,±,ÌfIfvfVf‡f",ĺftfHfO fe□[fuf< fGf~f…f征□[fVf‡f",ðfIf"/fIft,É,·,é,½,ß,ÉŽg—p,³,ê,Ü,·□B

Direct3D ,Å,Í[]AD3D fn[][fhfEfFfA fAfNfZf‰f@][fVf‡f",ª‰Â"\,ÈfffBfXfvf@fC fAf\_fvf^,ª]Afo][fefbfNfX ftfHfO,Ü,½,Ífe][fuf< ftfHfO,Ì,¢,\_,ê,©,ðŽÀ]s,Å,«,é,±,Æ,ð]ð@],Æ,µ,Ä,¢,Ü,·]B^ê•",ÌfQ][f€,Í]AD3D fn[][fhfEfFfA,Ì]«"\,ð]³Šm,ÉŠm"F,·,é,±,Æ,È,]Afe][[fuf< ftfHfO fTf][][fg,ð—v<],µ,Ü,·]B,±, ÌffvfVf‡f",ð'I'ð,·,é,Æ]]AŠmŽÀ,É,±,Ì,æ,¤,ÈfQ][f€,ð NVidia fOf‰ftfBfbfNfX fvf]]fZfbfT,Å]³[í,É"®]ì,³,¹,é,±,Æ,ª,Å,«,Ü,·]B

,±,ÌflfvfVf‡f",É,æ,è[]Afhf‰fCfo,Ì[]V,µ,¢ DirectX <@"\,ð-³Œø,É,µ,Ü,·[]B

^È'O,Ìfo□[fWf‡f",Ì DirectX ,ðŽg,¤,æ,¤,É□ì,ç,ê,½fQ□[f€,Ì'†,É,Í□Afhf‰fCfo,Å—LŒø,É,È,Á,Ä,¢ ,éfCf"fXfg□[f<□ï,Ý,Ì DirectX 6 ,¨,æ,Ñ 7 ,Å,Í□³□í,ÉŽÀ□s,Å,«,È,¢,à,Ì,ª, ,è,Ü,·□B,±,ÌflfvfVf‡f",ð'l'ð,·,é,Æ□Afhf ‰fCfo,ð<□§"l,É DirectX 5 ŒÝŠ·f,□[fh,ÅŽÀ□s,µ□AŒÃ,¢fQ□[f€,ð□³□í,ÉŽÀ□s,³,¹,é,±,Æ,ª,Å,«,Ü,·□B

<N" ® ,Å,«,È,¢∏A, ,é,¢,Í[]³]í,ÉŽÀ]]s,Å,«,È,¢,æ,¤,ÈŒÃ,¢fQ][f€,ðŽÀ]]s,·,é[]ê[]‡,Í[]A,±,ÌfIfvfVf‡f",ð'I'ð,µ,Ä,-,¾,³,¢]B  $Z-fofbftf@, i[[``x, \delta fAfvfŠfP[[fVf\ddaggerf", ^{a}-v<[], \cdot, e[[``x, ÉŽ©'``®``I, É'^2[]`®, \cdot, e, æ, ¤, Éfn[[fhfEfFfA, \delta[]Y'e, \mu, Ü, \cdot]]B$ 

"Á'è,Ì Z-fofbftf@□[("x,ð•K—v,Æ,·,é□ê□‡,ð□œ,¢,Ä□A'Ê□í,Í,±,ÌflfvfVf‡f",ð—LŒø,É,µ,Ä,¨,«,Ü,·□B,± ,ÌflfvfVf‡f",𖳌ø,É,·,é,Æ□AZfofbftf@,Ì□ì<Æ□[("x,ªŒ»□Ý,Ìfn□[fhfEfFfA□Ý'è,Æ^ê'v,µ,È,¢fAfvfŠfP□[fVf‡f",Í,·,×,Ä"®□ì,µ,È,,È,è,Ü,·□B •Ê,Ì[]['wfofbftf@•û-@,ð—LŒø,É,μ,Ü,·[]Β

16 frfbfg fAfvfŠfP□[fVf‡f",ÌŽÀ□sŽž,É□A^Ù,È,éfn□[fhfEfFfA<@□\,Å□['wfofbftf@,ð□s,¤,æ,¤,É□Ý'è,µ,Ü,·□B,± ,Ì□Ý'è,ð—LŒø,É,·,é,Æ□A,æ,è□,,¢•iŽ¿,Å 3D fCf□□[fW,ÌfŒf"f\_fŠf"fO,ð□s,¤,±,Æ,ª,Å,«,Ü,·□B Direct3D Žg—pŽž,É NVidia ,Ìf□fS,ð—LŒø,É,µ,Ü,·□B

,±,Ì□Ý'è,ð—LŒø,É,·,é,Æ□ADirect3D fAfvfŠfP□[fVf‡f",ÌŽÀ□sŽž,É□A‰æ–ʉº‹÷,É NVidia ,Ìf□fS,ª•\ ަ,³,ê,Ü,·□B NVidia fOf‰ftfBfbfNfX fvf□fZfbfT,Í□AMip f}fbfv,ðŽ©"®"I,É□¶□¬,·,é,±,Æ,ÅfofXco-R,ÌfefNfXf`ff"]'- cø-¦,ð□ã,°□AfAfvfŠfP□[fVf‡f",ÌfpftfH□[f}f"fX,ðcü□ã,³,¹,é,±,Æ,ª,Å,«,Ü,·□B

 $\begin{array}{l} & , \mu, \otimes, \mu^{\hat{e}} \bullet'', \hat{I} f A f v f \check{S} f P [[f V f \ddagger f', Å, \hat{I} \square A Mip f \} f b f v, \hat{I} \check{Z} \otimes'' \otimes \square \P [] \neg, ^{a} - L \textcircled{e} \sigma, \acute{E}, \acute{A}, \ddot{A}, ¢, \acute{e}, \pounds f C f \square [[f W, ^{a} \square ^{3} \square (, \acute{E} \bullet \setminus \check{Z} \mid, ^{3}, \acute{e}, \acute{e}, \pounds, \acute{e}, \pm, \pounds, \check{A}, ], \dot{A}, \dot{$ 

fOf‰ftfBfbfNfX fvf□fZfbfT,ÅŽg—p,·,鎩"® Mip f}fbfsf"fO-@,ð'l'ð,Å,«,Ü,·□B

2 -{[]ü-@,Ü,½,Í 8 f^fbfv^Ù•û[]«-@ MIP f}fbfsf"fO-@,ð'l'ð,Å,«,Ü,·[]B2 -{[]ü-@,Å,Í^ê"Ê"I,ÉfpftfH[][f}f"fX,ªŒü[]ã,µ[]A^Ù•û[]«-@,Å,ÍfCf[][][fW•iŽ¿,ªŒü[]ã,µ,Ü,·[]B Mip f}fbfv,Ì LOD (Level of Detail) fofCfAfX,ð'2□®,Å,«,Ü,·□B

