

!¹¿!¶µ¥í©ó¶}}±ò©îÃó³~Ãä½tÃú□/£¼òÀÀ¥\`à;C

Direct3D «ú©w`ã D3D µwÅé¥[³t`à□OªºÅã¥Ü¾¼¹□¶±¥dÅ³,Ó¥í¥H°ø|æ³»ÂIÃú□/£©îÃä½tÃú□/£;C|³`Ç¹CÀ,µLªk¥¿½T|a~d,ß D3D
µwÅé©Ã`à;A`Ã»ÝnÃä½tÃú□/£□ä´©;C¿i³¼Ü!¹¿!¶µ±N¥í¥H½T«O±zªº NVIDIA ¹î§î³B²z¾¼¹¥í¥H¥¿½T°ø|æ!¹Ãp¹CÀ,iC

l¹¿i¶µ®e³±zÃð³¬ÅX°Êµ{l¹ªº.s DirectX ¥\¬à;C

¬Y¨ÇÂÂª©¹CÀ,¥u¾A¥Î©ó,ûÂÂª©¥»ªº DirectX;A³o¨Çª©¹CÀ,¥ΓàµLªk°t{Xªw|w,Ëªº DirectX ª©¥» 6 ©Î 7 ¢l|bÅX°Êµ{l¹ªº±ò°Êª´©¥
V¬àªº±jªªªªU¥¿±`°ð|æ;C¿i¾Ül¹¿i¶µ¥i±j¬ÅX°Êµ{l¹;ª DirectX 5 ¬Ü®e¾Òl¹ªU°ð|æ;A¥H¬ÅÂª©¹CÀ,¥i¥H¥¿±`°ð|æ;C

|pªG±zn°ð|æ¬Y¨ÇµLªk¥¿±±ò°Ê©Î°ð|æªºÂÂª©¹CÀ,;A½D¬¥l¹¿i¶µ;C

±j`îµwÂé!Û°Ê±N`ä Z ½w½Ä°j²`«×½Ö¾ã¬°À³Ÿîµ{!i©Ö»Ý^{ao2}`«×iC

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$$\pm \hat{O}^{\circ} \hat{E}^{2^{\circ}} \ll x^{1/2} w^{1/2} \hat{A}^3 B^2 z^{a_0} \hat{a} \nexists L \wp^3 N_i C$$

30¥i¥HÄýµwÁé·Ï¥i¥ta@Ö,É,m|b 16 |i|,À³¥iµ|{|;|æ²·«x1/2w1/2Ä³B²z;C±Ö°Ê|13|)©w¥i¥H²£¥i\$ó^{oao} 3D 1/4v13µÛ|â«~1/2è;C

±Ö°Ê Direct3D ¢¢ªº NVIDIA Å²¼Ð;C

!pªG±Ö°Ê!¹³]©w;A|b°ð|æ Direct3D Å³¥î{;|®É;A¿Ã¹ð¢U¢èªº"ª, "±N·|Åã¥Ü NVIDIA Å²¼Ð;C

±z^{ao} NVIDIA 1ŝŝ³B²z³/₄1¥i¥H!Ů°Ê³B²z MIP ¶K¹İ;A¥H´Ê°a¶x~y±Æ^{ao}S÷½è¶K¹İ¶Ç°e@Ä²v;A¨Ä´Ê¨ÑSó°^{ao}Ä³¥İμ{;i@Ä¯à;C

İŸ~O;A; b±Ů°Ê!Ů°Ê²E¥Í^{ao} MIP ¶K¹İ@É;A¤@¨ÇÄ³¥İμ{;i¥İ¯àμL^ak¥ç½TÄã¥Ů;CnSó¥ç;¹°ŸÄD;A½Đ´İ¤Ö!Ů°Ê²E¥Í MIP

¶K¹İμ¥¯Ä^{ao1}/₄Æ¶q;A^{a1}/₂¨İ¼v¹³¥i¥H¥ç½TÄã¥Ů~°¤İ;C´İ¤Ö MIP ¶K¹İμ¥¯Ä^{ao1}/₄Æ¶q³q±`¥i¥H@Ø°ES÷½è¶K¹İ^{ao}¤E¹İ»ô©İıuµe-

±¼¹μō;v°ŸÄD;İİŸ~O³o¼Ě«o·|°§C@Ä¯à;^;C

®e³±zçî¼Üîî§î³B²z¾¹©Ò¥îªºîÛ°Ê³B²z MIP ¶K¹îªèîîîC

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±zpwÅx|s^{ao}!Ûq³]©wÈ;j|©îiu½Ö¾ãÈ;v₁^¤\$²M³æ;C¿î¾Ü¹¹²M³æ¤¤^{ao}¤@Ó¶µ¥Ø±N·|±Ö°È³]©wÈ;Cn®M¥î³]©w-
È;A½D¿î¾Üiu½T©w;v©îiu®M¥îv«ð¶|s;C

