

Microsoft® DirectX™ 3
ffffffŠ”fff

—Œ%□

$$,,', \bullet-, \%_{\infty} \check{Z}-, \check{S}\check{Z}, \bullet,,,$$

—œ%□

%□ž

HAL

f ffff ffffffffff¥fff ffffœ—
 ,ž‘,,ffff fff,•œ,, f ffff,ffff ffff,ffffff,, ,,, ffff fff,,—<
 ,,<”,œ ,f ffff,ž‘,,,,, ,<”,ffffff,ffff f,,

HEL

f ffff ffff fff fff f ffff,ff f,,<”,ffffff f f,,ffff fff,’<
 ,,

Z z-buffer

f f ,šffff, “,š”,,ffff Z’, ,ffff,Z’,‘,ffff, ,,,

,

attach

• ,DirectDrawSurfaceffffff, Zffff,,3Df f fffffff,•—
 ,,,,,• “, ‘,,, ffff,‘œ“,,, ,f fff,,ž ,ffff,,,,,,,,, ffff ff
 f, ffff f,,f fff, ffff fff,,f fff,ffffff,, •,f fff,ffffff ff
 f,,œ, ,,,f fff,“fff,,,,,,,,,

alpha edge blend

ffff fffffff ,ffff ffff • ,—
 ,,, ffff,“—”^,š,,fff, ,,,,,, fffffff,œ ,,-,,

alpha color component

•“—,ž,’š,32fff, —‘ ,, ffff,,
 —‘ ,,,ARGB ,,,,ffff •“—’,•%o,,,, ^”“,,,, “•,—
 ^,,ffff f fff,ffff,,ffff’,,,,•ž,,, ,,,

alpha channel

ffff,, —‘ ,,,ARGB ,’,,—^,,
 ff f,•“—’,<,’ ,,—
 ,ffff f fff,š”,, ffff,,•“—” ,, f fff“,•“—”

alpha constant

f fff“,—,,•“— ffff’

penumbra

ffffffœ% ž^,”^• —•,ž,^ ž•,^%o,f f,,

Ž -• fffffff

ambient

f f ,ffffff,Œ, ^ f fff,“ ,Š,,, f f“, ,,ŒŒ f f,,,, ,“Œ“,
,,, ffff,,,ff f,^,Œ,, —,,, ,,,f f,, • ,ffffffŒŒ,Œ ,,,,

color space

,fff f,,,•Ž,,,, ,,,,^,ffff,,,,,Ž, ,^“ff ¥ff f,fff, RGB,YUV
,,,,,

color-space conversion

,,,ff ff f,,‘ff ff f, ,•Š,< fff f f,YUVff ,,ffffff,RG
Bff ,,•Š,“Œ“,,,

¥ **audio stream**

ffffff,,, ,,,ffffff,,,“” ,,, ffff f f DirectSound, ,Šfffff
ffff ffff,,f fff fff f,ffffff, Œ%,ffffff ffff ffff, —
,, fffff ffff ffff, ffff f ffff,f fff f f,<,,

overdraw

fff f ffff,•%o,,,•<%o

overlay surface

fff ,Š““,Œ—
^ Š”,,,,ff f •, “ fffff f fff,ff f •,ff ,, f f ff, ‘,,,,fff
f—‘,fff,,,“,,,,

Z overlay z-order

f f ff,ffffff,,, ”Œ’,, ,,,, f ffff fffff ffff,DirectDraw,,,Ž‘
,,,

¥ **off-screen surface**

fff ,Š““,Œ—^ ^““, •Ž‘,ffffff,ffff““,ffffff,Š”,,,,,—
,,, ’ fffff,Š”,,,,,—,,,

opcode

Ž ffff,“%, •—,ffff ‘,• •—,‘<,,—f f

,

camera

•Ž^,•Œ,‘<,,, ff f f,—
,,Direct3DRMFrameffffff ff f f, fff ff f, ,žŽ ,,%žžffffff,,,
yŽ , •Œ,ffffff,,