•Û'¶,μ,½fJfXf^f€□Ý'è (,Ü,½,ĺ□uTweak□v) ,ÌfŠfXfg□B,±,ÌfŠfXfg,©,ç□€–Ú,ð'l'ð,·,é,Æ□A□Ý'è,ª•\ ަ,³,ê,Ü,·□B□Ý'è,ð"K—p,³,¹,é,É,ĺ□A[OK] ,Ü,½,ĺ ["K—p] f{f^f",ð'l'ð,µ,Ü,·□B Œ»[]Ý,Ì[]Ý'è ([Direct3D,Ì[]Ú[]×[]Ý'è] f\_fCfAf[]fO,Ì[]Ý'è,àŠÜ,Þ) ,ðfJfXf^f€[]uTweak[]v,Æ,µ,Ä•Û'¶,µ,Ü,·[]B•Û'¶,µ,½[]Ý'è,Í[]ã<L,ÌfJfXf^f€[]Ý'èfŠfXfg,É'ljÁ,³,ê,Ü,·[]B

"Á'è,Ì Direct3D fQ[[f€

,Å□Å"K,È□Ý'è,ªŒ©,Â,©,Á,½□ê□‡□A,»,Ì□Ý'è,ðfJfXf^f€□Ý'è,Ì□uTweak□v,Æ,µ,ĕۑ¶,µ,Ä,¨,,Æ□AfQ□[f€ ,ðŠJŽn,·,é′O,É,·,Î,â, Direct3D,ª□Ý'è,Å,«,é,Ì,Å□AŠefIfvfVf‡f",ðŒÂ•Ê,É□Ý'è,·,éŽèŠÔ,ª□È,⁻,Ü,·□B fŠfXfg,ÅŒ»∏Ý'l'ð,³,ê,Ä,¢,éʃJfXf^f€∏Ý'è,ð∏í∏œ,μ,Ü,·∏B

,∙,×,Ä,Ì∏Ý'è,ð∏‰Šú∏Ý'è'I,É–ß,µ,Ü,·∏B

Direct3D ,Ì′ljÁ□Ý'è,ðfJfXf^f}fCfY,Å,«,éf\_fCfAf□fO,ð•\ަ,μ,Ü,·□B

 $,\pm, \hat{I}fIfvfVf\sharp f^{*}, \hat{A} \Box AfefNfZf < (fefNfXf^{f}fGf Gf Gf Gf f^{*}fg) - p, \hat{I}fn \Box [fhfEfFfA fefNfXf^{f}, \hat{I}^{*}z^{\prime}u \Box \hat{Y}^{\prime}e, \delta \bullet \hat{I} \Box X, \mu, \ddot{U}, \cdot \Box B$ 

 $,\pm,\hat{e},\varsigma,\hat{l}'l,\delta\bullet\ddot{l}_X,\cdot,\acute{e},\pm,\mathcal{E},\mathring{A}_A \oplus A \oplus^3,\hat{l}fefNfZf<,^{a'}e<`,^{3},\hat{e},\acute{e}_{}\oplus\oplus^{S},\delta\bullet\ddot{l}_X,\mu,\ddot{U},\cdot\_B\_\%\check{S}\acute{u}_{}\oplus\check{Y}'e,\hat{l}_A Direct3D,\hat{l}\check{Z}d-$ 
$$\begin{split} & |, \acute{E}_{i}\rangle, \acute{A}, \ddot{A}, \dot{C}, \ddot{U}, \cdot \Box Bf \langle ftfgfEffA, \dot{I}' +, \acute{E}, \dot{I} \Box A \Box^{3}, \dot{I} fef Nf Zf <, \check{\delta}, \dot{e}, ..., \acute{e}, e, e, \dot{L} \Box^{2}, ..., \acute{e}, \pm, \mathcal{E}, \check{\delta} - v < \Box, \cdot, \acute{e}, \dot{a}, \dot{h}, \dot{a}, ., \dot{e}, \ddot{U}, \cdot \Box B, \\ & \times, \varkappa, \mu, \frac{1}{2} fAf v f \check{S} f P \Box [f V f \sharp f'', \dot{A}, \dot{I} \Box A \Box^{3}, \dot{I} fef Nf Zf <, \check{\delta} \Box \ddot{A}', ..., \acute{e}, \pm , \mathcal{A} f C f \Box \Box [f W \bullet i \check{Z}_{i}, ^{3} C \Xi \Box \Box^{3}, ..., \Box B ] \rangle \\ & \mathcal{A} = \mathcal{A} =$$

Ô,Å'2🛛 ®,µ,Ä,,¾,3,¢□B

fOf‰ftfBfbfNfX fvf□fZfbfT,ªfefNfXf`ff,ð<L‰⁻,∙,é,½,ß□AŽw'è,³,ê,½—e—Ê,Ü,ÅfVfXfef€ f□f,fŠ,ð—~ p,Å,«,é,æ,¤,É□Ý'è,Å,«,Ü,·□B

**f**□**f**,: fefNfXf`ff<L‰<sup>¬</sup>—p,ÉŽg—p,Å,«,éfVfXfef€ f□f,fŠ,Ì□Å'å—e—Ê,Í□AfRf"fsf... □[f^,ÉfCf"fXfg□[f<,³,ê,½•¨—□ RAM ,Ì—e—Ê,ð,à,Æ,É,µ,ÄŽZ□o,³,ê,Ü,·□BfVfXfef€ RAM ,Ì—e— Ê,ª′□‰Á,·,é,Æ□A□Ý'è,Å,«,é'l,à'å,«,,È,è,Ü,·□B

,±,Ì□Ý'è,Í□APCI fffBfXfvfŒfC fAf\_fvf^ (,Ü,½,Í PCI ŒÝŠ·f,□[fh,ÅŽg—p,μ,Ä,¢,é AGP fffBfXfvfŒfC fAf\_fvf^) ,É,Ì,Ý"K—p,³,ê,Ü,·□B ,±,ÌflfvfVf‡f",ð'l'ð,·,é,Æ $\Box$ AVSYNC ,ð-³Œø,É, $\mu$ ,Ü,· $\Box$ B

