



Application Settings

System Configuration

Copyright (c) 1999, ELSA AG (Aachen, Germany)

-ÚŽÝ

Í, ¶, ß, É
fCf“fXfg[]f< fKfCfh
ž©“®fCf“fXfg[]f<
f}fjf...fAf<fCf“fXfg[]f<
ft[]fU[]f}fjf...fAf<
fAfvfŠfP[]fVf+f“fŠfXfq
[]U[]x[]Y’è
fNfCfbfNfXfCfbf`
—WINman Suite“à, l ELSA Application Settings
fgf%ofofuf<fVf...[]fefBf“fO
fAfvfŠfP[]fVf+f“[]Y’è, à’l’ð, ³, ê, Ä, ç, È, ç
fn[]fhfEfFfA fAfNfZf%ofofCE[]fVf+f“, ð—LCEø, É, Å, «, È, ç
f]fv]fVf+f“, ð•í[]X, Å, «, È, ç
ELSA Application Settings, à•\ž!, ³, ê, È, ç



ELSAfOf%oſtſBſbfN f{[fh,íſh][NſXfe][Vſtſ“Nſ%oſX,í3DfOf%oſtſBſbfN fAſNſZf
%oſCſEſ[Vſtſ“,ÆſA’fſ°,ç,µ,‘,¬,È2DfpſtſHſ[f}f“X,δ—¼—§,·,é,·<”,]fOf%oſtſBſbfN
fvſ[ZſbfT,δ’•”ö,µ,Ä,¢,Ü,·B

ELSA Application Settingsſtſ[ſefBſſefB,ðžg,¤,±,Æ,Å]AEELSAfOf
%oſtſBſbfNf{[fh,í3Dfn][fhfEfFfA fAfNſZf%oſCſEſ[Vſtſ“@”\,δfRf“fgf][f<,·,é,±
,Æ,¤,Å,«,Ü,·B]Y’è,í•íX,íZÀſs,·,éfAfvfſfPſ[Vſtſ“,ÆſA•K—v,EfCſf“fſſf“fO]“\,
,É^Ë’¶,µ,Ü,·B

,½,¢,Ä,¢,í•éſtſ,íſſtſHfſfg,í•Y’è,ð•íX,·,é•K—v,í,È,¢,Å,µ,å,¤B,µ,©,µ^é•”,í3D/
OpenGLAfvfſfPſ[Vſtſ“,Å,í•Afhf%oſCfo,í3D]Y’è,í•íX,¤•K—v,Å,·B

fAfvfſfPſ[Vſtſ“,ð•Å“K%o»,·,é•Å,àŠÈ’P,È•û-@,í•AApplication
Settingsſtſ[ſefBſſefB,¤,é^é~A,íſtſfgfEfFfA—p]Y’è,í,¤,ì1,Å,ð’l’ð,·,é,±
,Æ,Å,·B’¤•”•¤,íſtſ[U]L,É,Æ,Å,Äfhf%oſCfo,íſRf“fgf][f<,í•A,±,íſſfXfg,©,ç’l’ð,·,é,±,Æ,Å]A
•¤,Å,·B

ELSA Application Settingsſtſ[ſefBſſefB,íWindows,íſRf“fgf][f<fpflf<,É,·é[%oæ-
È]fAfCſRf“,©,çfAfNſZfX,Å,«,é[%oæ-È,íſvfſfpſefB]f{fbfNſX,í[AppSet]fvſſfpſefB
fvſ[Zfg,É^o^,³,ê,Ü,·B

fCf“fXfg][f<fKfCfh,É’±,
-ÚŽY,É-ß,é



Ž© “ ®fCf“fXfg[]f<

’È[]í[AElsa Application Settings,íELSAfOf%oftfBfbfN fhf
%ofCfo,Æ“-žž,Éž©“®“I,ÉfCf“fXfg[]f<,³,ê,Ü,·BfCf“fXfg[]f<,í]¬”Û,í]A[%æ-
É,ífvf]fpfefB]f{fbfNfX,ífvf]fpfefB fV]fg,ðSj,¢
,Ä,Ý,ê,ÍSm,©,ß,ç,ê,Ü,·BELSA,íf]fSf}][fN,í]t,¢,½[AppSet],Æ,¢,¤-¼’O,íf^fu,¤,±,É, ,é,í,, ,Ä
,·B

Application Settings,íf}fjf...fAf< fCf“fXfg[]f<

ELSA Application Settingsft[]fefBfSfefB,í]AfffBfXfvfŒfCfhf%ofCfo,Æ-§]Ú,ÉŠÖŒW,µ,Ä,¢
,Ü,·B
,æ,Ä,Ä]Af}fjf...fAf< fCf“fXfg[]f<,ð]s,¤,í,í]ñ]í,É,Ü,ê,ÈfP]fX,Ä,·B,±,í]ê]‡AAApplication
Settings,É'‰ž,µ,½fo][fWf+f“,ífffBfXfvfŒfCfhf%ofCfo,¤fCf“fXfg[]f<,³,ê,Ä,¢,é•K—v,¤, ,è,Ü,·B
- fffBfXfvfŒfCfhf%ofCfo<y,Ñ]A,¤,í]¼,ífCf“fXfg[]f<Û,Ý,íELSAfc[]f<,ífo][fWf+f“,í]A/ELSA
Info]fc[]f<,ÄSm”F, ,é,±,Æ,¤,Ä,«,Ü,·B
ELSA Application Settingsft[]fefBfSfefB,ðfCf“fXfg[]f<,·,é,É,í]A[GLSET.CAB],Æ,¢
,¤ftf@fCf<y,Ñ[APPSxxx.INF],ÆŒ¾,¤-¼Û,í]INFftf@fCf<,í]2,Ä,¤•K—
v,É,È,è,Ü,·Bxxx,í]”•¤,É,í]AfCf“fXfg[]f<,·,éfOf%oftfBfbfNfXf{Û]fh,É,æ,Ä,ÄÛ,È,é-
¼Û,¤,ü,è,Ü,·B
fCf“fXfg[]f<’O,É,í]A[fffBfXfvfŒfC,ífvf]fpfefB]f_fCfAf]fOf{fbfNfX,¤•Ä,¶,Ä,¢,é,±
,Æ,ðSm”F,µ,Ä,,¾,³,¢B
INFftf@fCf<,ð‰œfNfSfbfN,µ,Ä]AfRf“fefLfXfgf]fjf...Û[,©,ç]fCf“fXfg[]f<
,ð]’ð,µ,ÄfCf“fXfg[]f<,ð]s,¢,Ü,·B

ft][fU][f}fjf...fAf<,É'±,
-ÙÙ,É-ß,é



,±,±,Å,Í ELSA Application Settings fy[[fW,íŽg,¢•û,É,Â,¢,Ä‰oõà,µ,Ü,··B

Application Settings

fRf“fgf□[f<fpflf,>Å[%oæ-Ê],δ’l’δ,·,é,©□A,à,μ,ífffXfNfgfbfv,Å
%oEf{f^“,ðfNfSfbfN,μ,Ä□A[fvf□fpfefB],δ’l’δ,μ□A[%oæ-
Ê,ìfvf□fpfefB]fv□[fg,ðCEÄ,N□o,μ,Ü,·□B,±,ìfv□[fg,ìä•”,ÉŠefvf□fpfefB
fy□[fW,ìf^fu,·,é,Ü,·□BELSA GLoria,ìf^fu,δ’l’δ,·,é,±,Æ,Å□AAplication
Settingsfy□[fW,·fAfNfefBfu,É,È,è,Ü,·□B

