

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()
_charInput(letter)

BASE

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

AUDIO

SOUND

Sound(wavPath)
play()

pause()
stop()
setVolume(vol)
setPan(val)
setCursor(val)
loop(state)
isLooping()
isPlaying()
getVolume()
getPan()
getCursor()
getData()

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)
persp(eye.at.pos.up)
ortho(w,h,near,far,flipLH)
orthoEx(l,r,t,b,near,far,flipLH)

VECTOR

Vector3(x,y,z)
Vector4(x,y,z,w)

NEON86

```
cross(vec)
get()
color()
mag()
magSq()
lerp(b,t)
neg()
normalize()
n(index,val)
x0,y0,z0,w0
```

RENDERER

```
ClearScene(color)
CameraPerspective(fov,near,far,flipLH)
CameraOrthographic(w,h,near,far,flipLH)
CameraOrthographicEx(l,r,t,b,near,far,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)
ToggleDepthTest(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()
getParts()
clear()
setName(name)
getName()
setMaterial(tex)
getMaterial(matId)
```

PART / FACEGROUP

```
FaceGroup()
clone()
addVertex(vert)
addIndex(index)
addTriangle(a,b,c)
setMaterial(mat)
getMaterial()
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)
alphaTest(state)
setAlphaRef(val)
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,flags)
measureText(text,flags,width)
```

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)
```

NEON86

```
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)
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_PATCHEDGESTYLE
RENDERSTATE_DEBUGMONITORTOKEN
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

TEXTF_NONE
TEXTF_POINT
TEXTF_LINEAR
TEXTF_ANISOTROPIC
TEXTF_PYRAMIDALQUAD
TEXTF_GAUSSIANQUAD

TEXTA_WRAP
TEXTA_MIRROR
TEXTA_CLAMP
TEXTA_BORDER
TEXTA_MIRRORONCE

FONTFLAG_TOP
FONTFLAG_LEFT

FONTFLAG_CENTER
FONTFLAG_RIGHT
FONTFLAG_VCENTER
FONTFLAG_BOTTOM
FONTFLAG_WRAP
FONTFLAG_SINGLELINE
FONTFLAG_EXPANDTABS
FONTFLAG_NOCLIP

RTKIND_COLOR
RTKIND_DEPTH
RTKIND_COLOR16
RTKIND_COLOR32

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_MBUTTON
KEY_XBUTTON1
KEY_XBUTTON2
KEY_BACK
KEY_TAB
KEY_CLEAR
KEY_RETURN
KEY_SHIFT
KEY_CONTROL
KEY_MENU

KEY_PAUSE
KEY_CAPITAL
KEY_KANA
KEY_HANGEUL
KEY_HANGUL
KEY_JUNJA
KEY_FINAL
KEY_HANJA
KEY_KANJI
KEY_ESCAPE
KEY_CONVERT
KEY_NONCONVERT
KEY_ACCEPT
KEY_MODECHANGE
KEY_SPACE
KEY_PRIOR
KEY_NEXT
KEY_END
KEY_HOME
KEY_LEFT
KEY_UP
KEY_RIGHT
KEY_DOWN
KEY_SELECT
KEY_PRINT
KEY_EXECUTE
KEY_SNAPSHOT
KEY_INSERT
KEY_DELETE
KEY_HELP
KEY_LWIN
KEY_RWIN
KEY_APPS
KEY_SLEEP
KEY_NUMPAD0
KEY_NUMPAD1
KEY_NUMPAD2