□uVSYNC,ð-³Œø,É,·,é□v,Æ"<sup>-</sup>—l,É□Af,fjf^,Ì□,'¼fŠfgfŒ□[fX,Ì"<sup>-</sup>'²,ð'Ò,½,\_,É□AfCf□□[fW,ð,·,®,ɉæ-Ê,ÉfŒf"f\_fŠf"fO,Å,«,Ü,·□B,±,ÌflfvfVf‡f",É,æ,è□AftfŒ□[f€ fŒ□[fg,ð‰æ-Ê,ÌfŠftfŒfbfVf...fŒ□[fg,æ,è'å,«,-□Ý'è,Å,«,Ü,·,ª□AfCf□□[fW•iŽ¿,ª'¹,È,í,ê,é,Ì,Å□A•\ަ,ɉe<¿,ª□o,½,è•\ަ,Ì′[,ª□Ø,ê,é,±,Æ,ª, ,è,Ü,·□B ,±,ÌflfvfVf‡f",É,æ,è□A"Á'è,Ì D3D fAfvfŠfP□[fVf‡f",ÅŽg—p,·,éfAf"f`fGfCfŠfAfX,Ì—Ê,ðŒ^'è,µ,Ü,·□B fAf"f`fGfCfŠfAfX,Æ,Í□A3D flfufWfFfNfg,̉□,ÉŽž□ÜŒ©,ç,ê,é□uŠK'i□ó□v,ÌfGftfFfNfg,ð□Å□¬ŒÀ,É—} ,¦,é<Z□p,Å,·□BfAf"f`fGfCfŠfAfX,Ì—Ê,Í□AŠ®'S,Èflft,©,çfAfvfŠfP□[fVf‡f",ÅŽÀ□s,Å,«,é□Å'å— Ê,Ü,Å'I'ð,Å,«,Ü,·□B ,±,ÌflfvfVf‡f",Í□AfAf"f`fGfCfŠfAfX,ð'¼□ÚfTf|□[fg,µ,Ä,¢,È,¢fAfvfŠfP□[fVf‡f",ÅfAf"f`fGfCfŠfAfX,ð<□§"I,ÉŽg —p,·,é,½,ß,Ì,à,Ì,Å,·□B

 $fAf"f^{f}GfCfŠfAfX,\delta=\frac{3}{4}Sm, ffTf|[[fg,\mu,Ä,\phi,È,¢^{e}",]fAfvfŠfP[[fVf‡f",Å,[]AfCf[][[fW,ª]][(fe),a]](fe), ff,a,e,b,c]] = 1, fffvfVf‡f",Å,f] = 1, fffvfVf{f}f] = 1, fffvfVf$ 

,±,ÌflfvfVf‡f",É,æ,è□AfOf‰ftfBfbfNfX f`fbfv,Å□^—□,³,ê,é'O,É CPU ,ª□€"õ,·,éftfŒ□[f€,Ì□",ð□§ŒÀ,µ,Ü,· (VSYNC ,³-³Œø,É,È,Á,Ä,¢,é□ê□‡)□B

,,ç,©,¶,ßfŒf"f\_fŠf"fO,³,ê,éftfŒ□[f€,Ì□",ª'½,-,È,é,Æ□AfWf‡fCfXfefBfbfN□AfQ□[f€fpfbfh□AfL□[f{□[fh,È,Ç,ÌfffofCfX,Ö,Ì"½‰ž,É,¨,⁻,é□u"ü—ĺf ‰fO□v,ª'·,,È,é□ê□‡,ª, ,è,Ü,·□B

fQ[[f€'†,É[]AfRf"fsf...[[f^,É[]Ú'±,³,ê,Ä,¢,é"ü—ĺfffofCfX,©,ç,Ì"ü—ĺ,É'Î,·,é"½‰ž,ª–¾,ç,©,É'x,ê,Ä,¢ ,é[]ê[]‡,Í[]A,±,Ì'I,ð[]¬,³,,μ,Ä,,¾,³,¢[]B  $fhf \% fC fo, \text{\& OpenGL Šg'}_{<@"\,} \textbf{``GL_KTX_buffer_region}, \text{``dŽg}, \text{``e}, \text{``e}, \text{``e}, \text{``H}, \text{``U}, \text{``B}, \text{``e}, \text{`e}, \text{``e}, \text{`e}, \text{``e}, \text{``e}, \text{``e}, \text{``e}, \text{``e}, \text{``e}, \text{`e}, \text{``e}, \text{``e}, \text{``e}, \text{`e}, \text{`$ 

$$\label{eq:GL_KTX_buffer_region Šg'} \begin{split} & \mathsf{GL}_KTX\_buffer\_region Šg'} \\ & \mathsf{E}_{\mathsf{G}} = \mathsf{L}_{\mathsf{G}} \\ & \mathsf{E}_{\mathsf{G}} \\ & \mathsf{E}_{\mathsf{G}} \\ & \mathsf{E}_{\mathsf{G}} \\ & \mathsf{G}_{\mathsf{G}} \\ & \mathsf{G}_$$

, $\frac{1}{2}$ , $\frac{3}{4}$ , $\mu$  A — ~ — p,Å, «, éf [] [f]f < frfffl f]f,fŠ,ª 8MB ^ȉ<sup>0</sup>,Ì ] ê ] ‡ ] Afff...fAf < fvf Œ ] [f"Šg'£ <@"\fTf| ][fg,Í — L Œø,É,È,È,Ü,<sup>1</sup>,ñ ] B

,±,Ì<code>[Y'è,Í<code>[A<code>[</code>ã<L,Ì <code>]</code>ubuffer region Šg'£<@"\,ð—LŒø,É,·,é<code>[</code>vflfvfVf‡f",ª-³Œø,É,È,Á,Ä,¢,é<code>[]ê<code>[]‡,ÍŒø ‰Ê,ª</code>, ,è,Ü,¹,ñ<code>[</code>B</code></code></code>

