL_TEXTURE_MAG_FILTER, GL_LINEAR);
glTexParameteri(GL_TEXTURE_2D, GL_TEXTURE_WRAP_S, GL_REPEAT);
glTexParameteri(GL_TEXTURE_2D, GL_TEXTURE_WRAP_T, GL_REPEAT);

gluBuild2DMipmaps(GL_TEXTURE_2D, chan, pix.GetWidth(), pix.GetHeight(), fmt,
GL_UNSIGNED_BYTE, pix.Begin());
return true;
```

My GLCtrl is slightly modified. First I'm using GLee for easy access to extensions, and second, I have the 'wglMakeCurrent(NULL, NULL);' line commented in GLCtrl::WindowProc.

I also inserted 'wglMakeCurrent(hDC, hRC);' at the end of 'GLCtrl::OpenGL'.

At first I had some issues, but it turned out to be my min filter that was LINEAR_MIPMAP_LINEAR while I used glTexImage2D...

I hope this is of help.

Subject: Re: opengl & tekstures
Posted by mirek on Mon, 01 May 2006 08:07:02 GMT
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BTW, should I change GLCtrl? I must admit that this is area that is completely out of my knowledge, so any contributions here are much welcome!

Mirek

Subject: Re: opengl & tekstures
Posted by lindquist on Tue, 02 May 2006 14:26:23 GMT

I would say yes. Make those changes.

The problem with not having them in means that OpenGL calls can only be made inside the GLPaint method.

As things like loading textures etc often happens somewhere else (not in the render code) this is somewhat and obstacle.

The problem with my simple approach is that if you're using multiple GLCtrls then we would need a method to activate the content we want to work on.

A MakeActive member might be a good idea. Or something else... For me, the approach I took is just fine as I only have one GL context.
And I just want to write GL code and expect it to work on that context.

P.S the texture code I posted only sort of works. the correct pixel format seems to be GL_BGR/GL_BGRA, using these the colours are correct. Tho it might still be flipped, as IIRC OpenGL expects a bottom-left origin.

Is ultimate++ top-left? and is the bgra format consistent? or do I need to do some more checking?