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Subject: : AmigaOS4

Topic: : RadeonHD 3.x bug (?): more than ~256mb of used GPU (second chunk) memory cause a heavy lockup/crash.

Re: RadeonHD 3.x bug (?): more than ~256mb of used GPU (second chunk) memory cause a heavy lockup/crash.

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Date: : 2019/9/27 18:09:26

URL:

@All

I step by step trying to find deep details, and create a simple test case, which looks like this:

```
#include <stdio.h>
#include <stdlib.h>
#include <stdbool.h>
```

```
#include <SDL/SDL.h>
#include <GL/gl.h>
```

```
// 100 : eat 34 mb of GPU
// 200 : eat 68 mb of GPU
// 300 : eat 101 mb of GPU
// 400 : eat 135 mb of GPU
// 500 : eat 168 mb of GPU
// 600 : eat 202 mb of GPU
// 700 : eat 235 mb of GPU
// 750 : eat 252 mb of GPU
```

```
// 761 : fill 256 mb of GPU , but not overbound to 257 mb at moment
// 762 : now we cross the line of 256 mb => CRASH
```

```
int num_of_textures = 761;
```

```
/* function to load in bitmap as a GL texture */
```

```
int LoadGLTextures( )
```

```
{
```

```
    int width = 256;
```

```
    int height = 256;
```

```
    unsigned char *data;
```

```
    data = malloc(width*height*3);
```

```

GLuint TextureID[num_of_textures];

glEnable(GL_TEXTURE_2D);

for(int a=0;a<num_of_textures;a++)
{
    glGenTextures( 1, &TextureID[a]);
    glBindTexture( GL_TEXTURE_2D, TextureID[a]);
    glTexImage2D(GL_TEXTURE_2D, 0, GL_RGB, width, height,0, GL_RGB, GL_UNSIGNED_BYTE, data);
}

free(data);
}

int main( int argc, char **argv )
{

    /* main loop variable */
    int done = false;
    /* used to collect events */
    SDL_Event event;

    /* initialize SDL */
    if ( SDL_Init( SDL_INIT_VIDEO ) < 0 )
    {
        fprintf( stderr, "Video initialization failed: %sn",
                SDL_GetError() );
        SDL_Quit();
    }

    /* get a SDL surface */
    SDL_Surface *surface = SDL_SetVideoMode( 640, 480, 16, SDL_OPENGL | SDL_GL_DOUBLEBUFFER);

    /* Load in the texture */
    LoadGLTextures();

    /* wait for events */
    while ( !done )
    {
        /* handle the events in the queue */

        while ( SDL_PollEvent( &event ) )
        {
            switch( event.type )

```

```
{
  case SDL_QUIT:
    /* handle quit requests */
    done = 1;
    break;
  default:
    break;
}
}
}

/* clean ourselves up and exit */
SDL_Quit();

/* Should never get here */
return(0);
}
```

I compile it over gl4es (so ogles2, warp3dnova in use), and can reproduce the crash easy. Till i fill only 256 and no more (so any amount of textures, but no more than 256 mb is filled) all is fine. Once i add one more texture so it should be placed in 257 mb of GPU then CRASH and burn !

Now i will start to reduce components. First i will try to create pure ogles2 example (without gl4es involved), then if issue still here, then pure warp3dnova example.