¥ **color key**

“—Œ%,”“—Œ%,,,,—,,, ,Ž,,’ ,,,,f ffff,ffff<”,Ž—
,, ff f ,,, ’,,, , ,Œ—
^ffff,,,ffff““,,,, ,,,, Œ,,,ffffff,f fff , ,,,

color table

n ,ff ’,”— ’ ,RGBŽŒ

current play position

DirectSoundffff“, ffff, ,,,^

current write position

DirectSoundffff,’ ^,f f,• ,,,,,,,^

quaternion

ffff,‘<, [x,y,z],4”–,—‘ ff ffff, 3D%“,”“,—,——,——, —
ffff,Ž,,‘,——,

clipper

DirectDrawClipperfffff

clip list

f fff,%Ž—
^,Ž,Œ,fff ,,,fffff ffff,DirectDrawClipperfffff,Œ,,,,,,,,, ffff
fff, ’,,,,,,,,,

group

DirectPlayfffff,——, ,,,fff,,,,,,,,,ff f,

back clipping plane

Ž ‘,% ,ŒŠ , ,,,fffff,fffff,——
Ž ‘•ffff–

,

service provider

DirectPlay,——
,, ffff f’ , ,fffff fff ffff f ff ffff, fff f,Ž ,—
,ffff fŒ—,f f,”,, fffff f ff,Š,,,,,’ , “%
,,f ffff,’ ”,,f ff ffff,<,,,,,,,,,

surface

ŽŠff f,Ž,,fff ,,,fffff fff,Ž,, ffff fff,——
Ž • f fff ffff f f fff f f ff f fff ffff f fff

sound buffer

DirectSoundf fff f f,Š,,fff ffff ffff,fffff,fffff,——, , ffff
f,fff f,——

reference count

fff fff ffffff fff COM ffffff,ffff f,——,ffff ffffff, ,——
Ž ffff,1, ’,, fff ffff,fffff,Œ,,,,,,,,Ž ffff,fffff,——, , ‘,
, , Ž ffff,fffff,—— Ž ffff,0,—— ffffff,”Š,, ,fffff,——,ff
f ffff,—Œ,,

scene

%Š<, ,fffff“,”fff %Žfffff ffff Œ ff f,Š, Direct3D,, f
f ff f,Š,,fffff,fff,Ž,
Ž f f ff f

viewing frustrum

ff f f,fff,’“,”,,f f,— Ž ‘,’,,fffff,%Ž ‘,’ , “Ž“%
, , ‘•ffff,—Œ•ffff—,Š,%““,”ffffŒ,Ž, • “%,,——•,’,,

execute buffer

3Df f,< , Š,ŽŒ“•Œ, “—, •ffff Ž ffff, Œ,—
fff f,’“,”fff,Š,——
fff f, fff ffff f fff f , ,fff f,’ ,f f, , ,——

stretching

^,fff,““ ,ff f,ffff,——, ,‘ ,’ ff f,f ffff,——

static sound buffer

Š‘,ffff,Š”,,,fff ffff“^“,ffff, ,,,, •—,,

sticky focus

DirectSound,,, f f ffff fff,“—ff ff,Ž,,,,,,,ffff, ,,—
,,, DirectSoundffff fff, f f ‘,ffff fff,“,,,,,,, ffff ffff,
,‘,,,,,,

stride alignment

DirectX,, fffff,, ,fff fff,Ž,fff fff,Š,ffffff,Ž, fffff fffffff,
ffffff fff f fff,ffffff,, , —, Ą—‘,,, ,,

streaming sound buffer

,ffff, ,,,,,, ,ffff ffff ffff fff, f fff f f, ,,,““,ff
ff,f f,, ,,,ffff fff, 3•,f fff f f,•Ž,,,ffff,2•,ffff, ,,,Ž—
,,,,, fff f ffff, fffffff ffff,,,,, ,fff,•—,,

spotlight

%o ,Ą•,ĄĄ %o ‘,‘,ffffff,, ,,, %o ,,,‘, , , %o,—,•• —
• ,ffffĄĄ““,“,,, Ž^“,• ^%o• , Ž•^,%o,f f,,

secondary sound buffer

f fff fff,,, ffff fff,’,, ,,Ą ,fff,Š”,•• ffff, 1%o
,ffff,, ,,,, f f ffff,,Ą•, ,,,,,, , fffff ffff, —
Ą,ffff ffff fff,’,ffff, ,,,%o”,,, ,fff, ,,,,,,ffff,^••,Š”,
,ff ,,—Š,Ž,,,

session

DirectPlay, Ą,,’ ,,,ff f fff ,ffff fff,ffffff

front clipping plane

Ž ‘,—,ĄŠ ‘•ffff—,,fff,‘^,,,ffffff,ffffff,,, ‘•ffff—
, , ff ,ff ff,’^,,
Ž Ą•ffff—

,

vertex

3D<Š,“

tearing

fff f,ffffff f f,ffff fff,ff f¥f f,“Š,,,,,‘,, •Ž,,,,,Ą,Ą
,,,ff f, ••,ff f,%o•,“Ž•Ž,, ,,,ff f,Š,—,— ,,