 $\label{eq:constraint} \begin{array}{l} & \label{eq:constraint} [], `\neg f \check{S} f j f A-Mip f \rbrace f b f v-f \check{S} f j f A f t f B f \langle f^f \check{S} f f O, \eth - L \end{tabular} e_{\emptyset}, \acute{E}, \cdot, \acute{e}, \end{tabular} = [f W \bullet i \check{Z}_{\dot{z}}, \eth^i \downarrow_{2}] `\acute{a} \\ & \end{tabular} & \end{tabular} e_{\mathbb{Q}}^{3,1}, \ddot{A} f A f v f \check{S} f P \end{tabular} [f V f \sharp f H \end{tabular} [f \rbrace f f f X, \eth \end{tabular} e_{\mathbb{Q}}, \grave{A}, \bullet, \dot{E}, \end{tabular} e_{\mathbb{Q}}, \grave{A}, \bullet, \dot{C}, \end{tabular} = [f V \bullet i \check{Z}_{\dot{z}}, \eth^i \downarrow_{2}] `\acute{a} \\ & \end{tabular} e_{\mathbb{Q}}^{3,1}, \dot{A} f A f v f \check{S} f P \end{tabular} [f V f \sharp f H \end{tabular} [f \rbrace f f f X, \eth \end{tabular} e_{\mathbb{Q}}, \grave{A}, \bullet, \dot{C}, \end{tabular} = [f V \bullet i \check{Z}_{\dot{z}}, \eth^i \downarrow_{2}] `\acute{a} \\ & \end{tabular} = [f V \bullet i \check{Z}_{\dot{z}}, \eth^i \downarrow_{2}] `\acute{a} \\ & \end{tabular} = [f V \bullet i \check{Z}_{\dot{z}}, \eth^i \downarrow_{2}] `\acute{a} \\ & \end{tabular} = [f V \bullet i \check{Z}_{\dot{z}}, \eth^i \downarrow_{2}] `\acute{a} \\ & \end{tabular} = [f V \bullet i \check{Z}_{\dot{z}}, \eth^i \downarrow_{2}] `\acute{a} \\ & \end{tabular} = [f V \bullet i \check{Z}_{\dot{z}}, \eth^i \downarrow_{2}] `\acute{a} \\ & \end{tabular} = [f V \bullet i \check{Z}_{\dot{z}}, \eth^i \downarrow_{2}] `\acute{a} \\ & \end{tabular} = [f V \bullet i \check{Z}_{\dot{z}}, \eth^i \downarrow_{2}] `\acute{a} \\ & \end{tabular} = [f V \bullet i \check{Z}_{\dot{z}}, \eth^i \downarrow_{2}] `\acute{a} \\ & \end{tabular} = [f V \bullet i \check{Z}_{\dot{z}}, \eth^i \downarrow_{2}] `\acute{a} \\ & \end{tabular} = [f V \bullet i \check{Z}_{\dot{z}}, \eth^i \downarrow_{2}] `\acute{a} \\ & \end{tabular} = [f V \bullet i \check{Z}_{\dot{z}}, \eth^i \downarrow_{2}] `\acute{a} \\ & \end{tabular} = [f V \bullet i \check{Z}_{\dot{z}}, \grave{a} ] `\acute{a} \\ & \end{tabular} = [f V \bullet i \check{Z}_{\dot{z}}, \grave^i \downarrow_{2}] `\acute{a} \\ & \end{tabular} = [f V \bullet i \check{Z}_{\dot{z}}, \grave^i \downarrow_{2}] `\acute{a} ] \\ & \end{tabular} = [f V \bullet i \check{Z}_{\dot{z}}, \grave^i \downarrow_{2}] `\acute{a} ] \\ & \end{tabular} = [f V \bullet i \check{Z}_{\dot{z}}, \bullet^i \check{A}_{\dot{z}}] `\acute{a} ] \\ & \end{tabular} = [f V \bullet i \check{Z}_{\dot{z}}, \bullet^i \check{A}_{\dot{z}}] `\acute{a} ] \\ & \end{tabular} = [f V \bullet i \check{Z}_{\dot{z}}, \bullet^i \check{A}_{\dot{z}}] `\acute{a} ] \\ & \end{tabular} = [f V \bullet i \check{Z}_{\dot{z}}, \bullet^i \check{A}_{\dot{z}}] `\acute{a} ] \\ & \end{tabular} = [f V \bullet i \check{A}_{\dot{z}}, \bullet^i \check{A}_{\dot{z}}] `\acute{a} ] \\ & \end{tabular} = [f V \bullet i \check{A}_{\dot{z}}, \bullet^i \check{A}_{\dot{z}}] `\acute{a} ] \\ & \end{tabular} = [f V \bullet i \check{A}_{\dot{z}}, \bullet^i \check{A}_{\dot{z$ 

,±,ÌflfvfVf‡f",É,æ,è□AfCf□□[fW•iŽ¿,ðŒü□ã,³,¹,é,½,ß,Ì^Ù•û□«ftfBf‹f^fŠf"fO,ð OpenGL ,ÅŽg p,Å,«,é,æ,¤,É,μ,Ü,·□B ,±,ÌflfvfVf‡f",ð'l'ð,·,é,Æ $\Box$ A"Á'è,Ì CPU ,ÅŽg-p,³,ê,é<‰»-½-ß,Ìfhf‰fCfo fTf| $\Box$ [fg,ð-³Œø,É,µ,Ü,· $\Box$ B

^ê•",Ì CPU ,Å,Í□ANVidia fOf‰ftfBfbfNfX fvf□fZfbfT,ð•â□•,µ,Ä 3D fQ□[f€ ,âfAfvfŠfP□[fVf‡f",ÌfpftfH□[f}f"fX,ðŒü□ã,³,¹,é'ljÁ 3D -½—ß,ðfTf|□[fg,µ,Ä,¢,Ü,·□B,± ,ÌflfvfVf‡f",É,æ,è□Afhf‰fCfo,Å,Ì,±,ê,ç,Ì′ljÁ 3D -½—ß,ÌfTf|□[fg,ð-³Œø,É,µ,Ü,·□BfpftfH□[f}f"fX,ð"äŠr,·,é□ê□‡,âfgf‰fuf‹fVf...□[fefBf"fO,ð□s,¤□ê□‡,ɕ֗~,ÈflfvfVf‡f",Å,·□B ,±,ÌflfvfVf‡f",É,æ,è□AOpenGL fhf‰fCfo—p,Ì'S‰æ-ÊfAf"f`fGfCfŠfAfX,ð— Lο,É,µ,Ü,·□BfAf"f`fGfCfŠfAfX,Æ,Í□AflfufWfFfNfg,Ì ‰□,ÉŽž□ÜŒ©,ç,ê,é,¬,´,¬,´,µ,½□uŠK'i□ó□v,ÌfGftfFfNfg,ð—},¦,Ä—ÖŠs,ðŠŠ,ç,©,É,·,é<Z□p,Å,·□B ,±,ÌflfvfVf‡f",É,æ,è[]A[]‰Šú[]Ý'è,Å OpenGL fAfvfŠfP[[fVf‡f",ª'Á'è,Ìf]f‰[[[[("x,ÌfefNfXf`ff,ðŽg p,∙,é,©,Ç,¤,©,ðŒ^'è,µ,Ü,·∏B

 $[] ufffXfNfgfbfv, ] f]f‰[[[["x,ðŽg-p]v,Å,I]AWindows fffXfNfgfbfv, ] @w]YZg-p, \mu, Ä, ¢, éf]f$ ‰[[[["x,ÌfefNfXf`ff,ð]í,ÉŽg—p,μ,Ü,·]B

