

NEON86

LEGEND

color: Color(r,g,b,a=255)
vec: Vector3 / Vector4
mat: Matrix
tex: Material / RTT / texture handle
rtt: Render Target
texHandle: texture handle
eye,at,up: Vector3
key: "a" or KEY_SPACE etc.
su,tv: UV coordinates (floats)
nx,ny,nz: normal
v1,v2,v3: Vertex

EVENTS

_init()
_shutdown()
_update(dt)
_render()
_render2D()

BASE

ShowMessage(caption, text)
LogString(text)
ExitGame()
RestartGame()
IsDebugMode()
SetFPS(fps)
doFile(scriptName)
loadFile(fileName)
getTime()

SOUND

Sound(wavPath)
play()
pause()
stop()
setVolume(vol)

setPan(val)
setPos(val)
loop(state)
isLooping()
isPlaying()
getVolume()
getPan()
getPos()

MATH

Color(r,g,b,a=255)
ColorLinear(r,g,b,a=1.0)
str2vec(text)
vec2str(vec)

MATRIX

Matrix()
translate(x,y,z)
rotate(x,y,z)
scale(x,y,z)
inverse()
shadow(PlaneVec,lightVec)
reflect(PlaneVec)
lookAt(eye,at,up)
m(row,col)
row(index)
col(index)
bind(kind)

VECTOR

Vector3(x,y,z)
Vector4(x,y,z,w)
cross(vec)
get()
color()
mag()
magSq()
lerp(b,t)
neg()

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```
normalize()
m(index.val)
x0,y0,z0,w0
```

RENDERER

```
ClearScene(color)
CameraPerspective(fov,near,far,flipLH)
CameraOrthographic(w,h,near,fart,flipLH)
BindTexture(tex)
GetResolution()
GetMatrix(kind)
IsFocused()
RenderState(kind,state)
ToggleWireframe(state)
SetFog(color,kind,start,end)
SetFog(color,kind,density)
ClearFog()
SamplerState(stage,kind,state)
EnableLighting(state)
AmbientColor(color)
ClearTarget()
DrawBox(mat,dims,color)
DrawQuad(x1,x2,y1,y2,color,flipY)
DrawQuad3D(x1,x2,y1,y2,z1,z2,color)
DrawPolygon(v1,v2,v3)
CullMode(mode)
FillScreen(color,flipY)
RegisterFontFile(path)
```

SCENE

```
Scene(modelName,loadMaterials=true,optimizeMesh=false)
draw(mat)
drawSubset(index,mat)
loadModel(modelName,loadMaterials=true,optimizeMesh=false)
loadScene(modelName,loadMaterials=true,optimizeMesh=false)
getMeshes()
getLights()
```

```
getFlattenNodes()
getTargets()
findMesh(name)
findLight(name)
findTarget(name)
getRootNode()
```

NODE

```
Node()
clone()
getName()
setName(name)
getTransform()
setTransform(mat)
getFinalTransform()
addNode(node)
addMesh(mesh)
draw(mat)
drawSubset(index, mat)
getMeshes()
getMeshParts()
getLights()
getTargets()
getNodes()
findMesh(name)
findLight(name)
findTarget(name)
findNode(name)
getMeta(name)
```

MESH

```
Mesh()
addFGroup(part)
addPart(part)
draw(mat)
clone()
getFGroups()
```

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```
getParts()
clear()
setName(name)
getName()
setMaterial(stage.tex)
getMaterial(stage)
```

PART / FACEGROUP

```
FaceGroup()
clone()
addVertex(vert)
addIndex(index)
addTriangle(a,b,c)
setMaterial(stage.mat)
getMaterial(stage)
getMaterialStage()
draw(mat)
build()
calcNormals()
clear()
getVertices()
getIndices()
```

MATERIAL

```
Material()
Material(textureName)
Material(w,h)
setSamplerState(sampler.state)
getSamplerState(sampler)
loadFile(textureName)
res()
data()
getHandle(slot)
setHandle(slot.texHandle)
setDiffuse(color)
setAmbient(color)
setSpecular(color)
setEmission(color)
setPower(val)
```

```
setOpacity(val)
alphaIsTransparency(state)
setShaded(state)
```