texture

Direct3D,,, fffff fffff,“—,, ffff,ĄĄ•,—

texture coordinates

Šffffff,ffff, fffff ,Š’“,,,Š~,,,,,Ą’, •

texture blending

ffffff, ,fff ,f fff, ,‘, ,,,^

texture mapping

ffffff,ffffff,“,,,,, fffff,•—
ff f,,ffffff,,,,, ,‘,,, fffff •,ffffff fff,—
,,ffffff,ffffff,f fff,fff,,,,,,
Ž fffff • fff

texel

fffff,^,—‘ fffff,ffffff,“—,,,,, ffff,fff f,ffff,‘%
 ,,,,,, ffff fff, ffff,,ffffš,•š,, Ą,, fffff fffffff,ž—
 ,,,,,,

decals

fffff fffffff,,,’ fffffff,,ffffff ff f f,^,,<Ą,ffffff,,

source color key

fffff“,,ff ,,, ,,, f f ff,, — ,•ž,,

destination color key

fffff“,,,’ ,š,, f f ff,, “ ,f fff ,•,%,,

,

array object

,,,,”—,,,,,ffffff,ff f ”—ffffff,,ff f“,,š,’ ,,, ”—
 fffffff,—,,COM,fff ffff,, **GetElement**ffff**GetSize**ffff,—
 ^,,,, ,fff,,”—‘,ffff ”—,fff,ž“,,

back buffer

fffff f fff,Ą ,%žff f,•ž,,š, fffffff,‘ff f,•,,,,, •%žf ff
 f

width

fff,š”,,ffffff“,,fff,ž“,,fff, “,ž,,,<— ,<—
 ,fff ,ffffff,•,•, <Ąfff,,^,ffffff,ž, ,ž“,,,’,—,•‘fff,š,,

parallel point

ffff fff,ffffff, ,ĄĄ,, ĄĄ,,ffff ffffĄĄ,^,Ą’, ,,, ffff
 ffffĄĄ,—‘,ffff,, ĄĄ,—,,,,,ffff,—,,

palette

ffffff,ffff fff,ž—,, ,fff DirectX,, **DirectDrawPalette**ffffff,ž,

palette index

,“,,,—,, ffff f ff”—,, ffffff

power

‘ ,”ž“ , fffff fffff,“—,Ą’, ,’ ,5,,<“šš,, ,^ ,,,,,, ,,,šš
 ,,,

specular property

ĄĄ,”ž,‘%
 ,Ą,ffffff ,Ą“,,,,,•ž,,Ą’, , ‘ ,“ ”ž“ , ‘ ,Ą,”ž,,Ą’,,,,,,
 ,,,,,,
 ž .ž“

pan value

%o,f fff ffff,“%— 100•,1ffff’^,•,,

viewport

3Df f,,,,,2Dffffff,ffffff,,,’<,<Ą ,ffffff,ffffff,, ffff —
 ^,’<,,

pick

ff f f,,2D •,f f,ffffff fffffff,’ ,,,

pitch

fff,Š”,,,ffffff“,,, ,Ž“,Ž, ,Ž“,Ž,,,,,←
DirectDraw,, ,,,,ffffff fff,,,,, Ćffff,,,”,,,,,Ć,,,,, fff fff,fff
•,^,, —,,, ,,,,Ć,fff,, fffffff fff,fff,, fffffff•,%
,ffffff,^•,Š,,, ,,,
Ž •

complex surface

DirectDrawSurfaceffffff, f f f fff,ffff,,,,,,,,,Ž,Ć • f fff “,
f f,”Š,,,,,,,,”Š,,,,,,,,

flipping surface

ffffff%”,,fff
Ž ffff

flip

fff ffff,ffff ffff,ffff,ĆŠ,,ffff Ž ,,fff ffff,ff f,ffff ffff,
ĆŠ,, ,,,,,ff f,•Ž,,,

frame

f f ,,ffffff,”,Ć,, „Ž,~ fffffff, Š~,Ž ff f,‘,,Š“ŠĆ,Ž’,,,,,,
f f ”,,, fffff fffffff, ,,^,Ć,,ff f,,Ž“,,, „ “%
,fff fff’,,,,ff f,ff f,,Ž“,,,

front buffer

ffffff ff f, ,ffff ‘,, %Ž ‘,ffffff f fff,Ž, ,,,,,, fffff
,ffffff ff f,,, 3Dffff,ffffff,Ž“,,,f fff,,,,, , ,ffffff f fff,,
, ,Ž,,,,, fffffff f f ff f fff,,ffff ffff,•Ž,,,, ,,’ffffff f f
ff,f f ff,,,f fff,,,,
Ž fffff f fff