**□u□í,É 16 bpp,ðŽg—p**□v,¨,æ,Ñ**□u**□**í,É 32 bpp,ðŽg—p**□v flfvfVf‡f",Å,Í□AfffXfNfgfbfv,Ì□Ý'è,ÉŠÖ,í,ç, <u>□</u>AŽw'è,³,ê,½fJf‰□[□["x,ÌfefNfXf`ff,ð<□§"I,ÉŽg—p,μ,Ü,·□B

,±,ÌflfvfVf‡f",É,æ,è□Aftf‹fXfNfŠ□[f" OpenGL fAfvfŠfP□[fVf‡f"—p,Ìfofbftf@ ftfŠfbfv f,□[fh,ðŒ^'è,µ,Ü,·□B □ufuf□fbfN"]'—-@£□A¢fy□[fW ftfŠfbfv-@£□A

$$\begin{array}{l} & \langle \check{Z} @ \overset{\circ}{``} \circledast \overset{\circ}{`I} \overset{\circ}{\delta} \overset{\circ}{\square} v, @, \zeta \overset{\circ}{,} \overset{\circ}{I} \overset{\circ}{,} \overset{\circ}{\square} \overset{\circ}{,} \overset{\circ}{\square} B \overset{\circ}{\square} u \check{Z} @ \overset{\circ}{``} \circledast \overset{\circ}{`I} \overset{\circ}{\delta} \overset{\circ}{\square} v, \mathring{A}, \begin{split} & (\square A fn \square [fhf E fF fA, \grave{I} \square \backslash \square \neg, @, \varsigma fh f \% f C fo, \grave{a} \square \mathring{A} ``K, \grave{E} \check{Z} \grave{e} & (\blacksquare, \Diamond \square ) \overset{\circ}{\square} \mathring{A} \overset{\circ}{``} \overset{\circ}{\otimes} \overset{\circ}{\square} \overset{\circ}{A} \overset{\circ}{`I} \overset{\circ}{\square} \overset{\circ}{A} \overset{\circ}{\square} \overset{\circ}{\square} \overset{\circ}{A} \overset{\circ}{\square} \overset{\circ}{A} \overset{\circ}{\square} \overset{\circ}{\square$$

,±,ÌflfvfVf‡f",Å,ĺ□AOpenGL ,Å,Ì□,'¼" <sup>-</sup>Šú,Ì□^—□•û–@,ðŽw'è,μ,Ü,·□B

 $[]\mathbf{u}[]\mathbf{i},\mathbf{\acute{f}fft}[]\mathbf{v},\mathbf{\acute{A}},\mathbf{\acute{I}}]A,\cdot,\times,\mathbf{\ddot{A}},\mathbf{\acute{I}} OpenGL fAfvfŠfP[[fVftf",\mathbf{\acute{A}}],'1/4"" \check{S}u,\delta[]\mathbf{i},\mathbf{\acute{E}}-{}^{3}\mathbb{E}\sigma,\mathbf{\acute{E}},\mu,\mathbf{\ddot{U}},\cdot]B$ 

**□u□‰Šú□Ý'è,Å,ĺflft□v**,Å,ĺ□A—LŒø,É,·,é,æ,¤fAfvfŠfP□[fVf‡f",©,ç-¾Šm,É—v<□,³,ê,Ä,¢ ,é,Æ,«^ÈŠO,ĺ□A□,'¼"<sup>-</sup>Šú,ð-³Œø,É,µ,Ä,¨,«,Ü,·□B

 $[] \textbf{u}[] \textbf{‰} Šú[] \acute{\textbf{Y'e}}, \texttt{Å}, \texttt{iflf"} [] \textbf{v}, \texttt{Å}, \texttt{i}[] A-^{3} Œ \emptyset, \texttt{É}, \cdot, \texttt{e}, æ, \texttt{x} \texttt{f} A \texttt{f} \texttt{v} \texttt{f} \texttt{S} \texttt{f} \texttt{P}[[\texttt{f} \texttt{V}\texttt{f}\texttt{+}\texttt{f}^{"}, \texttt{@}, \texttt{c}-^{3} \texttt{4} \texttt{S} \texttt{m}, \texttt{E}-\texttt{v} \texttt{v}_{[}, \texttt{a}, \texttt{e}, \texttt{A}, \texttt{c}, \texttt{e}, \texttt{a}, \texttt{c}, \texttt{e}, \texttt{a}, \texttt{c}, \texttt{a}, \texttt{c}, \texttt{a}, \texttt{c}, \texttt{a}, \texttt{a}, \texttt{c}, \texttt{a}, \texttt{a}, \texttt{c}, \texttt{a}, \texttt{a}, \texttt{c}, \texttt{a}, \texttt{a},$ 

$$\begin{split} & (E*)[\dot{Y},\dot{I}]\dot{Y},\dot{e},\deltafJfXf^{f}[\dot{Y},\dot{e},\dot{I}]]uTweak[]v,\mathcal{A},\mu,\ddot{A}\bullet\hat{U}^{\prime}\|,\mu,\ddot{U},\cdot]]B\bullet\hat{U}^{\prime}\|,\mu,\frac{1}{2}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}<L,\dot{I}JJfXf^{f}[\dot{Y}'\dot{e},\dot{I}]]\tilde{a}$$

, ,é OpenGL

fAfvfŠfP□[fVf‡f",Å□Å"K,È□Ý'è,ªŒ©,Â,©,Á,½□ê□‡□A,»,Ì□Ý'è,ðfJfXf^f€□Ý'è,Ì□uTweak□v,Æ,µ,ĕۑ¶,µ,Ä,¨ ,,Æ□Afvf⊡fOf‰f€,ðŠJŽn,·,é'O,É,·,Î,â, OpenGL ,ª□Ý'è,Å,«,é,Ì,Å□AŠefIfvfVf‡f",ðŒÂ•Ê,É□Ý'è,·,éŽèŠÔ,ª□È,⁻,Ü,·□B fJf‰[[•â[]³'2]]®,ðŽg—p,μ,Ä[]Af\[][fX fCf[][][fW,Æ•\ަfffofCfX,Ì[]o—

ĺ,Æ,ÌŠÔ,Å□¶,¶,é‹P"x,Ì,Î,ç,Â,«,ð•â□³,·,é,±,Æ,ª,Å,«,Ü,·□BfCf□□[fW□^—□fAf∨fŠfP□[fVf‡f",ðŽg—p,µ,Ä,¢ ,é□ê□‡□A,±,Ì‹@"\,É,æ,Á,ÄfCf□□[fW (ŽÊ□^,È,Ç) ,ðf,fjjf^,É•\ަ,·,é,Æ,«,ÌfJf‰□[,ð,³,ç,É□³Šm,É□ÄŒ»,·,é,± ,Æ,ª,Å,«,Ü,·□B

