

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()

AUDIO

SOUND

Sound(wavPath)
play()
pause()

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

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)
n(row,col)
row(index)
col(index)
bind(kind)

VECTOR

Vector3(x,y,z)
Vector4(x,y,z,w)
cross(vec)
get()
color()
mag()
magSq()

NEON86

```
lerp(b,t)  
ne9()  
normalize()  
n(index,val)  
x0,y0,z0,w0
```

RENDERER

```
ClearScene(color)  
CameraPerspective(fov,near,far,flipLH)  
CameraOrthographic(w,h,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)  
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)
```

NEON86

```
clone()
getFGroups()
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)
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)
```

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)
```

NEON86

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_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

TEXTF_NONE
TEXTF_POINT
TEXTF_LINEAR
TEXTF_ANISOTROPIC
TEXTF_PYRAMIDALQUAD
TEXTF_GAUSSIANQUAD

TEXTA_WRAP
TEXTA_MIRROR
TEXTA_CLAMP
TEXTA_BORDER
TEXTA_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_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_NUMPAD4
KEY_NUMPAD5
KEY_NUMPAD6
KEY_NUMPAD7
KEY_NUMPAD8
KEY_NUMPAD9
KEY_MULTIPLY
KEY_ADD
KEY_SEPARATOR
KEY_SUBTRACT
KEY_DECIMAL
KEY_DIVIDE
KEY_F1
KEY_F2
KEY_F3
KEY_F4
KEY_F5
KEY_F6
KEY_F7
KEY_F8
KEY_F9

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_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_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	
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_ENLW	
KEY_OEM_BACKTAB	