blit

ffffff““

blend factor

ffffff fffffff,, Š —‘,,,,, ,,,,Ž,Ć

blend mode

ffffff,,,,,fff ,f fff, , ,,,,Ć’,ffffff

primary surface

fff ,•Ž,,,ff f,Š,,fff—
^ DirectX,, fffff f fff,fffffDirectDrawSurfaceffffff,,,•,,

primary sound buffer

f f’,f f ,Ž,•,,%,Ž,ffff ^,,ffff¥ffff,,ffff,ffff,,—
,, ffff fffff,,‘,“ , ,,, fffff,ffff,,,,,,,,

player

DirectPlayffffff,Ž%Ž Šffff, ffffŠ,fff fĆŠ,%”,,,ffffID,Š~,

ID player ID

DirectPlayffffff,ŠŽ%Ž,Š~,,,,ff f,Ž•Ž ffff, Ž,Š,“,,, ffff fff,f
ffffID,Ž—
,, ffffŠ,fff f,ĆŠ,,,,,,,,, fff,,,,,DPID_SYSMMSGffffID,Š,“,,,

page flipping

Ž ffff

host

DirectPlay,,, ID,DPID_SYSMMSG,,,%‘ffff ffff fff f, fffff’,,,,
 ,ffff ,’,,,fff f, fff,,, —,,,

point

Œ“,,‘•œ<“,œ,•,œœ

emissive setting

Ž •Ž“

emissive property

‘ ,“ ,,,, ‘ ,œ,•Ž,,,,,Ž, •Ž“ , ‘ ,œ,”Ž,,,,œ’,,,,,“ ,,,,,,,
 Ž ”Ž“

normal vector

—,œ,,’<, f fff,, ’,,,%œ<,œ

,

material

—,,,,œ,”Ž,,,,œ’,,“ ‘ ,, •Ž“ œ,•Ž,,,,, ,”Ž“ ,,,, —‘,,, ”Ž,—
 ,,, <“, ’,,,œ’,,,

mixing

DirectSound,,, ,ffff ffff, , œ%
 ,ffff ffff ffff, ,ffff ffff f ffff,f fff f f, —, —
 ŽŠ,Ž—‘,,, ,,,, fffff,“ffff, , œ,,,

mipmap

~‘,fffff Šfffff, “,ff f,ffff,,, ,’%““,,,,, %Žfffff,Š‘Ž,<,,,
 ,,,, %““ff f,—,,, fffff,%œ,,, ,,, ,,,, ,,,, ,’%““,ff f,—,,,

umbra

ffffff,%œ ,œ, ’%œ,—,• ffffœœ,““ ,,,,,,
 Ž ^%œ• fffffff

mesh

’ ,ffff,•œ,,—,fff

face

ffff’,,,,ffff

X Mode X

ffff fVGAf f13,’<,ffffff,ffffff f f ,f f,, VGAffff,EGAfff
 ff fff ff f ffff,,, Mode 13,Ž—
 ,,64K,,, 256K,,,ffffff fff,Ž,,,,,

model coordinates

Žff f,‘“ •

Ž f ff •

,

directional

ff f,ffff,,,œœ,, ,,,,ffffff,“<, , œœ,ffffff,—œ%œ^,,,,œ%œ
 —,, —œœœœœ,Ž,,^,Ž,, ^”, ‘—,,,%œ,—,œœ,ffff f,,,,,—,,,

,

enable frame
ŒŒ,“—,,,,,,,,ff f

wrap
—,ffff,ffff •,ŒŽ,—
,,fff ff Š—“,ffffff fff,, ffff %o’ <‘ fff,,

root frame
Direct3D,,, ff f,Ž,,,ff f ff fŠ‘,fff,,ff f f f ff f, f f,
,,ffffff“‘,fff,Š,,,
Ž f f

latency
ffff ffff, ,,,, ff f,Ž ,ffff,—
,,,,,%ŽŠ DirectSoundffff,fffff, ^”,20ff•,,

lobby client
f f,ffff f,Š~,,,,ff Š—
f ff ffff fff,ffff f f fff ffff,ffff f ff f f,,’ ,Š,

lobby server
ff f f f,Š~,,,,ff Š—
f ff ff f f, “”,ffff fff, ‘,f f ,Š,,,,, •,’ ,,

,

world coordinates
f f ff f,‘,“ •
Ž fff •