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3ds Max DirectX Shader

Using DirectX Shaders in 3ds Max

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http://www.gamasutra.com/features/20060524/puech_01.shtml

. 3ds Max, Maya,
XSI DCC
RT/Shader Ginza, RenderMonkey FX Composer
DCC 가
3ds Max DirectX Shader
가 . 3ds Max
MAXScript, Max SDK DirectX Shaders 3ds
Max
3ds Max DirectX shader
DirectX shader

DirectX shader DirectX Effect 3ds Max

가

DirectX Shader
(normal mapping shader)

DirectX shader

DirectX shader

3ds Max

DirectX

DirectX

shader

가

DirectX Shader

Max

DirectX Shader

DirectX shader

DirectX shader

3ds Max

가

가

가

가

3ds Max

DirectX Shader

3ds Max

DirectX Shader

3ds Max FX Effect

Max

Max

DXSAS 0.8
가 가

2 가 Effect

DirectX Effect Shader

Effect

string ParamID = "0x0"; // Load default Max parser

```
string ParamID = "0x0001"; // Load DXSAS parser
```

3ds Max

가

가

```
_3DSMAX_, 3DSMAX, _MAX_ MAX
```

3ds Max, DCC

DirectX 9 Shader UI

UI

```
float OffsetScale <
```

```
    string UIType = "FloatSpinner";
```

```
    string UIName = "Offset Scale";
```

```
    float UIMin = -1.0f;
```

```
    float UIMax = 1.0f;
```

```
> = {0.1f};
```

```
    "UIType", "UIName", "UIMin", "UIMax"
```

```
    "Off Scale"
```

```
float
```

```
-1.0 - 1.0
```

```
float4 PS(VS_OUT In) : COLOR0
```

```
{
```

```
    // Pixel Shader code here
```

```
}
```

```
    "COLOR0"
```

```
float4
```

```
3ds Max
```

DirectX shader

3ds Max

DirectX shader

?


```

    - - Setup initial material
    delegate.effectfile = DEFAULTPATHFX + FX_TEXTURE
)
)

```

```

DirectX 9 Shader      "delegate"
    {
        .
    }

```

```

Delegate
    {
        .
    }

```

- DirectX 9 Shader
-

```

bool g_DiffuseMapEnable <
    string UIName = "Diffuse Map Enable";
> = false;

```

```

- - Set DiffuseMap activation value
on DiffuseMapEnable set val do
    delegate.g_DiffuseMapEnable = val

```

```

    ,
    ,
    가
    .

```

```

:

```

```

texture g_Diffuse Texture <
    string UIName = "Diffuse Map";
    int Texcoord = 0;
    int MapChannel = 1;
>;

```

```

( ):

```

```

- - When pressing btn DiffuseMap button
on btn DiffuseMap pressed do
(
  bmp = selectbitmap caption: "Diffuse Map"
  if(bmp != undefined) do
  (
    delegate.g_ Diffuse Texture = bmp - - Set effect bitmap
    btnDiffuseMap.text = bmp.filename - - Change caption text
    DiffuseMap = bmp - - Set Paramblock value
  )
)

```

SDK

```

3ds Max SDK SDK DirectX Hardware Shader Material
. 가 . SDK DirectX SDK
.
SDK DirectX Shader Material DirectX Manager
가 가 . Material DirectX
Manager . Max
. DirectX Effect Shader .

```

DirectX Shader

SDK

```

3ds Max SDK DirectX 9 Shader .
, 가 . DirectX 9 Shader Material
DirectX 9 Shader 가 .

```

```

// Get scene materials
Interface* ip = GetCOREInterface();
MtlBaseLib* lib = ip->GetSceneMtls();
if (!lib)
  return 0;

```

```

// Loop over the scene materials
const int NumMtls = lib->Count();
for( int i = 0; i < NumMtls; i++ ) {
    // Get current material
    MtlBase* mtl = static_cast<MtlBase*>( (*lib)[ i ] );
    if (!mtl)
        continue;

    // DxMaterial or extend ?
    IDxMaterial* dxMtl =
        (IDxMaterial*)mtl->GetInterface(IDXMATERIAL_INTERFACE);
    if( dxMtl)
        ProcessDxMaterial(dxMtl);
}

```

DxMaterial

```

// Get informations from the DirectX Shader material

// Get number of bitmaps used
unsigned int NumberOfBmps = dxMtl -> GetNumberOfEffectBitmaps ();

```

DirectX 9 Shader

0

```

// GetParamBlock() work only on the material pointer
IParamBlock2* pblock = mtl ->GetParamBlock(0);

```

DirectX 9 Shader
가

DirectX 9 Shader

3DXI

```

IGame          3DXI   3ds Max SDK          API   API
                Max                . 3DXI   DirectX Shader
                                . 3DXI
                . 3DXI                3DXI
GetIGameFX()   DirectX 9 Shader

```

DirectX 9 Shader 가

```
// Init IGame
IGameScene* plgame = GetIGameInterface();
plgame->InitialiseIGame(false);
plgame->SetStaticFrame(0);

unsigned int i = 0;

// Loop over scene materials
for(i = 0; i < plgame->GetRootMaterialCount(); i++)
{
    // Get this root material
    IGameMaterial* mtl = plgame->GetRootMaterial(i);
    if(!mtl)
        return;

    // DxMaterial ?
    IGameFX* fx = mtl->GetIGameFX();
    if(fx)
        ProcessEffect(fx)
}

unsigned int i = 0, j = 0;

// Loop over the technique of the effect
for(i = 0; i < fx->GetNumberOfTechniques(); i++)
{
    // Get current technique
    IGameFXTechnique* tech = fx->GetIGameFXTechnique(i);
    ProcessFXTechnique(tech);

    // Loop over the passes of the current technique
    for(j = 0 ; j < tech->GetNumberOfPasses(); j++)
    {
        // Get current pass
```

```

    IGameFXPass* pass = tech-> GetIGameFXPass(j);
    ProcessFXPass(pass);
}
}

```

3DXI 가 / . DirectX
shaders .

MAXScript

MAXScript

. DirectX 9 Shader

MAXScript

```

-- Loop over scene materials
for mtl in sceneMaterials do
(
-- DxMaterial?
if(Classof mtl == DirectX_9_Shader) do
(
-- Get current technique
CurrentTechnique = mtl.technique
EffectFile = mtl.effectfile

-- Get used bitmap(s) in the effect
for i = 1 to mtl.numberofbitmaps() do
(
bmp = mtl.geteffectbitmap i
BmpFileName = bmp.filename
)
)
)
)

```

DirectX 3ds Max . Max DirectX
SDK Direct
SDK . 3ds Max
3DXI DirectX . Max DirectX

Sparks : <http://sparks.discreet.com/>

Ben Cloward DirectX :
<http://www.monitorstudios.com/bcloward/resources.html>

DirectX shaders : <http://ypuechweb.free.fr/download.html>

: <http://dl3d.free.fr/phpBB2/index.php>

: <http://ypuechweb.free.fr/phpBB2/index.php>