®e³±zz±N¥Ø«e³]©wÈij¥]-Aju`ã¥L Direct3Djv⁴i,Üæ¶||ôððª³]©wÈi^Àx|s-°|Ûqiu½Ö¼ãÈiv;CðwÀx|sª³]©wÈ±N·|
·s¼W`i-Û¾Fª²M³æðW;C

|bSä`i`S©w Direct3D `CÀ,ª³i`î³]©wÈð§«á;A½D±N³]©wÈÀx|s-°|Ûq½Ö¾ãÈjC³o¼È±z´N¥i¥H|b±Ò°Ê`CÀ,ð§«e`³³t²Ö°A
Direct3DjA|ÓµL»ÝªÀ§O³]©w`CÓ¿i¶µjC

SR°£¥Ø««e|b²M³æ□□¿|©wª|Ùq³]©wÈ;C

±N©Ò¡³³J©wÈÁÙ¡Û"à¹w³JÈ¡C

Åã¥Ü¤@Ó©e³±z!Üq`ã¥L Direct3D ³©wÈª01î,Ü¤è¶||ô;C

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µù¡G ¥¡«O¯d¥í©óS÷½è¶K¹îÄx!s°îªªˆt²î°O¾DÁé³¡²¡®e¶q¡A~O®Ú¾Ú±z¹q,£²W!w,ËªªêÁé RAM ®e¶qˆÓpªª¹Cˆˆt²î RAM

¶V²¡jA±z¥¡¥H³¡©wªªÈˆN¶V²¡jC

!¹³¡©wÈ¶È®M¥í©ó PCI Åã¥Ü¾¹²¶¶±¥d¡j]©!¡b PCI ~Ú®e¹¼Ò!¡²U°ð!ªªª AGP Åã¥Ü¾¹²¶¶±¥d¡^¡C

čĩ¼Ü!¹čĩ¶µ¥¥HÃö³~««ª½!P`B¡C

@e³¹q,E¥ßSY±N½¼v¹³´yÃ,|bčÃ¹δ▯W¡A!ÓµL»Ýµ¥«ÝÃã¥Ü¾¼¹ao!P`B««ª½!^±½²°T,¹¡C³o·|`ĩ!i®Ø³t²vªa©óÃã¥Ü¾¼¹ao§ó·s²v¡A!ý~O¥ĩ¯à·|
²E¥!µøÃ±°Æ§@¥ĩ©M!j¹³¼¹µðªºÝÃD¡A±q!Ó°§C¾¼v¹³«~½è¡C

l¹¿i¶μ®e³±z`M©w|b`S©wªº D3D Å³¶¶μ{¶¶·i¶¶¶·Æ³B²zªºμ{«×;C

¶·Æ³B²z-Oª@ºØ¶¶¶©ó¶¶¶¶Æ¶³®É·|¶X²{¶b 3D º«¶óÃä½toWªºi¶¶±èjv®ÃªGªSSP³N;C±z¶¶¶H|bS¹¶pÃó³-¶·Æ³B²z»P¿i³¼Ü¶¶¶¶©ó`S©wÅ³¶¶μ{¶¶ªº¶j¼/E¶¶qªS¶¶¶¶¶æ¿i³¼Ü;C

$\cdot \ddot{\text{I}}\text{f}^{\text{I}}_1 \cdot \text{I}^{\text{I}} \mu \text{f}^{\text{I}} \text{H}^{\text{I}} \text{I}^{\text{I}} \cdots \cdot \zeta \alpha \varepsilon^{a_1/2} \pm \mu \alpha \check{\alpha}' \odot \text{F} \cdot \text{Ae}^3 \text{B}^2 \text{Z}^{a_0} \dot{\text{A}}^3 \text{Y}^{\text{I}} \mu(\text{I})_{\pm} \text{I}^{\circ} \tilde{o}^{\text{I}} \text{ae} \text{F} \cdot \text{Ae}^3 \text{B}^2 \text{Z}_i \text{C}$

$$\frac{1}{2}D^{a^*} \cdot N_j A \neg Y^* \mathbb{C} \nabla \frac{1}{4} \odot \hat{U} \frac{1}{2} T \ll \ddot{u} \nabla X \nabla i \partial \acute{a}^* \odot \nabla \cdot \mathbb{A} \mathbb{E}^3 B^2 z^{a0} \mathbb{A}^3 \nabla \{\mu \nabla \{\downarrow \nabla i^* \neg \grave{a} \mu L^{ak} \nabla \zeta \frac{1}{2} T \mathbb{A} \tilde{a} \nabla \mathbb{J} \frac{1}{4} v^{43} \downarrow \mathbb{A} \odot \hat{I} \nabla i^* \neg \acute{a}^* y \tilde{A}, \square$$