,Ü,½□A'½,,Ì 3D fAfNfZf‰fŒ□[fefbfh fQ□[f€,Å□A•\ަ,ª^Ã,·,¬,ÄfvfŒfC,Å,«,È,¢,± ,Æ,ª, ,è,Ü,·□B,·,×,Ä,Ìf`fff"flf<,Å<Ï"™,É-¾,é,³,âfKf"f}'l,ð□ã,°,ê,Î□A•\ަ,ª-¾,é,,È,èfvfŒfC,µ,â,·,,È,è,Ü,·□B ,Â,Ü,Ý,ðŽg—p,μ,Ä□A'2□®,·,éfJf‰□[ f`fff"flf<,ð'l'ð,μ,Ü,·□B□Ô□A—Î□A□Â,Ìf`fff"flf<,ðŒÂ•Ê,É'2□®,μ,½,è□A3 □F,ð"<sup>~</sup>Žž,É'2□®,Å,«,Ü,·□B fJf‰□[<È□ü,ðfOf‰ftfBfbfN•\ަ,μ,½,à,Ì□BfRf"fgf‰fXfg□A-¾,é,³□AfKf"f},ð'²□®,·,é,Æ□A,± ,Ì<È□ü,ªfŠfAf<f^fCf€,ŕω»,μ,Ü,·□B ,±,ÌflfvfVf‡f",ð'l'ð,∙,é,Æ□AWindows ,ª□Ä<N"®,μ,½,Æ,«,É,±,±,Å□Ý'è,μ,½fJf ‰□['²□®,ªŽ©"®"I,É∙œŒ³,³,ê,Ü,·□B

•Û'¶,μ,½fJf‰[[ fJfXf^f€[]Ý'èfŠfXfg[B,±,ÌfŠfXfg,©,ç[]€−Ú,ð'I'ð,·,é,Æ[]A[]Ý'è,ª•\ަ,³,ê,Ü,·[]B

Œ»□Ý,ÌfJf‰□[□Ý'è,ðfJfXf^f€□Ý'è,Æ,µ,ĕۑ¶,µ,Ü,·□B•Û'¶,µ,½□Ý'è,Í□ã‹L,ÌfJfXf^f€□Ý'èfŠfXfg,É'Ç ‰Á,³,ê,Ü,·□B fŠfXfg,ÅŒ»□Ý'I'ð,³,ê,Ä,¢,éfJf‰□[ fJfXf^f€□Ý'è,ð⊡í□œ,μ,Ü,·□B

 $,\cdot,\times,\ddot{A},\dot{I}Jf\%\Box\lbrack'I,\delta fn\Box\lbrack fhfEfFfA\Box o\%\times \check{Z}\check{z},\dot{I}\Box\dot{Y}'\dot{e},\acute{E}-B,\mu,\ddot{U},\cdot\Box B$ 

f,fjf^ f^fCf~f"fO f,□[fh,ð'l'ð,μ,Ü,·□B

$$\begin{split} \tilde{\textbf{Z}} & \textcircled{\begin{tinzed} \tilde{\textbf{Z}} @ \begin{tinzed} \tilde{\textbf{W}} @ \begin{tinzed} \tilde{\textbf{W}} @ \begin{tinzed} \tilde{\textbf{W}} @ \begin{tinzed} \tilde{\textbf{W}} @ \begin{tinzed} \tilde{\textbf{M}} & \tilde{\textbf{M}} &$$

^**ê"Êf^fCf~f"fO•ûŽ**®,Ü,½,Í **GTF**,Í□A□V,μ,¢fn□[fhfEfFfA,Ì'å•"•ª,ÅŽg—p,³,ê,Ä,¢,é‹KŠi,Å,⊡B

**"Æ—§f,fjf^ f^fCf~f"fO**,Ü,½,Í **DMT**,Í□A^ê•",Ìfn□[[fhfEfFfA,ÅŽg—p,³,ê,Ä,¢,éŒÃ,¢<KŠi,Å,·□B,²Žg p,Ìfn□[[fhfEfFfA,Å DMT ,ªŽw'è,³,ê,Ä,¢,é□ê□‡,Í□A,±,ÌflfvfVf‡f",ð—LŒø,É,µ,Ä,,³¼,³,¢□B [NVidia QuickTweak] fAfCfRf",ð Windows f^fXfNfo $\Box$ [,ɕ\ަ, $\mu$ ,Ü,· $\Box$ B

,±,ÌfAfCfRf",ðŽg—p,·,é,Æ□AfJfXf^f€□Ý'è,³,ê,½ Direct3D□AOpenGL□AfJf‰□[□Ý'è,ð•Ö—~,Èf|fbfvfAfbfv f□fjf...□[,©,ç'l'ð,µ,Ä,·,Î,â,"K—p,³,¹,é,±,Æ,ª,Å,«,Ü,·□B,Ü,½,±,Ìf□fjf...□[,É,Í□A□‰Šú□Ý'è,É-ß,·□€-Ú,â [‰æ-Ê,Ìfvf□fpfefB] f\_fCfAf□fO,ÉfAfNfZfX,·,é□€-Ú,àŠÜ,Ü,ê,Ä,¢,Ü,·□B 
$$\label{eq:windowsf} \begin{split} & \text{Windowsf}^{fXfNfo}[, \& \text{QuickTweakf}^{f}[fefBfŠfefB, \&, \mu, \ddot{A} \bullet \\check{Z}_{1}, \cdot, \acute{e}fAfCfRf``, & \check{O}'I' \\ & \bullet \\check{Z}_{1}, \overset{3}{}, 1, \overset{1}{2}, \\ & (fAfCfRf``, & \check{\delta}f\check{S}fXfg, \\ & \bigcirc, \\ & \varsigma'I' \\ & \check{\partial}, \mu \square Af^{-}fXfNfo}[, \grave{I}fAfCfRf``, & \textcircled{U}_{V}, \\ & \square V, \\ & \square V, \\ & \square V, \\ & \square B \end{split}$$

[□Ú□×fvf□fpfefB] f\_fCfAf□fO,Å [,ĺ,¢] ,Ü,½,ĺ ["K—p] ,ð'l'ð,μ,Ä•Ï□X,ð"K—p,·,é,½,ß,É□A,± ,Ìf\_fCfAf□fO,ð•Â,¶,Ä•Ï□X,ð•Û'¶,μ,Ü,·□B  $f^{fXfNfo} [fAfCfRf", \delta fNf Sf bf N, \mu, \frac{1}{2}, \mathcal{A}; \langle, E | A, C, \langle, c, \rangle f \} fEf X f \{f^f", A f | f j f ... [[, \delta \bullet \backslash Z |, ^3, ^1, e, @ 'l' \delta, A, «, Ü, \cdot ] B ]$ 

Šm"Ff□fbfZ□[fW,ð•\ަ/″ñ•\ަ,ð'l'ð,μ,Ü,·□B

f^fXfNfo[[ f[]fjf...[[,©,ç 3D []Ý'è,ðf][][fh,μ,½,Ӕ,«,ÉŠm"Ff[]fbfZ[][fW,ð•\ަ,³,¹,È,¢,æ,¤,É,·,é,É,ĺ[A,± ,ÌflfvfVf‡f",ðf`fFfbfN,μ,Ä,,¾,³,¢[]B  $f^fXfNfo[[ f]f...[[,ð 3D • \ަ,<sup>3</sup>,<sup>1</sup>,<sup>1</sup>/<sub>2</sub>,¢]ê[]‡,Í[]A,±,ÌflfvfVf‡f",ð'l'ð,µ,Ü,·]B$ 

fTf|[[[fg,³,ê,Ä,¢,é[]Å'å‰ð'œ"x,æ,è,à'á,¢‰ð'œ"x,ÅŽÀ[]s,µ,Ä,¢,é[]ê[]‡[]Aftf‰fbfg fpflf< fffBfXfvfŒfC[]ã,ÉfCf[][[fW,ð•\ަ,³,¹,é^Ê'u,ðŒ^'è,µ,Ü,·[]B –î^óf{f^f",ðŽg,Á,Ä□Af,fjf^□ã,ÌfffXfNfgfbfv,Ì^Ê'u,ð'²□®,μ,Ü,·□B

 $\textcircled{C} = [\hat{Y}, \hat{I}, \hat{W}, \hat{U}, \hat{$ 

,±,ê,ç,ÌflfvfVf‡f",©,ç□o—ĺ•\ަfffofCfX (f,fjf^□AfffWf^f< ftf‰fbfg fpflf<□AfefŒfr,È,Ç□AfffBfXfvfŒfC fAf\_fvf^,ªfTf|□[fg,μ,Ä,¢,éfffofCfX,É,æ,è^Ù,È,è,Ü,·),ð'l'ð,Å,«,Ü,·□B fAfNfefBfu,È•\ަfffofCfX,Ì□Ý'è,ðfJfXf^f}fCfY,Å,«,éfEfBf"fhfE,ð•\ަ,µ,Ü,·□B

TV □o—ĺ,ÅŒ»□ÝŽg—p,³,ê,Ä,¢,éŒ`Ž®,Æ'n^æ,Ì□Ý'è,ðަ,μ,Ü,·□B

"Á'è,Ì TV □o—ĺŒ`Ž®,ðŽw'è,∙,éfEfBf"fhfE,ð•\ަ,μ,Ü,·□B

 $,\pm, \mathbf{\hat{j}}f\mathbf{\hat{S}}f\mathbf{X}fg, \mathbb{O}, \varsigma, \ddot{=} [\mathbf{Z}, \ddot{\mathbf{U}}, \boldsymbol{\varepsilon}, \mathbf{\hat{l}}] (-\frac{1}{4}, \delta'\mathbf{I}'\delta, \mu, \ddot{\mathbf{A}} \mathsf{TV} []o-\mathbf{\hat{I}}\mathbf{G}^{*}\mathbf{\hat{Z}}^{\otimes}, \delta\mathbf{G}^{*'}\mathbf{\hat{e}}, \mu, \ddot{\mathbf{U}}, \vdots]B$ 

**f**□**f,:** ,¨□Z,Ü,¢,Ì□'-¼,²fŠfXfg,É•\ަ,³,ê,Ä,¢,È,¢□ê□‡,Í□A,¨□Z,Ü,¢,Ì′nˆæ,É□Å,à<ß,¢□'-¼,ð'l'ð,μ,Ä,,¾,³,¢□B

ʻl'ð,μ,½Œ`Ž®,ð"dŒ¹"Š"üŽž,Ì□‰Šú□Ý'è,É□Ý'è,μ,Ü,·□B

fefŒfr,ðfffBfXfvfŒfC fAf\_fvf^,É□Úʻ±,µ,ÄfRf"fsf...□[f^,ð<N"®,µ,½□ê□‡□A,±,ÌflfvfVf‡f",ðʻl'ð,·,é,± ,Æ,Å□A<N"®Žè□‡,Å•\ަ,³,ê,é,·,×,Ä,̉æ-Êf□fbfZ□[fW,ª,²Žg—p,ÌfefŒfr,ÅfTf| □[fg,³,ê,é□³,µ,¢Œ`Ž®,ÅŠmŽÀ,É□o—ĺ,³,ê,Ü,·□B TV ,É'—□M,·,é□o—Í□M□†,Ìf^fCfv,ðŽw'è,Å,«,Ü,·□B

"K□Ø,ÈfRflfNf^ fP□[fuf<,ðŽg—p,·,ê,Î□A^ê"Ê"I,É S-frfffl□o—ĺ,Ì•û,ªfRf"f|fWfbfg frfffl□o—ĺ,æ,è,à□,,¢ ‰æŽ¿,Å□o—ĺ,·,é,±,Æ,ª,Å,«,Ü,·□B,Ç,Ìf^fCfv,ð'l'ð,·,ê,Î,¢,¢ ,© •ª,©,Ç,È,¢□ê□‡,Í□A□**uީ"®'l'ð**□**v**□Ý'è,ð'l'ð,µ,Ä,,¾,³,¢□B  $-\hat{i}^{\circ} \acute{o}f{f^{\circ}}, \\ \\ \check{d}_{g}, \\ \dot{A}, \\ \\ \dot{A}, \\ \\ \dot{A}, \\ \\ \dot{A}, \\ \dot{A}, \\ \dot{A}, \\ \dot{A}, \\ \\ \dot{A}, \\ \dot{A}, \\ \\ \dot{A}, \\$ 

**f**□**f**,: '<sup>2</sup>□®,ðŒë,Á,Ä TV ‰æ'œ,ª□¬—□,μ,½,艽,à•\ަ,³,ê,È,,È,Á,½□ê□‡,Í□A,»,Ì,Ü,Ü 10 •bŠÔ,¨'Ò,¿,-,¾,³,¢□B‰æ'œ,ªŽ©"®"I,É□‰Šú□Ý'è,Ì^Ê'u,É-ß,è,Ü,·□B,»,ÌŒã,à,¤^ê"x'²□®,µ,Ä,-,¾,³,¢□BfffXfNfgfbfv,Ì^Ê'u,ªŒ^,Ü,Á,½,ç□A10 •bŒo‰ß,·,é'O,É [OK],Ü,½,Í ["K—p] f{f^f",ð ‰Ÿ,µ,Ä□Ý'è,ð•Û'¶,µ,Ä,,¾,3,¢□B  $( E \otimes [ \acute{Y}, \grave{I} ) \% \delta' ( e^{*} x, \acute{E}, \ddot{-}, \acute{e} ] \% \check{S} \acute{u} [ \acute{Y} \dot{e}, \grave{I} \hat{E}' u, \acute{E} ff fX fN fg fb fv, \delta - B, \mu, \ddot{U}, \cdot ] B$ 

,±,ê,ç,ÌfRf"fgf□□[f<,ðŽg—p,μ,Ä□ATV ‰æ'œ,Ì-¾,é,³,Æ□Ê"x,ð'²□®,μ,Ü,·□B

,±,ê,ç,ÌfRf"fgf□□[f<,ðŽg—p,μ,Ä□ATV ‰æ'œ,Ì-¾,é,³,ÆfRf"fgf‰fXfg,ð'²□®,μ,Ü,·□B

,±,ÌfRf"fgf]][[f<,ðŽg—p,µ,Ä]ATV []M[]†,É"K—p,·,éftfŠfbfJ ftfBf<f^,Ì—Ê,ð'<sup>2</sup>[]®,µ,Ü,·[]B DVD ‰f‰æ,ðfn][[fhfEfFfA fffR[][f\_,Å[]Ä[]¶,·,é,Æ,«,Í[]AftfŠfbfJ ftfBf<f^,ðŠ®'S,É[]Ø,é,±,Æ,ð,¨Š©,ß,µ,Ü,·[]B  $\mathsf{TV}, \acute{\mathsf{E}}\_o\_\acute{\mathsf{I}}, \cdot, \acute{\mathsf{E}}\_\mathring{U}, \grave{\mathsf{I}} & \overset{\circ}{\overset{\circ}{\overset{\circ}{\overset{\circ}{\overset{\circ}}{\overset{\circ}{\overset{\circ}}{\overset{\circ}{\overset{\circ}}{\overset{\circ}{\overset{\circ}}{\overset{\circ}{\overset{\circ}}{\overset{\circ}{\overset{\circ}}{\overset{\circ}{\overset{\circ}}{\overset{\circ}{\overset{\circ}}{\overset{\circ}{\overset{\circ}}{\overset{\circ}}{\overset{\circ}{\overset{\circ}}{\overset{\circ}{\overset{\circ}}{\overset{\circ}}{\overset{\circ}{\overset{\circ}}{\overset{\circ}{\overset{\circ}}{\overset{\circ}{\overset{\circ}}{\overset{\circ}{\overset{\circ}}{\overset{\circ}}{\overset{\circ}{\overset{\circ}}{\overset{\circ}{\overset{\circ}}{\overset{\circ}}{\overset{\circ}{\overset{\circ}}{\overset{\circ}{\overset{\circ}}{\overset{\circ}}{\overset{\circ}{\overset{\circ}}{\overset{\circ}}{\overset{\circ}{\overset{\circ}}{\overset{\circ}}{\overset{\circ}{\overset{\circ}}{\overset{\circ}}{\overset{\circ}}{\overset{\circ}{\overset{\circ}}{\overset{\circ}}{\overset{\circ}}{\overset{\circ}{\overset{\circ}}{\overset{\ci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

 $NVidia \ fOf \% ft fB fb fN fX \ fv f [] fZ fb fT, \ hf R fA, \ ", \ \ e, \ \ Nf [] f, f \ \ hf Nf [] fb fN \ \ Z \ \ "g \ ]", \ \ \delta'^2 [] \ \ e, \ \ , \ \ e, \ \ \pm, \ \ A, \ \ \ll, \ \ U, \ \ ] B$ 

NVidia fOf‰ftfBfbfNfX fvf□fZfbfT,ÌfRfA fNf□fbfN'¬"x,ð□Ý'è,µ,Ü,·□B

fRfA fNf□fbfN'¬"x,ðf□fKfwf<fc,Å•\ަ,µ,Ü,·□B

 $fffBfXfvf{@}fC~fAf\_fvf^, \hat{l}f{}_f, f\check{S}~fCf''f^ftfF{}_[fX, \hat{l}fNf{}_fbfN'\neg''x, \delta{}_{}]\acute{Y}'e, \mu, \ddot{U}, \cdot{}_{}B$ 

 $f \Box f, f \check{S} f C f ``f \land f t f F \Box [f X, \dot{f} N f \Box f b f N `\neg``x, \delta f \Box f K f w f < f c, \mathring{A} \bullet \backslash \check{Z} ;, \mu, \ddot{U}, \cdot \Box B$ 

□V,μ,¢fNf□fbfNŽü"g□",Ì□Ý'è,ð"K—p,∙,é'O,É^À'è□«,ðfefXfg,μ,Ü,·□B

 $\label{eq:final_field} \textbf{f}_{\texttt{I}} = f_{\texttt{I}}[f]_{\texttt{I}}[,\dot{h}]_{\texttt{K}} \check{S} \acute{u} \check{Y} \acute{e}, \\ \mathcal{K} = \dot{V}, \\ \mu, \\ \psi = \dot{V}, \\ \psi = \dot{V},$ 

,±,ÌflfvfVf‡f",ð'l'ð,·,é,Æ□AWindows ,ð<N"®,·,é,½,Ñ,ÉfNf□fbfNŽü"g□",Ì•Ï□X,ªŽ©"®"I,É"K—p,³,ê,é,æ,¤ ,É,È,è,Ü,·⊡B

$$\begin{split} & \texttt{f}_{\texttt{f}}, \texttt{f}, \texttt{f},$$

fRf"fgf□□[f‹,ð□Ä,Ñ—LŒø,É,·,é'O,É□A,·,×,Ä,ÌfNf□fbfN'²□®‹@"\,ðfŠfZfbfg,µ□AfOf‰ftfBfbfNfX fn□[fhfEfFfA,Ì□ÄŒŸ□o,ð‹□§"I,ÉŽÀ□s,µ,Ü,·□B

fffBfXfvfŒfC fAf\_fvf^,Ì BIOS ,ðfAfbfvff□[fg"Å BIOS fCf□□[fW,É□Ø,è'Ö,¦,é,½,Ñ,É□AfŠfZfbfg,ðŽÀ□s,·,é,± ,Æ,ð,¨Š©,ß,µ,Ü,·□B