

The DDS by me (=G=)

WIKI VERSION

The DirectDraw Surface container format (uses the DDS file name extension) is Microsoft's data storage format together with the previously proprietary S3 Texture Compression (S3TC) algorithm, which can be hardware decompressed by the GPU. This makes the format useful for saving graphical textures and cube environment maps as a data file, both compressed and uncompressed. The file extension for this data format is '.dds'.

MY VERSION

The DDS contains the image and its mipmaps, and of course the alpha channel that creates the transparency (RGBA). I'll start with a picture. VIETCONG uses textures that must meet the height or width parameters multiplied by 32. So 64x128 or maybe 1024x256. Standard texture for objects is 256x256 or 512x512. Larger textures can be used for landscapes or large posters, for example 1024x1024 or even 2048x1024, 2048x2048. But these textures then also take up more MBs. Don't forget that mipmaps are also wrapped in them. 1 m in game is 128 pixels. For more complex things, I also used a texture that contains parts of model.

I use a 512x512 or 1024x1024 texture for the terrain. But then in 3ds Max I will use the dimension 4x4m or 8x8m in UVW Map Modifier when texturing the terrain.

DDS FORMATS FOR VIETCONG PTEROENGINE

DXT1 24bit RGB + 1bit alpha (black or white)

DXT3 24bit RGB + explicit 8bit alpha (256 gray scale)

DXT5 24bit RGB + interpolated 8bit alpha (256 gray scale)

Format 3 is almost identical to the 5, 5 is usually used.

ALPHA CHANNEL

1bit alpha - used for almost all of the textures. RGB pixels below which is white, are seen.

Usually the entire alpha is white.

8bit alpha - used for the overaly, decals, multitexture (spots, color shading of the terrain, watermarks) or partially transparent textures like glass, water, or fog. Depending on the shader with the range of shades of gray amended the transparency.

For the 1 bit alpha can be used TGA, but due to lack of mipmaps and the larger size is only used for small textures as overlay (various indicators, symbols, logos).

SHADERS (in 3ds Max for VIETCONG Pteroengine)

For standard texturing is not necessary to use.

#0-transparent, zbufwrite, sort - used for transitions (8bit alpha, thus DXT5, 3 or 1).

#1-transparent, zbufwrite, sort, 1-bit alpha - used for vegetation, fences etc.

White in alpha - see the texture, black - full transparency.

#2-translucent, no_zbufwrite, sort - most commonly used for glass. It is translucent.

The lighter alpha - more to see texture.

#3-transparent, zbufwrite, nosort, 1-bit alpha - so far I have not met with practical use.

#4-translucent add with the background, no_zbufwrite, sort - like #2,

but reflects the hue of the background. Produces an effect similar to the luminescence.

Mipmaps are sequences of textures, each of which is a progressively lower resolution representation of the same image. The height and width of each image in the mipmap is a power of two smaller than the previous level. They are intended to increase rendering speed. DirectX switches smoothly between them depending on the distance.

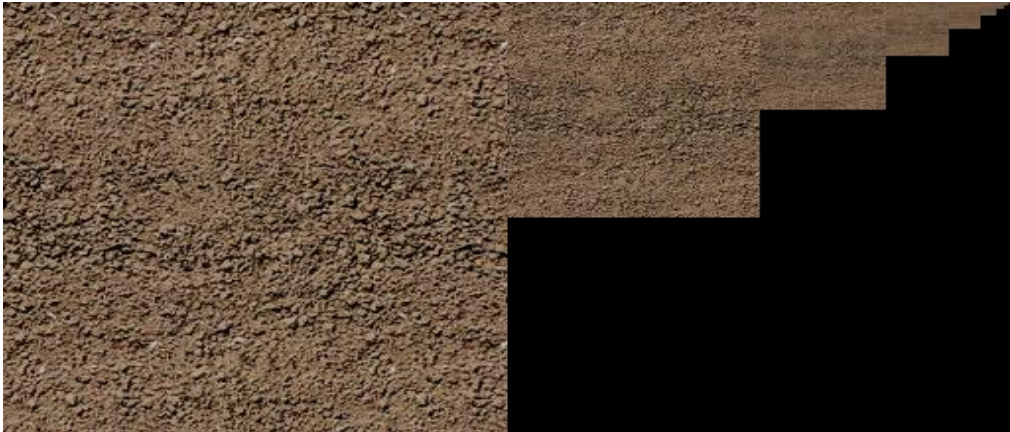
DDS DXT1 FORMAT EXAMPLE WITH MIPMAPS



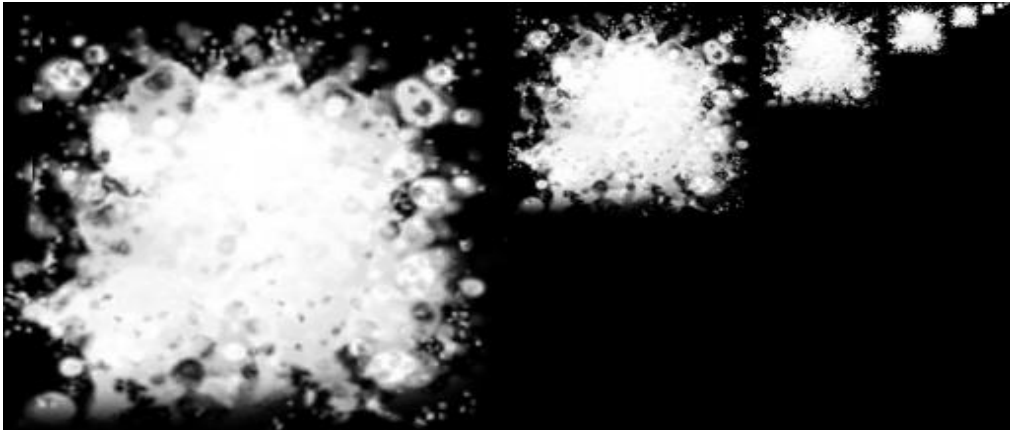
ALPHA CHANNEL



DDS DXT5 FORMAT EXAMPLE WITH MIPMAPS



ALPHA CHANNEL



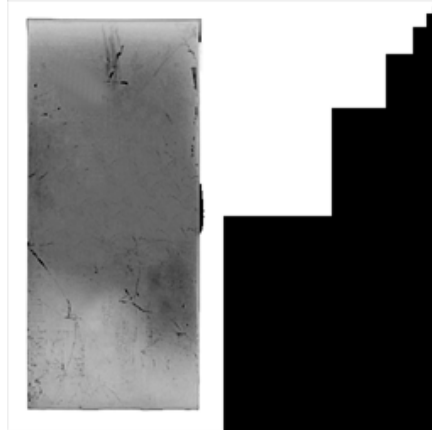
BEER GLASS – DDS DXT5



AND ALPHA CHANNEL



NOW ONE MY TRICK WITH DDS DXT5



I used semi-transparent glass but adjusted the alpha channel. I left the first image original and put the others in white. As a result, when you move away from a window in the game, the window becomes opaque. It can be used in other ways, you can put in RGB on the original image for example 1 and gradually on other mipmaps 2, 3 ... Just a tip.

=GONZO=