KEY_NUMPAD3	KEY_NAVIGATION_VIEW
KEY_NUMPAD4	KEY_NAVIGATION_MENU
KEY_NUMPAD5	KEY_NAVIGATION_UP
KEY_NUMPAD6	KEY_NAVIGATION_DOWN
KEY_NUMPAD7	KEY_NAVIGATION_LEFT
KEY_NUMPAD8	KEY_NAVIGATION_RIGHT
KEY_NUMPAD9	KEY_NAVIGATION_ACCEPT
KEY_MULTIPLY	KEY_NAVIGATION_CANCEL
KEY_ADD	KEY_NUMLOCK
KEY_SEPARATOR	KEY_SCROLL
KEY_SUBTRACT	KEY_OEM_NEC_EQUAL
KEY_DECIMAL	KEY_OEM_FJ_JISHO
KEY_DIVIDE	KEY_OEM_FJ_MASSHOU
KEY_F1	KEY_OEM_FJ_TOUROKU
KEY_F2	KEY_OEM_FJ_LOYA
KEY_F3	KEY_OEM_FJ_ROYA
KEY_F4	KEY_LSHIFT
KEY_F5	KEY_RSHIFT
KEY_F6	KEY_LCONTROL
KEY_F7	KEY_RCONTROL
KEY_F8	KEY_LMENU
KEY_F9	KEY_RMENU
KEY_F10	KEY_BROWSER_BACK
KEY_F11	KEY_BROWSER_FORWARD
KEY_F12	KEY_BROWSER_REFRESH
KEY_F13	KEY_BROWSER_STOP
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_LAUNCH_MEDIA_SELECT	KEY_OEM_7
KEY_LAUNCH_APP1	KEY_OEM_8
KEY_LAUNCH_APP2	KEY_OEM_AX
KEY_OEM_1	KEY_OEM_102
KEY_OEM_PLUS	KEY_ICO_HELP
KEY_OEM_COMMA	KEY_ICO_00
KEY_OEM_MINUS	KEY_PROCESSKEY
KEY_OEM_PERIOD	KEY_ICO_CLEAR
KEY_OEM_2	KEY_PACKET
KEY_OEM_3	KEY_OEM_RESET
KEY_GAMEPAD_A	KEY_OEM_JUMP
KEY_GAMEPAD_B	KEY_OEM_PA1
KEY_GAMEPAD_X	KEY_OEM_PA2
KEY_GAMEPAD_Y	KEY_OEM_PA3
KEY_GAMEPAD_RIGHT_SHOULDER	KEY_OEM_WSCTRL
KEY_GAMEPAD_LEFT_SHOULDER	KEY_OEM_CUSEL
KEY_GAMEPAD_LEFT_TRIGGER	KEY_OEM_ATTN
KEY_GAMEPAD_RIGHT_TRIGGER	KEY_OEM_FINISH
KEY_GAMEPAD_DPAD_UP	KEY_OEM_COPY
KEY_GAMEPAD_DPAD_DOWN	KEY_OEM_AUTO
KEY_GAMEPAD_DPAD_LEFT	KEY_OEM_ENLW
KEY_GAMEPAD_DPAD_RIGHT	KEY_OEM_BACKTAB
KEY_GAMEPAD_MENU	KEY_ATTN
KEY_GAMEPAD_VIEW	KEY_CRSEL
KEY_GAMEPAD_LEFT_THUMBSTICK_BUTTON	KEY_EXSEL
KEY_GAMEPAD_RIGHT_THUMBSTICK_BUTTON	KEY_EREOF
KEY_GAMEPAD_LEFT_THUMBSTICK_UP	KEY_PLAY
KEY_GAMEPAD_LEFT_THUMBSTICK_DOWN	KEY_ZOOM
KEY_GAMEPAD_LEFT_THUMBSTICK_RIGHT	KEY_NONAME
KEY_GAMEPAD_LEFT_THUMBSTICK_LEFT	KEY_PA1
KEY_GAMEPAD_RIGHT_THUMBSTICK_UP	KEY_OEM_CLEAR
KEY_GAMEPAD_RIGHT_THUMBSTICK_DOWN	
KEY_GAMEPAD_RIGHT_THUMBSTICK_RIGHT	
KEY_GAMEPAD_RIGHT_THUMBSTICK_LEFT	
KEY_OEM_4	
KEY_OEM_5	
KEY_OEM_6	