VERTEX

```
Vertex(x,y,z,su,tv,color,nx,ny,nz)
get()
```

FONT

```
Font(fontFamily,size,boldness,italic)
drawText(color,text,x,y,w=0,h=0)
```

RENDER TARGET

```
RenderTarget()
RenderTarget(w,h)
RenderTarget(w,h,hasDepth=false)
getHandle()
bind()
```

EFFECT

```
Effect(effectPath)
begin(technique)
end().flush()
beginPass(pass)
endPass()
commit()
setBool(name,val)
setFloat(name,val)
setMatrix(name.mat)
setVector3(name.vec)
setVector4(name.vec)
setInteger(name,val)
setTexture(name.texHandle)
setTexture(name.slot.mat)
setTexture(name.rtt)
```

LIGHT

```
Light(slot)
enable(state.slot)
setPosition(vec)
setDirection(vec)
setDiffuse(color)
```

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```
setSpecular(color)
setAmbient(color)
setRange(val)
setFalloff(val)
setAttenuation(a,b,c)
setInnerAngle(val)
setOuterAngle(val)
setType(kind)
setSlot(slot)
getType()
getSlot()
```

INPUT

```
GetKey(key)
GetKeyDown(key)
GetKeyUp(key)
GetMouseXY()
GetMouseDelta()
SetMouseXY(x,y)
GetMouse(button)
GetMouseDown(button)
GetMouseUp(button)
IsCursorVisible()
ShowCursor(state)
GetCursorMode()
SetCursorMode(mode)
ShowCursor(state)
```

GLOBALS

RENDERER

```
PRIMITIVEKIND_POINTLIST
PRIMITIVEKIND_LINELIST
PRIMITIVEKIND_LINESTRIP
PRIMITIVEKIND_TRIANGLELIST
PRIMITIVEKIND_TRIANGLESTRIP
PRIMITIVEKIND_TRIANGLEFAN
```

```
MATRIXKIND_VIEW
MATRIXKIND_PROJECTION
MATRIXKIND_TEXTURE0
MATRIXKIND_TEXTURE1
MATRIXKIND_TEXTURE2
MATRIXKIND_TEXTURE3
MATRIXKIND_TEXTURE4
MATRIXKIND_TEXTURE5
MATRIXKIND_TEXTURE6
MATRIXKIND_TEXTURE7
MATRIXKIND_WORLD
```

```
CLEARFLAG_COLOR
CLEARFLAG_DEPTH
CLEARFLAG_STENCIL
CLEARFLAG_STANDARD
```

```
TEXTURESLOT_ALBEDO
TEXTURESLOT_SPECULAR
TEXTURESLOT_NORMAL
TEXTURESLOT_DISPLACE
TEXTURESLOT_USER_END
MAX_TEXTURE_SLOTS
```

```
FOGKIND_NONE
FOGKIND_EXP
FOGKIND_EXP2
FOGKIND_LINEAR
```

```
WORLD
VIEW
PROJ
```

```
CULLKIND_NONE
CULLKIND_CW
```

CULLKIND_CCW

LIGHTKIND_DIRECTIONAL

LIGHTKIND_POINT

LIGHTKIND_SPOT

RENDERSTATE_ZENABLE

RENDERSTATE_FILLMODE

RENDERSTATE_SHADEMODE

RENDERSTATE_ZWRITEENABLE

RENDERSTATE_ALPHATESTENABLE

RENDERSTATE_LASTPIXEL

RENDERSTATE_SRCBLEND

RENDERSTATE_DESTBLEND

RENDERSTATE_CULLMODE

RENDERSTATE_ZFUNC

RENDERSTATE_ALPHAREF

RENDERSTATE_ALPHAFUNC

RENDERSTATE_DITHERENABLE

RENDERSTATE_ALPHABLENDENABLE

RENDERSTATE_FOGENABLE

RENDERSTATE_SPECULARENABLE

RENDERSTATE_FOGCOLOR

RENDERSTATE_FOGTABLEMODE

RENDERSTATE_FOGSTART

RENDERSTATE_FOGEND

RENDERSTATE_FOGDENSITY

RENDERSTATE_RANGEFOGENABLE

RENDERSTATE_STENCILENABLE

RENDERSTATE_STENCILFAIL

RENDERSTATE_STENCILZFAIL

RENDERSTATE_STENCILPASS

RENDERSTATE_STENCILFUNC

RENDERSTATE_STENCILREF

RENDERSTATE_STENCILMASK

RENDERSTATE_STENCILWRITEMASK

RENDERSTATE_TEXTUREFACTOR

RENDERSTATE_WRAP0

RENDERSTATE_WRAP1

RENDERSTATE_WRAP2

RENDERSTATE_WRAP3

RENDERSTATE_WRAP4

RENDERSTATE_WRAP5

RENDERSTATE_WRAP6

RENDERSTATE_WRAP7

RENDERSTATE_CLIPPING

RENDERSTATE_LIGHTING

RENDERSTATE_AMBIENT

RENDERSTATE_FOGVERTEXMODE

RENDERSTATE_COLORVERTEX

RENDERSTATE_LOCALVIEWER

RENDERSTATE_NORMALIZENORMALS

RENDERSTATE_DIFFUSEMATERIALSOURCE

RENDERSTATE_SPECULARMATERIALSOURCE

RENDERSTATE_AMBIENTMATERIALSOURCE

RENDERSTATE_EMISSIVEMATERIALSOURCE

RENDERSTATE_VERTEXBLEND

RENDERSTATE_CLIPPLANEENABLE

RENDERSTATE_POINTSIZE

RENDERSTATE_POINTSIZE_MIN

RENDERSTATE_POINTSPRITEENABLE

RENDERSTATE_POINTSCALEENABLE

RENDERSTATE_POINTSCALE_A

RENDERSTATE_POINTSCALE_B

RENDERSTATE_POINTSCALE_C

RENDERSTATE_MULTISAMPLEANTIALIAS

RENDERSTATE_MULTISAMPLEMASK

RENDERSTATE_PATCHEDGE STYLE

RENDERSTATE_DEBUGMONITOR TOKEN

RENDERSTATE_POINTSIZE_MAX

RENDERSTATE_INDEXEDVERTEXBLENDENABLE

RENDERSTATE_COLORWRITEENABLE

RENDERSTATE_TWEENFACTOR

RENDERSTATE_BLENDOP

RENDERSTATE_NORMALDEGREE
RENDERSTATE_SCISSORTESTENABLE
RENDERSTATE_SLOPESCALEDDEPTHBIAS
RENDERSTATE_ANTIALIASEDLINEENABLE
RENDERSTATE_MINTESSELLATIONLEVEL
RENDERSTATE_MAXTESSELLATIONLEVEL
RENDERSTATE_ADAPTIVETESS_X
RENDERSTATE_ADAPTIVETESS_Y
RENDERSTATE_ADAPTIVETESS_Z
RENDERSTATE_ADAPTIVETESS_W
RENDERSTATE_ENABLEADAPTIVETESSELLATION
RENDERSTATE_TWOSIDEDSTENCILMODE
RENDERSTATE_CCW_STENCILFAIL
RENDERSTATE_CCW_STENCILZFAIL
RENDERSTATE_CCW_STENCILPASS
RENDERSTATE_CCW_STENCILFUNC
RENDERSTATE_COLORWRITEENABLE1
RENDERSTATE_COLORWRITEENABLE2
RENDERSTATE_COLORWRITEENABLE3
RENDERSTATE_BLENDFACTOR
RENDERSTATE_SRGBWRITEENABLE
RENDERSTATE_DEPTHBIAS
RENDERSTATE_WRAP8
RENDERSTATE_WRAP9
RENDERSTATE_WRAP10
RENDERSTATE_WRAP11
RENDERSTATE_WRAP12
RENDERSTATE_WRAP13
RENDERSTATE_WRAP14
RENDERSTATE_WRAP15
RENDERSTATE_SEPARATEALPHABLENDENABLE
RENDERSTATE_SRCBLENDALPHA
RENDERSTATE_DESTBLENDALPHA
RENDERSTATE_BLENDOPALPHA

SAMPLERSTATE_ADDRESSU
SAMPLERSTATE_ADDRESSV

SAMPLERSTATE_ADDRESSW
SAMPLERSTATE_BORDERCOLOR
SAMPLERSTATE_MAGFILTER
SAMPLERSTATE_MINFILTER
SAMPLERSTATE_MIPFILTER
SAMPLERSTATE_MIPMAPLODBIAS
SAMPLERSTATE_MAXMIPLEVEL
SAMPLERSTATE_MAXANISOTROPY
SAMPLERSTATE_SRGBTEXTURE
SAMPLERSTATE_ELEMENTINDEX
SAMPLERSTATE_DMAPOFFSET

TEXF_NONE
TEXF_POINT
TEXF_LINEAR
TEXF_ANISOTROPIC
TEXF_PYRAMIDALQUAD
TEXF_GAUSSIANQUAD

TEXA_WRAP
TEXA_MIRROR
TEXA_CLAMP
TEXA_BORDER
TEXA_MIRRORONCE

INPUT

MOUSE_LEFT_BUTTON
MOUSE_MIDDLE_BUTTON
MOUSE_RIGHT_BUTTON
MOUSE_WHEEL_UP
MOUSE_WHEEL_DOWN

CURSORMODE_DEFAULT
CURSORMODE_CENTERED
CURSORMODE_WRAPPED

KEY_LBUTTON
KEY_RBUTTON

KEY_CANCEL	KEY_SNAPSHOT
KEY_MBUTTON	KEY_INSERT
KEY_XBUTTON1	KEY_DELETE
KEY_XBUTTON2	KEY_HELP
KEY_BACK	KEY_LWIN
KEY_TAB	KEY_RWIN
KEY_CLEAR	KEY_APPS
KEY_RETURN	KEY_SLEEP
KEY_SHIFT	KEY_NUMPAD0
KEY_CONTROL	KEY_NUMPAD1
KEY_MENU	KEY_NUMPAD2
KEY_PAUSE	KEY_NUMPAD3
KEY_CAPITAL	KEY_NUMPAD4
KEY_KANA	KEY_NUMPAD5
KEY_HANGEUL	KEY_NUMPAD6
KEY_HANGUL	KEY_NUMPAD7
KEY_JUNJA	KEY_NUMPAD8
KEY_FINAL	KEY_NUMPAD9
KEY_HANJA	KEY_MULTIPLY
KEY_KANJI	KEY_ADD
KEY_ESCAPE	KEY_SEPARATOR
KEY_CONVERT	KEY_SUBTRACT
KEY_NONCONVERT	KEY_DECIMAL
KEY_ACCEPT	KEY_DIVIDE
KEY_MODECHANGE	KEY_F1
KEY_SPACE	KEY_F2
KEY_PRIOR	KEY_F3
KEY_NEXT	KEY_F4
KEY_END	KEY_F5
KEY_HOME	KEY_F6
KEY_LEFT	KEY_F7
KEY_UP	KEY_F8
KEY_RIGHT	KEY_F9
KEY_DOWN	KEY_F10
KEY_SELECT	KEY_F11
KEY_PRINT	KEY_F12
KEY_EXECUTE	KEY_F13

KEY_F14	KEY_BROWSER_SEARCH
KEY_F15	KEY_BROWSER_FAVORITES
KEY_F16	KEY_BROWSER_HOME
KEY_F17	KEY_VOLUME_MUTE
KEY_F18	KEY_VOLUME_DOWN
KEY_F19	KEY_VOLUME_UP
KEY_F20	KEY_MEDIA_NEXT_TRACK
KEY_F21	KEY_MEDIA_PREV_TRACK
KEY_F22	KEY_MEDIA_STOP
KEY_F23	KEY_MEDIA_PLAY_PAUSE
KEY_F24	KEY_LAUNCH_MAIL
KEY_NAVIGATION_VIEW	KEY_LAUNCH_MEDIA_SELECT
KEY_NAVIGATION_MENU	KEY_LAUNCH_APP1
KEY_NAVIGATION_UP	KEY_LAUNCH_APP2
KEY_NAVIGATION_DOWN	KEY_OEM_1
KEY_NAVIGATION_LEFT	KEY_OEM_PLUS
KEY_NAVIGATION_RIGHT	KEY_OEM_COMMA
KEY_NAVIGATION_ACCEPT	KEY_OEM_MINUS
KEY_NAVIGATION_CANCEL	KEY_OEM_PERIOD
KEY_NUMLOCK	KEY_OEM_2
KEY_SCROLL	KEY_OEM_3
KEY_OEM_NEC_EQUAL	KEY_GAMEPAD_A
KEY_OEM_FJ_JISHO	KEY_GAMEPAD_B
KEY_OEM_FJ_MASSHOU	KEY_GAMEPAD_X
KEY_OEM_FJ_TOUROKU	KEY_GAMEPAD_Y
KEY_OEM_FJ_LOYA	KEY_GAMEPAD_RIGHT_SHOULDER
KEY_OEM_FJ_ROYA	KEY_GAMEPAD_LEFT_SHOULDER
KEY_LSHIFT	KEY_GAMEPAD_LEFT_TRIGGER
KEY_RSHIFT	KEY_GAMEPAD_RIGHT_TRIGGER
KEY_LCONTROL	KEY_GAMEPAD_DPAD_UP
KEY_RCONTROL	KEY_GAMEPAD_DPAD_DOWN
KEY_LMENU	KEY_GAMEPAD_DPAD_LEFT
KEY_RMENU	KEY_GAMEPAD_DPAD_RIGHT
KEY_BROWSER_BACK	KEY_GAMEPAD_MENU
KEY_BROWSER_FORWARD	KEY_GAMEPAD_VIEW
KEY_BROWSER_REFRESH	KEY_GAMEPAD_LEFT_THUMBSTICK_BUTTON
KEY_BROWSER_STOP	KEY_GAMEPAD_RIGHT_THUMBSTICK_BUTTON

KEY_GAMEPAD_LEFT_THUMBSTICK_UP
KEY_GAMEPAD_LEFT_THUMBSTICK_DOWN
KEY_GAMEPAD_LEFT_THUMBSTICK_RIGHT
KEY_GAMEPAD_LEFT_THUMBSTICK_LEFT
KEY_GAMEPAD_RIGHT_THUMBSTICK_UP
KEY_GAMEPAD_RIGHT_THUMBSTICK_DOWN
KEY_GAMEPAD_RIGHT_THUMBSTICK_RIGHT
KEY_GAMEPAD_RIGHT_THUMBSTICK_LEFT
KEY_OEM_4
KEY_OEM_5
KEY_OEM_6
KEY_OEM_7
KEY_OEM_8
KEY_OEM_AX
KEY_OEM_102
KEY_ICO_HELP
KEY_ICO_00
KEY_PROCESSKEY
KEY_ICO_CLEAR
KEY_PACKET
KEY_OEM_RESET
KEY_OEM_JUMP
KEY_OEM_PA1
KEY_OEM_PA2
KEY_OEM_PA3
KEY_OEM_WSCTRL
KEY_OEM_CUSEL
KEY_OEM_ATTN
KEY_OEM_FINISH
KEY_OEM_COPY
KEY_OEM_AUTO
KEY_OEM_LENW
KEY_OEM_BACKTAB
KEY_ATTN
KEY_CRSEL
KEY_EXSEL
KEY_EREOF

KEY_PLAY
KEY_ZOOM
KEY_NONAME
KEY_PA1
KEY_OEM_CLEAR