£3W«h^{ao1}/₄v¹³iA_jl¹iA¹/₂Đpρβ³ŸŸl¹¿ŸŸμiC|p^aG±z|b³ŸŸl¹Đpă³©¥.Æ³B²z^{ao1}CÀ,©ÎÀ³ŸŸμ{|i®É¹J¹ÎĂăŸÜ°ÝĂĐiA¹/₂ĐĂö³¬¹¿ŸŸμiC

!¹¿í¶µ®e³±z`ī CPU !b¹ĩšĩ¹±ù¶¶}©|³B²z±§«e¥ĩ¥H·Ç³Æªº¹j®Ø¼⁄₄Æij!|b««ª½₂|P`BÃö³~®É;^iC

!b~Y`Ç±iªp±U;A®e³ªº¹w¥ýµû!â¹ĩ®Ø¼⁄₄Æ¶VªªiA;^À³·n±i;B¹CÀ,¥x©ĬÁă½₂Lµ¥,Ě,mªºiuzé±J©µ½₂wiv´N¶V±[iC

!pªG±z!bª±¹CÀ,®É;A³s±µ!Ü±zªº¹q,£±š¿é±J,Ě,m!³©úĂă!^À³©µ½₂wªº²{¶H;A½₂Đ´î±p!¹È;C

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GL_KTX_buffer_region: C
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@e³\|b GL_KTX_buffer_region ©μ'ù¥À¯à±Ò°Ê®É·'¥|¥»¾⁄⁄¼v¹³°O¾⁄⁄DÅé;C

|ý-O;A|pªG¥í¥îª°¥»¾⁄⁄¼v¹³°O¾⁄⁄DÅéªÖ©ó 8MB;A«hμLªk±Ò°ÊÂù¥±©μ'ù¥À¯àªä´©;C

|pªGÃö³-ªFªWz;u±Ò°Ê½w½Ä°î©μ'ù¥À¯à;v¿'î|μ;A¹¹³]©w±NμLªk\$@¥î;C

@e³sÖ3t½u©Ê MIP ¶K1½u©Ê¹LÂo¥¹±ñN¥i¥H'£°aÄ³¥µ¶¶i¹aoÖÄ`à¡A¡y-O«o-|°SCa@`Ç½v¹³«-½è¡C
 ¡b¶j¡h¼4E±¡²pU¡A¼v¹³«-½è¹ao°SC`Ä°E©ÚÄäA¡J¶¹±z¥¹-a.Qn³z¹L±o°Ê¹¥¹-a`ÔÄo°úS°¹ao°Ä`à¡C

!²¿î¶@e³\ OpenGL ·ÿŒ«DS;½è¹LÂo¥H´£ª¼v¹³«~½è;C

¿İ¼Ü¹¿İ¶µ¶i¶HÃö³¬ÅX°Êµ{₁¹i¬Y¬Ç CPU ¶¶i¶¹º¹/₄W±j«¬«ü¶Oªº¶ä´©₁C

¬Y¬Ç CPU ¶ä´©ªp¶[ªº 3D «ü¶OjA³o¬Ç«ü¶O¶i¶H»²§U NVIDIA ¹İ§İ³B²Z³/₄¹¬Å´Eªª 3D ¹CA,©İÅ³¶İµ{₁¹ªº@Ä¬àjC₁¹¿İ¶µ@e³\ ±z!bÅX°Êµ{₁₁µ¶Ãö³¬¹i³o¬Çªp¶[ªº 3D «ü¶Oªº¶ä´©₁C³o!b¶¶i!æ@Ä¬àªĥ,û©İ¬G»Ü±Æ°E®Ê«Ü¹³¶İjC

30"Ç¿i¶µ¶i©ó±±i OpenGL ÅX°Êµ¶i|a0¥b¿Ä1ô¥Æ3B2zC¥Æ3B2z-O¶@0Ø¶i©óiµe±¶a0a«¥6Ãä½i¥ÆiA¥H'i¶Öi3®É-|¥X2fao¿÷¾a-iu¶i¥±èv|®ÄG¶§§B3NjC1.5 x 1.5 ¶èi|'E'Ñ3i|®Ä-a0¥Æ3B2zA!Ö 2 x 2 ¶èi|'E'Ñ3i|a0a1/√13-1½èC

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!¹¿ï¶µ¶i¶HSPÂ_¬OS_À³,Ó|b OpenGL À³¶|µ{|i¶¶iA«ö·Ó¹w³]È¬¶|¬S©w|â±m²`«×ªº§÷½è¶¶K¹|¶iC
¬¶¶|@â±|â±m²`«×±N©|²×¬¶¶| Windows @â±¶Ø«e¶¿|b°õ|æªº|â±m²`«×ªº§÷½è¶¶K¹|¶iC
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·Æ'Î±±~ï®e³|±z¬°¿ï©w^{ao1}â±mÀW¹D¹½Õ³¼ă«G«×¡B¹ïañ«×©Î|÷°¿È¿C

|â±m,É¥¿±±ˆŸí“ó§U±z!bÂã¥Ü,Ë,mªW½Ö,Ë“Ó·½¼√¹³»P¨ä¿é¥Xª§¶¡ªº¥ú«×®t²§¡C|¹¥

$$\sqrt[3]{a}b^{-1}\sqrt[4]{1/4}v^{133}B^2z\tilde{A}^3\sqrt[5]{\mu}\{j\}|\otimes\acute{E}\ll D\pm\sqrt[3]{3}\sqrt[5]{j}|A\neq\sqrt[5]{y}\neq H|b\pm z^{a0}\tilde{A}\tilde{a}\neq\tilde{U}^{3/4}1\sigma W\tilde{A}\tilde{a}\neq\tilde{U}\acute{S}0^0\tilde{e}_{1/2}T|\hat{a}\pm m^{a0l/4}v^{13}|j|p-\hat{U}\sigma\sqrt[5]{i}\wedge\sqrt[5]{c}$$
$$\begin{aligned} & \left| \text{O}\Psi\text{B}_i\text{A}\langle\text{U}\rangle\right| \text{H}^{\frac{1}{2}} \text{3D} \Psi\left\{ \left(\Psi^{\frac{1}{2}} \text{a}^{\text{a-1}} \text{C}\bar{\text{A}}_i \mu \pm \text{e}^{\frac{1}{2}} \text{E} \cdot \text{U} \cdot \text{t} \right) \text{C} \right\} \text{b} \text{O}^{\frac{1}{2}} \bar{\text{A}} \text{W}^{\text{D} \text{a} \text{a} \frac{1}{2}} \text{W} \Psi \left[-\text{U} \right] \text{P}^{\text{a} \text{O}} \langle \text{G} \times \text{x} \text{O} \text{M}_i \rangle \text{O} \left\{ \bar{\text{I}}_i \cdot \Psi^{\frac{1}{2}} \text{O} \right\} \bar{\text{E}} \pm \text{N} \Psi \left\{ \Psi^{\frac{1}{2}} \text{H}^{\frac{1}{2}} \text{O} \right\} \bar{\text{C}}^1 \text{C}\bar{\text{A}}_i \mu \pm \text{S} \bar{\text{O}} \langle \text{G} \text{a} \text{O} \rangle \cdot \bar{\text{C}}_i \text{A}^{\text{a} \text{O} \frac{1}{2}} \bar{\text{E}} \pm \text{Z} \text{N} \Psi \left\{ \text{H} \bar{\text{S}} \bar{\text{O}}^2 \text{M} \cdot \text{j} - \bar{\text{Y}}^{\frac{1}{2}} \bar{\text{E}}^1 \text{C}\bar{\text{A}}_i \mu \pm \text{j} \text{C} \right\} \end{aligned}$$

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±N NVIDIA QuickTweak ¼ÏÜ·s¼4W!Ü Windows ¢u\$@!CjC

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Äö³¬¹¹¹ÿ, Üðè¶ô·ÄÄx¡s©ÒS@ªºÄÜSó¡A¥H«K±z¡b¡u"ä¥Lªª@e¡v¹ÿ, Üðè¶¶ðç¡³⁄₄Ü¡u½T©w¡v©Î¡u©M¥Î¡v©É¡A"ï³o"Ç³¡©wÈ¥Í©Ä¡C

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¿i%4Ü!¹¿i¶µ¥iÂý±z³z¹L«ö□U Ctrl/Alt/Shift º~Y Ç²Ö|X»P¨ï¥f·Æ¹«ºu½ü ÓšÖ³tÂÜšóÁY©ñµø¹jª©ñµjÂã¥Üµ¥ Å¡C

¿i%4ÜÀ³«öU^{ao} Ctrl|BAlt ðí Shift ²Ö|X#H"i¥í·Æ¹«ºu½ü"ÓÄÜsóÁY©ñμø¹í^{ao}©ñσjÅã#Üμ¥~Å¡C

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Quincunx Antialiasing ¥Í'EÑ,ú°Cªº 4x AA ¼Ò|¡¤§«~½è¡A!Ó"ä®Ä-à»P,û\$Öªº 2x AA ¼Ò|~Û®¼L'X¡C

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