

MPlayer – The Movie Player for LINUX

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MPlayer – The Movie Player for LINUX

<http://www.mplayerhq.hu>

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F. ëÁË ÐÒÈÓÙÌÁÔØ ÐÁÔΠÈ

ëÁË ΠÈÔÁÔØ ÛÔÕ ÄÌËÕÌÁÌÔÁÃÈÁ

ãÓÌÈ ÷Ù ÈÌÓÓÁÌÌÈÒÔÁÔÁ × ÐÁÒ×ÛÈ ÓÁÚ, ÐÒÌΠÈÔÁËÈÔÁ ×ÓÁ ÁÌ ÈÌÌÁÁ ÓÁËËËÈ ðÓÓÁÌÌ×ÈÁ € ÐÒÌÓÌÁÔØÈ×ÁËÈÔÁ ÓÓÛÌÈÈ, ÈÌÓÌÓÛÁ ÷Ù ÌÁÌÁÐÔØÈÔÁ. ãÓÌÈ Ô ÷ÁÓ ×ÓÁ ÁÝÈ ÌÓÓÁÌÈÓØ ×ÌÐÒÌÓÛ, ×ÁÒÌÈÔÁÓØ È ÷ÇÌÁ×ÌÁÌÈÁ È ÐÌÈÝÈÔÁ ÓÁÌ ÌÁ ÛÔÕ ÔÁÌÌ, ÐÒÌΠÈÔÁ ÆAQ, ÈÌÈ ÐÌÐÛÔÁËÈÔÁÓØ ÐÒÌ'grep'ÐÈÔØ ÆÁÈÌÛ. ÌÁ ÁÌÌØÛÔÁ ΠÁÓÔØ ×ÌÐÒÌÓÌ× ÷Ù ÌÁËËÔÁ ÌÔ×ÁÔÛ ÚÁÁÓØ, Á ÌÓÓÁÌØÌÛÁ, ÌÁ×ÁÒÌÌÁ, ÔÔÁ ÓÐÒÁÛÈ×ÁÌÈÓØ × ÌÁÛÈÈ ÒÁÓÓÛÌÈÁËÈ. ðÒÌ×ÁÔØÔÁ ÐÌ ÁÓÈÈ×ÁÌ, ÇÁÁ ÌÌÌÌ ÌÁÈÓÈ ÌÌÇÌ ÁÁÌÌÈ ÈÌÆÌÓÌÁÁËÈ.

çÌÁ×Á 1. ÷×ÁÄÁÌÈÁ

øÌÁÁÒÖÁÌÈÁ

1.1. ÈÓÔÌØÈÑ

1.2. ðÓÓÁÌÌ×ÈÁ

- 1.2.1. ðÒÁÁÔÁÌÛÁ ÐÒÌÇÒÁÌÌÛ:
- 1.2.2. ëÌÁÁËÈ:
- 1.2.3. ÷ÈÁÁÌ ÈÁÔÔÛ
 - 1.2.3.1. YUV ÈÁÔÔÛ
 - 1.2.3.2. ÌÁ-YUV ÈÁÔÔÛ
 - 1.2.3.3. Cirrus Logic ÈÁÔÔÛ
- 1.2.4. ú×ÕÈÌ×ÛÁ ÈÁÔÔÛ:
- 1.2.5. ÷ÌÛÌÌØÌÓÓÈ:

÷ÁÖÏ

VBR MP3 ÁÖÄÉÍ ÍÁ ×ÓÅÇÄÄ ÈÏÖÏÛÏ ÐÒÏÉÇÒÛ×ÄÄÓÓÑ ÐÌÄÄÒÁÍÉ Windows!

- PCM ÁÖÄÉÍ
- ÈÏÐÉÒÏ×ÁÍÉÄ ÐÏÖÏÏ×
- ×ÈÏÄÍÄÑ A/V ÓÉÏÈÒÏÏÉÚÁÄÈÑ (ÏÓÏÏ×ÁÍÄ ÍÁ PTS, ÏÏÖÅ ÆÙÒØ ÏÖÈÌÄÐÁÍÁ Ó ÐÏÏÏÝØÀ ÈÌÄÐÁ -mc 0)
- ÈÏÒÒÄÈÄÈÑ FPS[ÈÄÄÒÏ×/ÓÄÈ] ÈÌÄÐÏ -ofps (ÐÏÏÁÛÏ ÐÒÈ ÈÏÄÈÒÏ×ÁÍÉÉ 29.97fps VOB × 24fps AVI)
- ÉÓÐÏØÛÏ×ÁÍÉÄ ÍÁÛÄÈ ÏÐÁÏØ ÏÏÏÏÈ ÓÉÓÓÁÍÛ ÐÌÄÇÉÏÏ× (ÏÄÒÁÛÁÍÉÄ[crop], ÒÁÓÛÈÒÁÍÉÄ[expand], ÏÒÒÁÒÁÍÉÄ[flip], ÐÏÓÏ-ÏÄÒÁÄÏÈÄ[postprocess], ÐÏ×ÏÏÏ[rotate], ÍÁÓÛÒÁÄÈÒÏ×ÁÍÉÄ[scale], rgb/yuv ÐÒÄÏÄÒÁÛÏ×ÁÍÉÈÑ)
- ÏÏÖÅ ÈÏÄÈÒÏ×ÁÒØ DVD/VOBsub é ÒÄÈÓÏÏ×ÛÄ ÓÒÄÈÉÒÛ × ÏÄÈÍ ×ÙÈÏÄÏÈ ÆÄÈÏ
- ÏÏÖÅ ÈÛ×ÏÄÈÄÒØ DVD ÓÒÄÈÉÒÛ × Vobsub ÆÏÏÁÒ

ðÌÄÍÈÒÒÁÍÛÄ ×ÏÏÏÏÏÓÈ

- ÅÝε ÆÏØÛÄÈ ÈÏÈÐÁÓÓ×Ï ÄÏÓÓØÐÏÛÈ ÆÏÏÁÒÏ× ÈÏÄÈÒÏ×ÁÍÉÈ.ÄÄÈÏÄÈÒÏ×ÁÍÉÈ (ÏÏÛÄÄÍÉÄ VOB ÆÄÈÏ× Ó DivX4/Indeo5/VIVO ÐÏÏÈÄÍÉ :)

MPlayer É MEncoder ÏÏÇÒ ÒÁÓÐÒÏÓÒÄÏÑÒØÑ × ÒÏÏ×ÄÒÓÓ×ÈÉ Ó GNU General Public License Version 2.

1.1. éÓÏÏÈÑ

ÛÏÏ ÍÄÐÁÏÏÓØ ÏÈÏÏ ÇÏÄÄ ÍÁÛÄÄ... ñ ÐÏÐÒÏÄÏ×ÁÏ ÏÏÏÖÅÓÓ×Ï ÐÌÄÄÒÏ× ÐÏÄ linux (mtv, xmps, dvdview, livid/oms, videolan, xine , xanim, avifile, xmpeg) ÏÏ Ò ÏÈÈ Ò ×ÓÄÈ ÆÙÏÈ ÈÄÈÈÄ-ÏÈÄÒÄØ ÐÒÏÄÏÄÏÛ. ðÏ ÆÏÏØÛÄÈ ÐÁÓÓÈ ÒÏ ÒÐÄÄÈÄÏÏÛÏÏÈ ÆÄÈÏÄÍÉ ÈÏÈ ÁÓÄÈÍ.×ÈÄÄÏ ÓÉÏÈÒÏÏÉÚÁÄÈÄÈ. ÆÏÏØÛÈÏÓÓ×Ï ÈÛ ÏÈÈ ÆÙÏÈ ÍÄ ÒÐÏÏÁÏÏ ÐÒÏÈÇÒÛ×ÁÒØ ÈÄÈ MPEG1, MPEG2, ÓÄÈ É AVI (DivX) ÆÄÈÏÛ. ð ÏÏÇÈÈ ÐