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()/GetTime()
    SaveState(data)
    LoadState()

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)

NEON86

```
    ortho(w,h,near,far,flipLH)                    DrawQuad(x1,x2,y1,y2,color,flipY)
    orthoEx(l,r,t,b,near,far,flipLH)              DrawQuad3D(x1,x2,y1,y2,z1,z2,color)
VECTOR                                            DrawPolygon(v1,v2,v3)
    Vector3(x,y,z)                                CullMode(mode)
    Vector4(x,y,z,w)                              FillScreen(color,flipY)
    cross(vec)                                    RegisterFontFile(path)
    get()
    color()                                   SCENE
    mag()                                         Scene(modelName,loadMaterials=true,optimizeMesh=false)
    magSq()                                       draw(mat)
    lerp(b,t)                                     drawSubset(index,mat)
    neg()                                         loadModel(modelName,loadMaterials=true,optimizeMesh=false)
    normalize()                                   loadScene(modelName,loadMaterials=true,optimizeMesh=false)
    m(index,val)                                  getMeshes()
    x(),y(),z(),w()                               getLights()
                                                  getFlattenNodes()
                                                  getTargets()
RENDERER                                          findMesh(name)
    ClearScene(color)                             findLight(name)
    CameraPerspective(fov,near,far,flipLH)        findTarget(name)
    CameraOrthographic(w,h,near,far,flipLH)       getRootNode()
    CameraOrthographicEx(l,r,t,p,near,far,flipLH)
    BindTexture(tex)                          NODE
    GetResolution()                               Node()
    GetMatrix(kind)                               clone()
    IsFocused()                                   getName()
    RenderState(kind,state)                       setName(name)
    ToggleWireframe(state)                        getTransform()
    SetFog(color,kind,start,end)                  setTransform(mat)
    SetFog(color,kind,density)                    getFinalTransform()
    ClearFog()                                    addNode(node)
    SamplerState(stage,kind,state)                addMesh(mesh)
    EnableLighting(state)                         draw(mat)
    ToggleDepthTest(state)                        drawSubset(index, mat)
    AmbientColor(color)                           getMeshes()
    ClearTarget()                                 getMeshParts()
    DrawBox(mat,dims,color)                       getLights()
```

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```
    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)
```

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```
        end().flush()                              GetMouseDelta()
        beginPass(pass)                            SetMouseXY(x,y)
        endPass()                                  GetMouse(button)
        commit()                                   GetMouseDown(button)
        setBool(name,val)                          GetMouseUp(button)
        setFloat(name,val)                         IsCursorVisible()
        setMatrix(name,mat)                        ShowCursor(state)
        setVector3(name,vec)                       GetCursorMode()
        setVector4(name,vec)                       SetCursorMode(mode)
        setInteger(name,val)                       ShowCursor(state)
        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()
```

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
```

INPUT

```
        GetKey(key)
        GetKeyDown(key)
        GetKeyUp(key)
        GetMouseXY()
```

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```
TEXTURESLOT_ALBEDO                      RENDERSTATE_DITHERENABLE
TEXTURESLOT_SPECULAR                    RENDERSTATE_ALPHABLENDENABLE
TEXTURESLOT_NORMAL                      RENDERSTATE_FOGENABLE
TEXTURESLOT_DISPLACE                    RENDERSTATE_SPECULARENABLE
TEXTURESLOT_USER_END                    RENDERSTATE_FOGCOLOR
MAX_TEXTURE_SLOTS                       RENDERSTATE_FOGTABLEMODE
                                        RENDERSTATE_FOGSTART
FOGKIND_NONE                            RENDERSTATE_FOGEND
FOGKIND_EXP                             RENDERSTATE_FOGDENSITY
FOGKIND_EXP2                            RENDERSTATE_RANGEFOGENABLE
FOGKIND_LINEAR                          RENDERSTATE_STENCILENABLE
                                        RENDERSTATE_STENCILFAIL
WORLD                                   RENDERSTATE_STENCILZFAIL
VIEW                                    RENDERSTATE_STENCILPASS
PROJ                                    RENDERSTATE_STENCILFUNC
                                        RENDERSTATE_STENCILREF
CULLKIND_NONE                           RENDERSTATE_STENCILMASK
CULLKIND_CW                             RENDERSTATE_STENCILWRITEMASK
CULLKIND_CCW                            RENDERSTATE_TEXTUREFACTOR
                                        RENDERSTATE_WRAP0
LIGHTKIND_DIRECTIONAL                   RENDERSTATE_WRAP1
LIGHTKIND_POINT                         RENDERSTATE_WRAP2
LIGHTKIND_SPOT                          RENDERSTATE_WRAP3
                                        RENDERSTATE_WRAP4
                                        RENDERSTATE_WRAP5
RENDERSTATE_ZENABLE                     RENDERSTATE_WRAP6
RENDERSTATE_FILLMODE                    RENDERSTATE_WRAP7
RENDERSTATE_SHADEMODE                   RENDERSTATE_CLIPPING
RENDERSTATE_ZWRITEENABLE                RENDERSTATE_LIGHTING
RENDERSTATE_ALPHATESTENABLE             RENDERSTATE_AMBIENT
RENDERSTATE_LASTPIXEL                   RENDERSTATE_FOGVERTEXMODE
RENDERSTATE_SRCBLEND                    RENDERSTATE_COLORVERTEX
RENDERSTATE_DESTBLEND                   RENDERSTATE_LOCALVIEWER
RENDERSTATE_CULLMODE                    RENDERSTATE_NORMALIZENORMALS
RENDERSTATE_ZFUNC                       RENDERSTATE_DIFFUSEMATERIALSOURCE
RENDERSTATE_ALPHAREF                    RENDERSTATE_SPECULARMATERIALSOURCE
RENDERSTATE_ALPHAFUNC                   RENDERSTATE_AMBIENTMATERIALSOURCE
```

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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_SLOPESCALEDEPTHBIAS
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

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TEXF_GAUSSIANQUAD

TEXA_WRAP
TEXA_MIRROR
TEXA_CLAMP
TEXA_BORDER
TEXA_MIRRORONCE

FONTFLAG_TOP
FONTFLAG_LEFT
FONTFLAG_CENTER
FONTFLAG_RIGHT
FONTFLAG_VCENTER
FONTFLAG_BOTTOM
FONTFLAG_WORDBREAK
FONTFLAG_SINGLELINE
FONTFLAG_EXPANDTABS
FONTFLAG_NOCLIP

FF_TOP
FF_LEFT
FF_CENTER
FF_RIGHT
FF_VCENTER
FF_BOTTOM
FF_WORDBREAK
FF_SINGLELINE
FF_EXPANDTABS
FF_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

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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_F11
KEY_F12
KEY_F13
KEY_F14
KEY_F15
KEY_F16
KEY_F17
KEY_F18
KEY_F19
KEY_F20
KEY_F21
KEY_F22
KEY_F23
KEY_F24
KEY_NAVIGATION_VIEW
KEY_NAVIGATION_MENU
KEY_NAVIGATION_UP
KEY_NAVIGATION_DOWN
KEY_NAVIGATION_LEFT
KEY_NAVIGATION_RIGHT
KEY_NAVIGATION_ACCEPT
KEY_NAVIGATION_CANCEL
KEY_NUMLOCK
KEY_SCROLL
KEY_OEM_NEC_EQUAL
KEY_OEM_FJ_JISHO
KEY_OEM_FJ_MASSHOU
KEY_OEM_FJ_TOUROKU
KEY_OEM_FJ_LOYA
KEY_OEM_FJ_ROYA

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KEY_LSHIFT
KEY_RSHIFT
KEY_LCONTROL
KEY_RCONTROL
KEY_LMENU
KEY_RMENU
KEY_BROWSER_BACK
KEY_BROWSER_FORWARD
KEY_BROWSER_REFRESH
KEY_BROWSER_STOP
KEY_BROWSER_SEARCH
KEY_BROWSER_FAVORITES
KEY_BROWSER_HOME
KEY_VOLUME_MUTE
KEY_VOLUME_DOWN
KEY_VOLUME_UP
KEY_MEDIA_NEXT_TRACK
KEY_MEDIA_PREV_TRACK
KEY_MEDIA_STOP
KEY_MEDIA_PLAY_PAUSE
KEY_LAUNCH_MAIL
KEY_LAUNCH_MEDIA_SELECT
KEY_LAUNCH_APP1
KEY_LAUNCH_APP2
KEY_OEM_1
KEY_OEM_PLUS
KEY_OEM_COMMA
KEY_OEM_MINUS
KEY_OEM_PERIOD
KEY_OEM_2
KEY_OEM_3
KEY_GAMEPAD_A
KEY_GAMEPAD_B
KEY_GAMEPAD_X
KEY_GAMEPAD_Y
KEY_GAMEPAD_RIGHT_SHOULDER
KEY_GAMEPAD_LEFT_SHOULDER

KEY_GAMEPAD_LEFT_TRIGGER
KEY_GAMEPAD_RIGHT_TRIGGER
KEY_GAMEPAD_DPAD_UP
KEY_GAMEPAD_DPAD_DOWN
KEY_GAMEPAD_DPAD_LEFT
KEY_GAMEPAD_DPAD_RIGHT
KEY_GAMEPAD_MENU
KEY_GAMEPAD_VIEW
KEY_GAMEPAD_LEFT_THUMBSTICK_BUTTON
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_ENLW
KEY_OEM_BACKTAB
KEY_ATTN
KEY_CRSEL
KEY_EXSEL
KEY_EREOF
KEY_PLAY
KEY_ZOOM
KEY_NONAME
KEY_PA1
KEY_OEM_CLEAR