^È‰‰„íƒZƒNƒVƒ†ƒ„,„íƒAƒRƒ“fgf„„[ƒ„,„é„@“\,„íƒÚ„„x,„É,„Ä,„¢,„Ä„à-¾,„µ,„Ü,„·„B

fn █ [fhfEfFfAfAfNfZf‰ofŒ█ [fVf†f“

,±,í[XFcFcbf],í[AfOf%oftfbFbfNfxf{[],fh,13Dfn[],fhEfFfAfAfNzf%ofofCŒ[],fvf+f](fffftfHf<fg),
ðflf",É,·,é,½,ß,ÉZg,¢,Ü,·,B,±,í[XFcFcbf],a-3CŒ,È,³,é,é,AŒAOpenGLftf[],fg,lf
ftfgfEfFfA,ÀfRf"fgf[],f,³,ê,Ü,·,a,A"ñòÍ,É"¬"x,a'x,É,è,Ü,·,B,Ü,½,AfOf
‰oftfbfNFxf{[],fh,13Dfn[],fhEfFfA,a'fAfNfefBfu,É,È,À,À,¢,é,É,à,®,®,í,c,,Afa
ftfgfEfFfAOpenGL,aŒf"f_fSf"fo,ÉZg-p,³,é,é,AE,¢,¤,±,AE,a,,è,Ü,·,a,A,±,l,æ,¤
,È,ê,É,í[Afn[],fhEfFfAfAfNzf%ofofCŒ[],fvf+f],a'ftf[],fg,³,ê,È,¢‰ð'œ"x,AŒApplication
Settings,l'g#‡,¹,a'!ð,³,ê,À,¢,Ü,·,B'A,É,‰ð'œ"x,À,í[AftfCŒ[],f
fofbftf@,íOpenGL,ífn[],fhEfFfAfAfNzf%ofofCŒ[],fvf+f],É•K—v,ÈfofbfNfofbftf@,È,C,íf[],f,fS,ð\\
•,ä,ÉSm•Ü,·,é,±,AE,ä,À,«,Ü,¹,ñòB,±,l,æ,¤,È,ê,‡,Afu,fuf<fofbftf@,ð•K—
v,Æ,·,éfAfvfSfp[],fvf+f],a'ftfgfEfFfAOpenGL,ÀZÀ,s,³,é,é,±,AE,È,È,è,Ü,·,Bfvf"fof,f
fafvfSfp[],fvf+f],È,À,¢,À,ífn[],fhEfFfAfAfNzf%ofofCŒ[],fvf+f"OpenGL,È,æ,èZÀ,s,³,ê,Ü,·,B

«»Ý,Ç,]Í—þ,]OpenGL,ºžÀ]s,º,é,Ä,¢,é,©,ðŠm,©,ß,é,É,í]AELSA Infofc]f<,ðŽg—þ,µ,Ä,-,º¾,º,¢]B

fAfvfŠfP□[fVf‡f“ fŠfXfg

Application Settings fſt[ſefBfŠſefB, íA]P[Ú]x[Ý]è, Å'è`³, è, é'½", í]Y]èfOf<fv, ð•Û'¶, µ, Ä, „, ±, Æ, ª, Ä, „, Ü, ·B, ±, ê, ç, í]Y]èfOf<fv, í]Z"•È-½, í]fAfvfŠfP[fvf]f" fŠfxfg, È•\ Ž|, ³, ê, Ü, ·B, „, ç, ä, éfAfvfŠfP[fvf]f", í]"®í, í]A"K%o», È—v<, ³, ê, éfIfvfVf]f", í, „, x, Ä, ð, ±, ±, È•Û'¶, µ, Ä, „, ±, Æ, ª, Ä, „, Ü, ·B, ELSA, í, ç, „, Ä, ©, í]fAfvfŠfP[fvf]f", È'í, µ, Ä]AŠù, É]Y]è, ð'è`³, µ, Ä, ç, Ü, ·B, ±, ê, ç, í]fvf]fOf%oƒ€, í]"®í, í]AfŠfxfg, ©, ç'‰ož, í]Gf"fgfŠ, ð'l'ð, „, è, ±, Æ, Ä]A"K%o», ³, ê, Ü, ·B%oE, È•t, ç, ½fXf%oƒCf, ðŽg, Ä, Ä]AfŠfxfg
f{fbfNfx, ðfxNf]f[f<, ³, ê, í]AfGf"fgfŠ, í, „, x, Ä, ª•\ Ž|, ³, ê, Ü, ·BfCf"fxfg]f<CEä, ËfAfNfefBfu, È, È, éfffftfHf<fg, l'I, í]A]ELSA Default
Settings]fOf<fv, È, Ü, Æ, B, c, ê, Ä, ç, Ü, ·B

fAfvfšP█[fvf#f“, É█‡, Á, ½fGf“fgfš, ðl’ð, μ, Ä█A[OK]f{f^f“, ð‰Y, μ█A█Y’è, ðZó, “ü, ê, é, ©█A[f]fff”fZf<]f{f^f“, ð‰Y, μ, Ä█A’l’ð, ðZæ, è█Á, ·, ©, μ, Ü, ·█B, ±, ê, Ä█[%oæ-È, jfvf█fpfefB]f_fCfAf█fO, ²·Ä, ¶, é, l, , Ä, ·█Bf_fCfAf█fO, ð█l-¹, μ, È, ¶, Ä█A•í█X, ðfAfNfefBfu, È, ·, é, È, í█A[“K-p], ð‰Y, μ, Ü, ·█B

ŽŶ,É„,°,éfAfvfŠfP¶[fVf‡f“ fŠfXfq,ì,·,®,

%ooº,É, ,éf{f^g^f”,ðŽg,!,íºA\lV,µ,cfAfVfSfP\l[fVf+f”,É,‘,µ,ÄºAft\l[fU\l[ž©\l[g,ìºY’èfOf<\l[fv,ð\l[iº\l[–,µ,½,è\l[A[ELSA Default Settings],ð\l[V,µ,cfAfVfSfP\l[fVf+f”ŒÜ,‘,É,‘\l[X,·,é,±,Æ,º,Å,«,Ü,·\l[B

ú x

,±,í{f^f“,ð‰‰Ÿ,¹,í[Å]ÚxÝ’èf{fbfNfX,ºŠJ,«,Ü,·B,±,±,ÅOpenGlfvfOf‰f€,É,Å,¢,Ä,¡fhf‰ofCfo,í“®]ì,ð•í[X,·,é,±,Æ,º,Å,«,Ü,·B

,± ,ífgfOf<fxfcfbf` ,É,È,Á,Ä,“ ,è A A “xfNfSfbfN,·,é,Æ A Ú x Y’èf_fCfAf_fO,¤•Å,¶,ç,ê,Ü ,■B

'Ç%oÁ

[’Ҫ‰Á]f{f^f“,í[fšfXfg,Ö,í]V<Kf]fvfVf+f“,í[’Ҫ‰Á]f_fCfAf]fO,ðSJ,«,Ü,·BfAfvfšfp[fVf+f“fšfXfg,É•ži,³,ê,é,±,Æ,É,éfGf“fgfS,É¹,·éfefLfXfg,ð,±,±,Å“ü—

I, μ, Ü, · □B(□Ú□x□Y'è, δŽQ□Æ, i, ±, Æ□B□j[OK], δ

%‰Ý,·,ÆŒÅA,»,lfeflfXfg,¤Œ»Ý,ifSfXfg,iŒÅŒä,EŒV,µ,¢Œ-Û,Æ,µ,Ä'Ç‰œÅA•\
Ž!,³,ê,Ü,·ŒB[fLffff"Zf<],ð‰Ý,·,ÆŒAf_fCfAfŒfO,ŒI—¹,µ,ÄŒA•ŒX,ÍŽæ,èŒA,³,ê,Ü,·ŒB

10

[ðíœ]f{f^f'', ðZg, l, lñlñlñ-, µ, ½fAfvfSfPÙ[fvf†f'', lfGf“fgfS, ðlñœ, ·é, ±

-1/4'0,1•1□X

,A,»),•||\x,æ,e|A,>,e,U,:|B
+ fff^f“ íft|[f]|||[’ò`í`ífAfvy/f

ſ ſt ſtſ Hſ < ſg
ſ ſt ſtſ Hſ < ſg

+ $\int f(x) dx$ from a to b = $\int_a^b f(x) dx$

ÉPÔÊPTÉ FCEÀ Á ÄfAfNfefBfu É È è ï :■B

,e|e|t,ECA,A,AJA]N]e]B]u,E,E,e,U,·]B

□U□×□Y'è

[\sqcup U \times]f{f \wedge f'', \exists^1 ' δ , \exists , \hat{e} , \exists ASefOf<fv,E'1, \cdot ,éfGf''fgfS,I \sqcup U \times , \exists^1 Z!, \exists , \hat{e} ,U, \cdot BZY,E<'', \circ ,éA, \pm , \hat{e} , ζ ,I \sqcup €-U,I \sqcup V<K,fGf''fgfS, \eth \sqcup \neg , μ , \exists^1 , \exists AC€» \exists Y,I \sqcup Y' \circ , δ \bullet I, \exists ,é, \exists^1 , β ,ÉA“K<X \bullet I \sqcup X, \cdot ,é, \pm , \exists , \exists^1 , \hat{A} ,«,Ü, \cdot B

ÚxÝ'è, ižg-p•û-@

½, ·ÍfÍfvFVfÍfÍ, ·ÍA2ZÍ—þ, ·Íþó’Ó, ðZ·Í, A, A, ç, U, ·ÍBON, à, µ, , I—LCEØ·ÍAOff, à, µ, , I—³CEØ·ÍA, Æ, ç, ·Íþó’Ó, A, ·ÍB, ±, ·Íþó’Ó, É, ·ÍA^È‰oº, I, æ, ·ÍEfVf“f{f<, ·ÍS,, è—, -Á, ç, ê, Ä, ç, Ü, ·ÍB



fsfNfZf<ftfH\{f\}fbfg

fuf<fofbftf@

□[fg, əZw'è, ³, ê, Ü, · □Bf_fuf<fofbftf@, ²fAfNfejBfu, É, ³, ê, é, Æ □AftfCE □[f€

3DfEfCf“fhfE,ÉGDI[],«ž,Y,ð<-‰ooÅ

,±,ífXfCfbf`¸,ð—LŒø,É,·,é,±,Æ,Å[OpenGLfrf...][“à,ÉGDIŠÓ”,É,æ,é•`‰æ,ð‰Å”\,É,·,é’Ç‰‰Å,ífsfNfZf<ftfH][f}fbfg,ð’Ç‰Å,·,é,±,Æ,ª,Å,«,Ü,·[B(PFD_SUPPORT_GDI)^ê•”,]fAfvfŠfP][fvf#f”,Å,í[Å,±,ífXfCfbf`¸,ífZfbfg,ª•K—v,Å,·[B

fAf<ftf@fvfŒŒ[f“

f [f] **fo** [fɔ] **fCf** **fCfvf** [f“]

f[]fo[]fCfCfvfCE[]f“, i·W·€fjf%o[][(RGB)fofbf@, É·t, %oÅ, l, c, ê, éfpfCfbfg-É, Æ, µ, ÅZg-p, ^, ê, Ü, ·Bf[]fo[]fCfC, fFfj...[], âfj[]fFj<, l, æ, x, É3DfCf[]fWZ©‘, l, c, i, “Æ—§, µ, ½• %oæ-l, æ, É‘, µ, Å‘A, É—L—p, Å, ·Bf[]fo[]fCfCfvfCE[]f“, i·ATrueColorf, [fh(32frfbfg), Å, l, YZg-p %oÅ“, Å, ·B, ±, l, ê, f#A, ±, jfxCfbf, ðfZfbfg, ;, é, Æ[AAlphaf`fff“flf<, É·É[]iZg, i, ê, Å, ¢, éfofCgf‘, ðf[]fo[]fCfvfCE[]f“, É·ïS·, µ, Ü, ·B (Softimage, l, æ, x, É)ê·”, jAfvfSfP[fVf+f“, i[]fo[]fCfCfvfCE[]f“, ð·K-v, Æ, µ, Ü, ·B

fXf\fbfv fŒfCf,,\fofbftf@

fl[]fo[fCfC<@"\,ðŽg—p,·,éfAfvfSfP[]fVff",íA·ÈX,ifCfCf,,íä,É“Æ—§,μ,½‘,«óž,Ý,ðš,s,¤,±,Æ,¤‰Å"\,Å,·B,±,íšg'f'sfNfZf<ftfH[]f)fbfg(PFD_SWAP_LAYER_BUFFERS),ðŽg—p,·,é,±,Æ,Å[AŠefCfCf,,[],²,Æ,É“Æ—§,μ,½‘O¤äfobftf@,ífxf[]fbfv,ðš,s,¤,±,Æ,¤‰Å"\,É,È,è,Ü,·B,à,µAfCfCf,,[],³,·ÈX,Éfxf[]fbfv,μ,½é•t,àAí,É,»,)“à—e,ífRfs[],³,ê,Ü,·B(Blit[]j

fXfefŒflf,□[fh

%oot»jFVffffbf^@[fOf%ofX,ðžg—p,μ,ÄfXfefCEFfl'‰%žAfvfŠfpP@[fvf†f”,ðžÀs,·,é,Û,É,íAfhf%ofCfo’¤,ÄfXfefCEFfl—p,lfsfNzf;ftfH@[f}fbfg,ð—LCEFø,É,μ,È,·,ê,î,È,è,Ü,¹,ñØB,Ü,½A-Ú,É—D,μ,¢ffffBfXfvfCEFcf,|[fh,ðžg—p,·,é,½,ß,ÉA,æ,è,,¢fŠftfCEFbfVf...fCEFflfg,ð’l’ð,Å,«,Ü,·ØB’^ÓFFxfefCEFfl'‰%žfsfNzf;ftfH@[f}fbfg,íA•K—v,È,Æ,«,‰ÈŠO,í'l’ð,μ,È,¢,æ,¤,É,μ,Ä,-¾,³,¢ØB,¢,·,Å,©,ì,ƒAfvfŠfpP@[fvf†f”,È,·,¢,Å,íA•K—v,Æ,μ,È,¢,É,à,©,í,ç,·,ŠO^á,Å,ÄZ©“®”I,ÉfXfefCEFfl'‰%ž,lfsfNzf;ftfH@[f}fbfg,ðžæ“¾,μ,Ä,μ,Ü,¤,±,Æ,²,·,è,Ü,·ØB,Ü,½[AfXfefCEFfl'‰%ž,lfsfNzf;ftfH@[f}fbfg,íÛêÛ,È,íAfhf%ofCfo,í•l’i,Æ^Û,È,Å,½f[f,fšš,,è,“-Å,ðs,Å,ÄAfXfefCEFflAfvfŠfpP@[fvf†f”,Æ’ÈÛí,ìfAfvfŠfpP@[fvf†f”,ð”-ž,ÉžÀs,Å,«,é,æ,¤,É,μ,Ü,·,¤AftfØf”fgfobftf@,ÆfofbfNfofbftf@’o·Û,ÉÛ,«,ž,Y,ðs,¤,æ,¤,ÆAfvfŠfpP@[fvf†f”,íA<ZØp”I,EØSCEA,©,ç”®Û,¹,é,±,Æ,²,Å,«,È,,È,è,Ü,·ØB

fXf□fbfvfofbftf@

fofbftf@fufŠfbfg,ð<šžÀs

f_fuf<fofbftf@ÅA,Å,Ü,éftf[]“fg,Æfofbftf@ŠO,Å,ì[]Ø,è'Ö,!,É†,µ,ÄÅA'ÈÙÍAfhf
‰ofCfo,í,Å,«,éŒA,é[],‘-,È•Ù-@,ðŽg-p,µ,æ,¤,Æ,µ,Ü,·Bfy[]fW[]Ø,è'Ö,!,í[]A'P[]f,È•\ Ž!,³,ê,éfy[]fW,³/,_,¤[]Ø,è'Ö,!,ç,ê,é,Æ,¢,¤·Ù-
@,Å,·,¤[]A,«,ê,É†,µ,AfrfbfgfufSfbfg,ðŽg,Å,Äff[]f^,ðfRfs[][,·,é•Ù-@,ðŽg-p,·,é,±,Æ,à,·,é,Ü,

„Bfgy[fWØ, èÖ, l, ðŽg—
p, ., éØéÙ‡, É, lAfff[f^, æftfØf“fg AfobfNfobftf@, Å®Ù‡«, ðŽæ, ê, Ä, ç, é•K—v, a, , è, Ü, ·ØB, È, °,
È, çØA^è•“, lfAfvfSfP[fVff“, Å, lA3D•ØZ, ÉØA2D (GDI), Æ3D (OpenGL), lfRf}f“fh, a<¤, ÉŽg—
p, ^, ê, Ä, ç, é, l, ÅØA, ±, l, æ,¤, È®Ù‡«, a•ÙØ, ^, ê, È, ç, ®, ç, Å, ·ØB, , ±, l, æ,¤
.ÈØéÙ‡, ÈØA^À'S, Å, , a'—“x, lfobftf@ufjSfbfg-@, ðfAfNfefBfu, È, ., é, ±, Æ, È, è, Ü, ·ØB

„¼“-Šú,ð’ò,â
fy[]fW[]Ø, è'Ö, i, È, Ç, j|fAfNfVf+f”, í[]Af,fjf^, i[], '½fuf%oof”fN,Æ“-Šú,µ,Ä,ç,Ü,·ØB,±,ê,í%oæ-
È, j|fefBfAfSf”fO,ð-hŽ~,µ,Ä,ê,Ü,·,ä[]A,±,i,Æ,«ftfCŒ[]f¢fCŒ[fg,ÆfSftfCŒfbfVf...
fCŒ[fg, a”-Šú,µ,Ä,ç,é, i, Ä[]AfAfjf[]fVf+f”, ð•\Z|, ·, é[]ê[]‡, È, IfptfjH[]f]f”fX, a”~, µ, 'á%o°, µ, Ü, ·ØB
‰æ-È, j|fefBfAfSf”fO, a<N, «, é, æ, x, Ä, µ, ½, ç[]A,±, j|f{f^+f”, ðfAfNfefBfu, È, µ, Ä[]A[], '½fuf
‰of”fN“à, È, ·, x, Ä, j|fAfNfVf+f”, a[]s, i, ê, é, æ, x, È, µ, Ü, ·ØB

GDI•`%oæ,ðfofbfNfofbftf@,É"½%oof

Windows, lGDI API, l[A]Ê[i, lOpenGL, ÄŽg—p, , ê, Ä, ç, éfofbfNfofbftf@, ðŠC—
[], Å, «, Ü, , ñ[B3Dfrf...][“à, Ä2DfRf}f”fh, ðŽg—p, , é, ç, -
, Ä, ©, lAfvfjŠfP[lfvftf”, Ä, lAGDI, Ä•, ©, ê, ½SG, afofbfNfofbftf@, É, à”½%of, , ê, Ä, ç, é•K—v, , ,
é, Ü, ·B, ±, lfxfcfbf, ðŽg—p, , é, ±
, Ä, Ä[A2DfRf}f”fh, lOpenGL, lfofbfNfofbftf@, É, à”`_, !, ç, ê, Ü, ·BOpenGLfEfCf”fhfE, lŠO’¤, l2D—
íæ, ÈŠO’, µ, Ä, l[A, ç, i, æ, ¤, Èlê¤†, Ä, àfhf‰oCfo, aŠC—[], µ, Ä, ç, Ü, ·B

fAfvfŠfP█[fVf‡f““Á—L,ì█Ý'è

Unix OpenGL

“-¶OpenGL,É,µ,Ä,å¶Afvf%fbfgftfH¶[f€,É,æ,Á,Ä•`‰œ@®¶í,í,³,Ü,‘,Ü,Å,·¶B2,Ä,¡f|fŠfSf“,í‰œ,¤d,È,é,Æ,±,ë,¡fsfNfZf<,í¶AfCEf“f_jfŠf“fO,³,é,é¶‡#¶A2“x•`,©,ê,Ä,í,¢,í,Ü,¹,ñ¶B,»ê,Å,C,¡f|fŠfSf“,¤,C,¡fsfNfZf<,ð¶užæ,é,©¶v,Æ,¢,¤Œ^`è,¤,³,é,Ü,·¶B—á,|,íMicrosoft Windows,¡fvf%fbfgftfH¶[f€,í¶A’·•ÛŒ`‰œE‰œ,íŠp,í•`,©,ê,Ü,¹,ñ¶BS softimage 3.01,Å,í¶A’·•ÛŒ`í¶AUNIX OpenGL,É,µ,¶,©,ê,Ü,·¶BS softimage 3.01,ðŽg,Á,Ä,¢,é¶é¶‡A,±,¡fxjCfbf,ð¶AfNfefBfu,É,µ,Ü,·¶B

3DStudio MAX 両ê—p

±,íflfvfVfjf“,²Í’ð,³,é,Ä,¢,é,Æ,«,É,íA3D Studio MAX
1.x/VIZ,Æ[]A,»,í¼,íOpenGLfAfvfSfp[fVfjf“,í”-ž,ÉžÀ[]s,Å,«,Ü,¹,ñ[]B,Ü,½[]A,±,íflfvfVfjf“,²-
³Œø,É,È,A,Ä,¢,é,Æ,«,É,íA3D Studio
MAX,Æ¹¼,íOpenGLGfAfvfSfp[fVfjf“,ð”-ž,ÉžÀ[]s,·,é,Æ,íA3D Studio MAX’¤,Å•\ž,É-â’è,²<N,±
,é,±,Æ,²,·,è,Ü,·[]B,±,í-â’è,íA3D Studio MAX¤,Å,íftfgfEfFfAfhf
%oFCfo,Æfn[]fhfEfFfAfAfNzf%oFCE[]fgfhf%oFCfo,í`á,¢,é,æ,Á,Ä[]¶,¶,Ü,·[]B

fŠfjfA fefNfXf`ffff}fbfsf“fO

fefNfxf` ff, ²ā, <, É, é, Æ, «|A—á, |, î AfY| [f€fAfbfv, ·, éŽ, È, Ç, É|A2, Â, , é•âŠ®•û-@, |, ø
 , , i1, Â, ^aZg—p, ³, è, Ü, ·|B[Nearest neighbor], ÆŒ¾/4, í, ê, é•û-
 @, ||A'P|f, É<|B|U, ·éfsfNfZf<, ð, ðZQ|Æ, µ, Ä|A“-, ¶|F, ðZg—p, µ, Ü, ·|B^è•û|A[Linear
 interpolation], ÆŒ¾/4, í, ê, é•û-@, ||A|Zü, è, ðZæ, è¹, þfsfNfZf<, ||F, ð•âŠ®, µ, ÄZg—p, µ, Ü, ·|BfSfjfA
 fefNfxf` ffff}fbfsf`fO, ðZg—p, ·, é, Æ|A, » , ê, É, æ, Á, Ä½|FXfs| [fh, ²á‰o, µ, Ü, ·, ^a|A•
 Ž|, ³, ê, éŒ‰È, |, æ, èfSfAf<, È, à, |, Æ, È, è, Ü, ·|B

SI 3.5x/3.7x, Ö, I Å “K‰»

fNflfŠfefB / fpftfH[f]f“fX

ftf@|[f]XfgfNfŠfAfvfŒ|[f]

ftf@|[f]XfgfNfŠfAfvfŒ|[f],ffffvfx_fofbf@{Zfofbftf@},í,‘¬Á,Éžg—p,³,é,Ü,·B
ELSAfOf
‰ftfBfbfNfXf{[fh]ä,ÅA,±,ffffvfx_fofbf@,IDRAM,É'u,©,é,Ä,„,èA^é•ûffj
‰[fofbftf@]{ftfŒ|[f} fofbf@)
,IVRAM“à,É, ,è,Ü,·BVRAM,δA,·é,ì,DRAM,ì,»,{,é,É”ä,x,Ä””í,‘¬,Å,·B ZžŠO,δB-
ñ,·é,É,í,A•”•”I,EDRAM,δA,·é,μ,©, ,è,Ü,¹,ñB,»,é,ÄA,C,ifsfNfZf<,δA,·é,©,ð’è<`>,
é,æ,¤,È•ñ,ð•Ù’¶,μ,ÄAfAfjff{[fvf]f”,ìŽAs’t,Éù’,«,é,Ü,é,fv,fS—É,ðŒ,,ç,μ,Ü,·B,±
,fxCfbf,í·”ÉAfjf{[fvf]f”,Å,í•‰œ“”\
,ðXfs{[fhfAfbfv,·é,½,ß,ÉfZfbfg,³,é,Ü,·BOpenGLAfvfSfp{[fvf]f”,@(Microsoft,ìOpenGL_fn{[fhf
EfFfAŒYŠ·”“fefxfg,í,æ,¤,É)fobfN fffvfx_fofbf@,í•ñ,ð”C,ÝZæ,é•K—v,^a, ,éê‡,É,í,A,±
,fxCfbf,í–³Œø,É,μ,Ü,·B

fAf“f`fGfŠfAfvf“fO(f‰œfCf)

,±,fxCfbf,É,æ,èAPERMEDIA 2f`fbfvfZfbfg,ðZg,Á,½fOf‰œftfBfbfN fAf_fvf^ä,ÅAf‰œfCf“
fAf“f`fGfŠfAfvf“fO,ðTf|{fg,·é,½,ß,ÉfffUfCf”,³,é,½<@”,—p,Å,«,é,æ,¤,É,È,é,Ü,·B,±
,fxCfbf,ðZfbfg,·é,ÆAü,ifMfUfMfU,μ,½ŠOŒ©,‰S,ç,©,É,È,é,Ü,·B,½,¾,μfŒf“f_fSf“fO
,íZ,æ,Ü,é,±,Æ,ÄAfŒf“f_fSf“fO’¬“x,í’‰œ,μ,Ü,·B
f,·,±,fxCfbf,íGloria SynergyfAf_fvf^,ÉŒÀ,Á,ÄŒø‰œ,É, ,é,Ü,·B

f~fbfvf}fbfsf“fO

,,cfŒf“f_fSf“fOfNflfŠfefB,ðZAŒ»,·é,½,ß,ÉAfefNfXf`ffff}fbfv,í•í“,í^Ù,È,éfTfCfY,Å•Ù’¶,³,
é,Ü,·B(f~fbfvf}fbfvfŒfxf<),±
,é,ç,lfefNfXf`ffff}fbfv,íÄŒvZZ,³,éAÅl“I,É,»,{,é,¼,é,ifsfNfZf<,É”\
,ç,é,Ü,·Bf~fbfvf}fbfv<@”,ð–³Œø,É,·é,±,Æ,ÄAfefNfXf`ffff}fbfv,fS,íZg—p—È,ðŒíŒ,,μAfOf
‰œftfBfbfNfXf{[fh,íŒvZZžžŠO,ðZk,·é,±,Æ,æ,Å,«,Ü,·B

fefNfXf`ff,í^³lk

■F“,ðŒ,□
fefNfXf`ff,íA24Bit,â32Bit,íftfH[f]fbfg,ðZg—p,¹,,ÉA16Bit,ÉŒ,□F,μ,Ä•Ù’¶,³,é,Ü,·B
Auto:Œ»ÙY,íF“,É‰œ,¶,ÄAŽ©”®“I,ÉŒ,□F,³,é,é
On:fefNfXf`ffff}fbfv,í,ÉŒ,□F,³,é
Off:fefNfXf`ffff}fbfv,í,ÉŒ,□F,³,é,,ÅAÅ,ífNflfŠfefB,ð•Ù,Â

^³lk”ä

fOf‰œftfBfbfNfXf{[fh]ä,É,æ,è’½,,lfefNfXf`ffff}fbfv,ð•Ù’¶,·é,½,ß,ÉA‰œ,Å“\\
,ÈŒÀ,èfefNfXf`ffff}fbfv,í^³lk,ðs,ç,Ü,·B,,ç^³lk—I,íê‡,É,íAfNflfŠfefB,a’½-
<]ç,É,È,é,Ü,·,äA’½,‘,É,È,é,Ü,·B

fNfCfbfNfXfCfbf`

[fNfCfbfNfXfCfbf`I’ðfSfxfg],Æ,ç
,¤_fCfAfŒfŒf{fbfNfX“À,Å’I’ð,³,é,½fAfvfSfp{[fvf]f”,aAWINman Suite “à,Å•Ù,^,é,éfTfufŒffj...
[],íÙ’¤,Å’I’ð,Å,«,éfAfvfSfp{[fvf]f”,Æ,È,èA,»,í’¼,ífAfvfSfp{[fvf]f”,í‰œ¤,ÉfSfxfg•\
Ù,^,é,Ü,·B,Q,Å,í{f^f”,ðZg—p,μ,ÄAfAfvfSfp{[fvf]f”,ð,»,{,é,¼,é,ífTfCfh,©,ç^Ù”®,·é,±
,Æ,æ,Å,«,Ü,·B

WINman Suite“à,íApplication Settings

WINman Suite,É,æ,Á,ÄAAApplication Settings“à,íAfvfSfp{[fvf]f”fSfxfg,É,·,í,â,fAfNfZfx,·é,±

,Æ,‰oÂ"\,É,È,è,Ü,·B,±,]ft[fefBfŠfefB,íAf^fXfNfo["à,ìWINman SuitefAfCfRf"
,ðfNfŠfbfN,·,é,¾,·,Åf]fbfvfAfbfvf]ff...[],³Œ»,í,ê€82±,©,çApplication
Settingsf_fCfAf]fO,ðŒÄ,Ño,·,±

,Æ,âAfwf fv,ðŒÄ,Ño,μ,½,èAfŠfXfg,©,çAfvfŠfP[fVf#f“,ð'l'ð,·,é,±,Æ,‰oÂ"\,Å,·B,±
,]f]ff...[],É•\Ž!,³,é,éAfvfŠfP[fVf#f“fŠfXfg,íAAApplication

Settings"à,]fNfCfbfNfXfCfbf_f_fCfAf]fO"à,Å'l'ð,μ,½,à,í,É,È,è,Ü,·B

f]ff...[],]^é"Ôä,]fGf"fgfŠ,ð'l'ð,·,é,±,Æ,ÅAAApplication
Settingsf_fCfAf]fO,ðfAfNfefBfu,É,Å,«,Ü,·B

fNfCfbfNfXfCfbf`f]ff...[],©,ç'l'ð,μ,½fAfvfŠfP[fVf#f“,²,±,±,]f]ff...[],É•\
Ž!,³,é,é,í,·,Å,·,¤A'l'ð,³,é,Å,¢,éY'e,É,]f]ffNf}[]fN,²•t,«,Ü,·B,Ü,½¤A,¢,,Å,©,ì•íX,É,“,¢
,Å,í¤AWindows NT,ì¤Ä<N“®,²•K—v,É,È,é,±,Æ,à, ,é,Ü,·B

fgfoofuf<fVf...[]fefBf"fO,É'±,
–UZY,É–ß,é



fñ[[fhfEfFfA fAfNfZf%ofofCfCE[[fVftf“, ð—LCEø, É, Å, «, È, ¢

- fn[[fhfEfFfA fAfNfZf%ofofCfCE[[fVftf“fRf“fgf[[f<, ð, Å, «, È, ¢, ñ, A, f, fffBfXfvfCfCfhf
‰ofofCfo, [Cf»]Y, lffffBfXfvfCfCf, [[fh, OpenGL, fn[[fhfEfFfA fAfNfZf%ofofCfCE[[fVftf“, ðfTf|
[[fg, µ, Ü, 1, ñ, B, ±, è, É, í, A, ^, È‰o, ì, æ, x, È—R, ð, °, ç, ê, Ü, ·, B
• , ¢, , Å, ©, lELSAfO%ofofBfbfNfx{[[fh, íA8Bpp(256)F)f, [[fh, Å, A, 3DfAfNfZf%ofofCfCE[[fVftf“, ðfTf|
[[fg, µ, Ü, 1, ñ, B
• “ñí, É, , ¢‰oð’œ”x, ð, l, ð, µ, Å, ¢, é, É, à, ©, ©, í, ç, , Af_fuf_fofbf@, ð, s, x, ½, ß, É, , È—
È, lfffflflS, ¢, È, ¢, ñ, B-w, Ç, OpenGLAfvfSfP[[fVftf“, fuf_fofbf@, ð, K—
v, È, ·, é, ½, B, A, ±, ì, æ, x, È, ñ, È‰o, ÈffffBfXfvfCfChf%ofofCfo, 3Dfn[[fhfEfFfA fAfNfZf
‰ofofCfCE[[fVftf“, ð, LCEø, É, µ, Ü, ·, B
, ð, ì, æ, x, È, ñ, A‰oð’œ”x, à, µ, , íF”, ð, C, , ç, µ, Å, Ý, Å, , ¾, ¢, B

fAfvfŠfP[[fVftf“]Y’è, ð, Å, ¢, È, ¢

- , ð, è, í, A, fn[[fhfEfFfA fAfNfZf%ofofCfCE[[fVftf“]fIfvfVftf“, ð, l, ð, Å, ¢, È, ¢, ñ, N, ±, è, Ü, ·, B, ±
, ñ, è, Windows, W, lffffgEfFfA OpenGL, —LCEø, É, È, lELSA Application Settings
, lffffgEfFfA fn[[fhfEfFfA fAfNfZf%ofofCfCE[[fVftf“]fIfvfVftf“, ð—LCEø, É, µ, Å, , ¾, ¢, B
, ð, ì, æ, x, È, ñ, A, fn[[fhfEfFfA fAfNfZf%ofofCfCE[[fVftf“]fIfvfVftf“, ð—LCEø, É, µ, Å, , ¾, ¢, B

fIfvfVftf“, ð, l, X, Å, «, È, ¢

- , ð, l, l, l, l, Vftf“, , 2, žg—p’t, l, fo%ofofBfbfNfx{fChf%ofofCfo, Å, l, Tf|[[fg, , è, È, ¢‰oÅ”\, , ¢, Å, ·, B, ±
, ð, ì, æ, x, È, ñ, Å, , l, A, ^, È‰o, ð, æ, x, È, ñ, Å, , N, ±, è, Ü, ·:
• , ¢, , Å, ©, l, l, l, Vftf“, , A, S, Å, l, fo%ofofBfbfNfx{, [[fh, Å, —LCEø, È, , , Å, , è, Ü, 1, ñ,
B([fAf_f@fvfCf[[f], l, A, 32Bppf, [[fh, Å, , Y—LCEø, Å, , è, A, f, X, fefCf, [[fh], l, \
• , ÈffffBfXfvfCfChf, l, S, , Sm, •, Ü, Å, «, è, ñ, È‰oÅ”\, Å, ·, B
• , ¢, , Å, ©, l, l, l, Vftf“, , A, fo%ofofBfbfNfx{, [[fh, È, æ, Å, Å, l, Tf|[[fg, , è, Å, ¢, È, ¢, ©, A, K—
v, Å, È, ¢, ñ, , è, Ü, ·, B

ELSA Application Settings, ð, Å, ¢, È, ¢

- , ð, è, æ, x, È, l, U, l, AELSA Application Settings, , , È, , , l, fo%ofofBfbfNfx{, [[fh, à, µ, -
l, fffffBfXfvfCfChf%ofofCfo, Å, l, Tf|[[fg, , è, Å, ¢, È, ¢, ñ, N, ±, è, Ü, ·, B
ffffBfXfvfCfChf%ofofCfo, l, A, , µ, ¢, f, [[fh, È, l, g, Y, , , Å, , Y, , @, , µ, Ü, ·, B

—ÚŽÝ, È, —ß, è

ELSA Info, íAffffBfXfvfŒfCfVfXfef€’S”È, íÚÙx, ÈÙÙ•ñ, ðŒ©, é, ±, Æ, ï, Å, «, éfcÙ[f<, Å, ·ÙB
, ±, ïfcÙ[f<, íAfhf‰ofCfofCf”fXfgÙ[f<, íÙÙ, ÈÙÙ© “® “I, ÈfCf”fXfgÙ[f<, ³, êÙA[%oæ-
È, ïfvfÙfpfefB]f_fCfAfÙfOf{fbfNfX“à, í[*ELSA Info*], ©, çÙÅÙs, Å, «, Ü, ·ÙB

fOf<>[]fv,í[]A'P“Æ,]fAfvfŠfP>[]fvf‡f“,à,µ.,ífAfvfŠfP>[]fvf‡f“fOf<>[]fv—p,É[]Y’è,³,ê,Ü,·[]B,±,ífOf<>[]fv,í[fAfvfŠfP>[]fvf‡f“fŠfXfg]^É%oº,ÉŠÜ,Ü,ê,Ä,“,è[]AŠefAfvfŠfP>[]fvf‡f“—p,í[]é—p[]Y’è,³“ü,Ä,Ä,¢,Ü,·[]B

f_fuf<fofbftf@fIfvfVf#f“, ð—LŒø, É, ·, é, Æ, Äf, fCE[f€fofbftf@, í•\, Æ— , ï2, Â, É•¤Š,, ¢, ê, A•\ fofofbftf@, í•\Z|, ÉŽg—p, ¢, ê, A— fofofbftf@, ïfŒf“f_fŠf“fO, ÉŽg—p, ¢, ê, Ü, ·, B, ±, ê, É, æ, è, A, ç, Å, «, ï, È, cfAfjf[]fVf#f“, ðŽÅŒ», Å, «, Ü, ·, B’½,, ïOpenGLfAfvfŠfP[]fVf#f“, Å, í, A, ±, ïfXfCfbf` , ð—LŒø, É, ·, é•K—v, ¢, , è, Ü, ·, B

,±,ífXfCfbf` ,ð—LŒø,É,·,é,Æ[]AfOf‰oftfBfbfNfXf{[]}fh,)3Dfn[]fhfEfFfAfAfNfZf‰ofoŒ[]fVf#f“<@”\,²
—LŒø,É,È,è,Ü,·[]B(ffftfHf<fg[]Y’è) fXfCfbf` ,ð-³Œø,É,·,é,Æ[]AOpenGL,íf\\
ftfgfEfFfA,É,æ,èŽÀ[]s,³,ê,Ü,·,ì,Å[]A”ñ[]í,É’x,,É,è,Ü,·[]B

,žg—p’t,¡ELSAfOf‰ftfBfbfNfx{[]fh,íACE»]ÝOpenGL,¡fn[]fhfEfFfAfAfNfZf‰fCE[]fVf‡f“,ðfTf|
[]fg,µ,Ä,¢,Ü,¹,ñBf]fCf“f]fj...[]“à,¡HELPfRf}f“fh,ðžg—p,·,é,±,Æ,ÄA,æ,èÚ,µ,¢†•ñ,ð”¾,é,±
,Æ,ª,Ä,«,Ü,·B

Application Settings fefBfŠfefB, É, íA'½,, jY'èfOf<fv, ð•Ü'¶, ·, é, ±, Æ, ª, Å, «, Ü, ·B, ±, ê, ç, jAfvfŠfP[fVf+f“Y'èfOf<fv, iAfAfvfŠfP[fVf+f“fŠfXfgf{fbfNfX, É•\Z, , ê, Å, ¢, Ü, ·B

,±,í{f{f^f“,ð‰„Ÿ,µ[]AfefLfXfgf{fbfNfX,É“ü—í,·,é,±
„Æ,Ã[]AfAfvfŠfP[]fvf‡f“fŠfXfg,É[]V,µ,¢fGf“fgfŠ,ð'Ç‰„Å,„Å,«,Ü,·[]B

,±,íƒ{f^f“,ÅÅAf†[]fU[],íƒ)¬,μ,½fAfvfŠfP[]fVf+f“fGf“fgfŠ,ðíœ·,é,±
,Æ,ª,Å,«,Ü,· BELSA,ª)¬,μ,½•W€,lfGf“fgfŠ,íœ·,é,±,Æ,ª,Å,«,Ü,¹,ñB

,±,ê,ðŽg—p,·,é,±,Æ,Å[]A[]ì[]¬,μ,½[]Ý'è,ì-¼[]l,ð•í[]X,·,é,±,Æ,ª,Å,«,Ü,·[]B

,±,íƒ{f^f“,Å OpenGLfvf)fOf‰f€,íƒhf‰fCfoÝ'è,ð•íƒX,Å,«,éÚ×Ý'è,íƒ{fbfNfX,¤ŠJ,«,Ü,·B

,±,íƒ{f^f“,Å¤A¤í¤¬,µ,½f|fvfVf#f“,ðELSA,í•W¤€’I,É-ß,·,±,Æ,ª,Å,«,Ü,·¤B

[fNfCfbfNfXfCfbf`'l'ðfŠfXfg]f_fCfAf[]fO,©,ç[]AWinman Suite“à,ì[Display: ApplicationSettings],É[]o,Ã,-,éfŠfXfg,ð•Ó[]W,Å,«,Ü,·[]B,±,í<@"\",íflf“f%ofCf“fwf·fv,í[]A[fNfCfbfNfXfCfbf`'l'ðfŠfXfg]f_fCfAf[]fO{fbfNfX,©,çfAfNfZfX,Å,«,Ü,·[]B

,±,ífxFcfbf`É,æ.èf_fuf<fofbftf@f,[]fh,äfRf“fgf[]f<,³,é,Ü,··Bf_fuf<fofbftf@f|fvfVf+f”,ð—
LŒø,É,·,é,Æ[]AftfŒ[]f¢fofbftf@,í·\,Æ—,í2,Ä,É·¤S,,³,ê[]A·vfofbftf@,í·\Z!,ÉŽg—p,³,ê[]A—fofbftf
@,ífŒf“f_jfŠ“fO,ÉŽg—p,³,é,Ü,··B,±,é,É,æ,è[]A,i,ç,Ä,«,ì,È,¢fAfjf[]fVf+f”,ðŽAŒ»,Ä,«,Ü,··B

fhf‰fCfo, ©,ç¤AOpenGLfEfCf“fhfE“à,ÉGDI•`‰æ,ð<-‰¤,·,é¤A,Æ,¢,¤'Ç
‰¤¤,ífsfNfZf<ftfH¤[f}fbfg,ð—L¤ø,É,µ,Ü,·¤B (PFD_SUPPORT_GDI),¢,-
¤,©,ífAfvfSfP¤[fVf#f“,É,“,¢,¤,í¤A,±,ífsfNfZf<ftfH¤[f}fbfg,¤•K—v,¤,·¤B

fAf<ftf@f`fff“flf<,í[]#[]¬,â“§%oß,ì[]^—[],È,Ç,ÉŽg—
p,³,ê,Ü,·[]B,à,µOpenGLfAfvfŠfP[]fVf†f“,¤fAf<ftf@'l,ðŽg—p,µ,È,c[]ê[]‡[]A,±,ìfXfCfbf` ,É,æ,Á,Ä[]Ô,
—î,Å,ì3[]F,ì,Ý,ðŒvŽZ,·,é,æ,¤,É•ì[]X,Å,«,Ü,·[]B

fI[]fo[]fCfvfCE[]f“,ífI[]fo[]fCfvfCE[]f“,í•W[]€fjf%o[]((RGB)fofbftf@,É•t,-%oÀ,í,ç,ê,éfpfCEfbfg-È,Æ,µ,ÄZg—p,³,ê,Ü,·B(Softimage,í,æ,¤,È)^ê•”,ífAfvfSfP[]fVff“,ífI[]fo[]fCfvfCE[]f“,ð•K—v,Æ,µ,Ü,·B

fI[[fo[[fCfvfCf,,f“,đŽg—p,·,éfAfvfŠfP[fVf+f“,íA•ÊX,]fCf,,[],É“Æ—§,μ,½‘,«ž,Ý,đS,s,¤
,±,Æ,ª,Å,«,Ü,·B,±,lŠg'fjsfNfZf<ftfH[f}fbfg(PFD_SWAP_LAYER_BUFFERS)
,É,æ,Á,ÄAfAfvfŠfP[fVf+f“,í”—l,É— foſbftf@,©,ç•\br/>foſbftf@,Ö,]fXf]fbfv,đAſCf,,[],²,Æ,É•ÊX,Éſs,¤,±,Æ,ª,Å,«,Ü,·B

fXfefŒflfAfvfŠfPŒ[fVf†f“,đ%otŒ»fOf‰ofX,AŒ^êŒŒ,É“®Œì,³,¹,é,É,íŒAfhf‰ofCfo,©,çfXfefŒfl—
p,ífsfNfZf<ftfHŒ[f}fbfg,đ—LŒø,É,µ,È,¬,ê,î,È,è,Ù,¹,ñŒB

f fuf<fofbftf@fŠf“fO,ì,½,ß,É□Afhf‰ofoCfo,í,Å,«,éŒÀ,è□,‘¬,ÈŽè’i,ðŽæ,ë,¤,Æ,µ,Ü,·□B,¢,-
,Å,©,ífAfvfŠfP□[fVf‡f“,Å,í□A’x,¢,¬,ê,Ç,à^Å’S,Èfofbftf@fufŠfbfg•ûŽ®,ðŽæ,é•K—v,¤, ,è,Ü,·□B

fy|[fW]Ø, è'Ö, ¡, È, Ç,]fAfNfVf†f“, íAƒ,fjf^, ï, ’½fuf‰of“fN,Æ“-Šú,µ,Ä,¢,Ü,·B,±,ê,í‰æ-
Ê,ífefBfAfŠj“fO,ð-hŽ~,µ,Ä,,ê,Ü,·,¤A,±,í,Æ,«ftfŒ|[f€fŒ|[fg,ÆfŠftfŒfbfVf...fŒ|[fg,¤“-Šú,µ,Ä,¢
é,í,ÅAƒAfAfjf|||[fVf†f“,ð•\Ž|,·,é¤ê¤‡,É,ífpftfH|[f}f“fX,¤“,µ,’á‰º,µ,Ü,·B,±,í,½,ß¤A‰æ-
Ê,ífefBfAfŠj“fO,¤<N,¤,é,æ,¤,Å,µ,½,c¤A,±,íf{f^f“,ðfAfNfefBfu,É,µ,Ä¤A¤,’½fuf
‰of“fN“à,E,·,×,Ä,]fAfNfVf†f“,¤¤s,í,ê,é,æ,¤,É,µ,Ü,·B

Windows, l GDI API, l A' E l i, l OpenGL, A Zg—p, , e, A, c, éfofbfNfofbftf@, oSç—l, A, «, Ü, , n l B3Dfrf...
l ("à, A2DfRf}f"fh, oZg—p, , e, c, -
, A, ©, l fAfvfSfp[lVf]f", A, l AGDI, A•` , ©, e, ½ŠG, afofbfNfofbftf@, É, à"½‰f, , e, A, c, é•K—v, , è, Ü, ·
l B, ±, l fXfCfbf` , oZg—p, , e, ±
, A, l A2DfRf}f"fh, l OpenGL, l fofofbfNfofbftf@, É, à"`, l, ç, e, Ü, · l BOpenGLEfCf"fhfE, l ŠO'¤, l 2D—
l ^æ, EŠÖ, µ, A, l A, Ç, l, æ, ¤, E l ê l f, A, àfhf‰fCfo, oSç—l, µ, A, c, Ü, · l B

"", ¶OpenGL, É, µ, Ä, à Afvf‰fbfgftfH[f€, É, æ, Á, Ä•`‰œ“ ® ï, í, Ü, Å, · B2, Ä, jf|jŠfSf“, ï‰œ, a d, È, é, AE, ±, ë, lfsfNfZf, í AfŒf“f_fŠf“fO, Ü, ê, é ê‡A2“x•`, ©, ê, Ä, í, ü, Ü, ï B, », ê, Ä, Ç, jf|fŠfSf“, a, Ç, jf|fNfZf, ð užæ, é, © v, AE, f, œ^`è, a, Ü, · B—á, l, Microsoft Windows, jfvf‰fbfgftfH[f€, í A'••Œ` , ï‰œE‰œ, išp, í ` , ©, ê, Ü, Ü, ï BSoftimage 3.01, Ä, í A'••Œ` , í AUNIX OpenGL, É, ¶, Ä•` , ©, ê, Ü, · BSoftimage 3.01, ð Zg, Ä, Ä, ç, é ê‡A, ±, jfXfCfbj, ð fAfNfefBfu, É, µ, Ü, · B

,±,ƒ,ƒvƒVƒƒ„,²'ƒ'ƒ,³,ê,Ä,¢,é,Æ,«,É,íA3D Studio MAX
1.x/VIZ,ÆA,»,ƒ'¼,OpenGLfAfvfSfPŒ[ƒVƒƒ„,í“-Žž,ÉŽÀŒs,Å,«,Ü,¹,ñŒB

fefNfXf`ff,º'å,«,,È,é,AE,«A—á,!,íAfvY[f€fAfbfv,·,éžž,È,ç,ÉA2,Â, ,é•âš®•û-@,ì,¤,¿,í,P,Â,ºžg
—p,³,ê,Ü,·B[Nearest neighbor],AEŒ³/4,í,ê,é•û-
@,íA'Pf,É<ßÚ,·efsfnfZf<,ð,ðžQÆ,µ,ÄA“-,¶F,ðžg—p,µ,Ü,·B^é•ûA[Linear interpolation]
,ÆŒ³/4,í,ê,é•û-@,íAžü,è,ðžæ,è,í,þfsfnfZf<,íF,ð•âš®,µ,Äžg—p,µ,Ü,·BfšfjjA
fefNfXf`ffff}fbfsf“fO,ðžg—p,·,é,ÆA,»,ê,È,æ,Â,Ä'½fXfs[]fh,º'á
‰‰,e!,³,ê,éŒ<%‰È,í,æ,èfšfAf<,È,à,í,Æ,È,è,Ü,·B

,„,Â,©,ìOpenGLfAfvfSfP@[fVf#f],íAf_fuf<fofbftf@,ìOpenGLfEfCf“fhfEä,ÉAGDIŠÖ”,ðŽg—
p,µ,Äf_fjf...[],âf_fCfAf_fOf{fbfNfX,ð•‰æ,µ,Ü,·B,±
,ífxFcfbf,âfAfNfefBfu,É,³,é,é,ÆAftf<fxfNfS@[f“f,[]fh,Â“®[],·,éfAfvfSfP@[fVf#f“ä,ìGDI•‰æ,
íAftf[]“fg<y,NfobfbfNfobfbftf@,É“-žž,És,í,ê,Ü,·B,±
,í“®[],ífn@fhfEfGfA,ÂžA@s,³,é,é,í,Â@AfpftfH@[]f“fx,l’á‰‰,í, ,è,Ü,¹,ñBS Softimage 3.5x/3.7x,í,æ,¤,
.éfAfvfSfP@[fVf#f],Â,íA,A,±,ífxFcfbf,ðfAfNfefBfu,É,·,é·K—v,¤, ,è,Ü,·B

ftf@[]fxfgfNfŠfAfvfŒ[]f“,íffvfX foſbſtf@(Zfoſbſtf@),í[],’¬Á<Ž,ÉŽg—
p,³,ê,Ü,·BOpenGLfAfvfŠfP[]fVf†f“,¤(Microsoft,OpenGLfn[]fhfEfFfAŒÝŠ·¤«fefXfg,í,æ,¤,É)foſbfN
ffvfX foſbſtf@,í[]•ñ,ð“Ç,ÝŽæ,é•K—v,ª, ,é[]ê[]‡,É,í[]A,±,ífxfCfbf` ,í-³Œø,É,µ,Ü,·B

,±,ífXfCfbf` ,É,æ,èÅAPERMEDIA 2f` fbfvfZfbfg,ðŽg,Á,½fOf‰ftfBfbfN fAf_fvf^ä,ÅÅAf‰ofCf“
fAf“f` fGfŠfAfVf“fO,ðfTf|fg,·,é,½,ß,ÉffffUfCf“,³,ê,½<@”\,ä—~—p,Å,«,é,æ,¤,É,È,è,Ü,·ÅB,±
,ífXfCfbf` ,ðfZfbfg,·,é,ÆÅAÅü,ífMfUfMfU,µ,½ŠOŒ©,¤Š,ç,©,É,È,è,Ü,·ÅB,½,¾,µfŒf“f_fŠf“fO,íž,·
¤Å,,Ü,é,±,Æ,ÅÅAfŒf“f_fŠf“fO’¬“x,í'á‰º,µ,Ü,·ÅB

„,¢fŒf“f_fŠf“fOfNflfŠfefB,ðŽÀŒ»,·,é,½,ß,ÉÅAfefNfXf`fff}fbfv,í•i“,ì^Ù,È,éfTfCfY,Å•Û’¶,³,ê,Ü,·
B(f~fbfvf}fbfvfŒfxf<),±,ê,ç,lfefNfXf`fff}fbfv,íÅŒvŽZ,³,êÅAÅ!“I,É,»,ê,¼,ê,ifsfNfZf<,É“\
,ç,ê,Ü,·Bf~fbfvf}fbfv<@”\,ð-³Œø,É,·,é,±,Æ,ÅÅAfefNfXf`fff}f,fŠ,ìŽg—p—È,ðÅíŒ,·µÅAfOf
‰ftfBfbfNfXf{[]fh,ìŒvŽZŽžŠÔ,ð'ZÅk,·,é,±,Æ,¤,Å,«,Ü,·ÅB

fefNfXf`ff,íA24Bit,â32Bit,]ftfH][f}fbfg,ðŽg—p,¹,,ÉA16Bit,ÉŒ,F,μ,Ä•Û‘¶,³ê,Ü,·B

fOf%oftfBfbfNfXf{[]fh[]ã,É,æ,è'½,,}fefNfXf`fff}fbfv,ð•Û'¶,·,é,½,ß,É[]A%oÂ"\n,ÈŒÂ,èfefNfXf`fffTfCfY,i^3[]k,ð[]s,¢,Ü,·[]B[],¢^3[]k—!,i[]ê[]‡,É,i[]AfNflfSfefB,¤'½[]-\n<][]µ,É,È,è,Ü,·,¤[]A'½[][],'¬,É,È,è,Ü,·[]B

,±,ífgfsfbfN,É,í[]A'Ç‰oÁ,ífwf<fv,í—p^Ó,³,ê,Ä,¢,Ü,¹,ñ[]Bfwf<fvf{f^f“,ð‰oÝ,µ,Ä[]Aflf“f‰ofCf“f}fjj...
fAf<,ðŽQ[]Æ,µ,Ä,,³/₄,³,¢[]B

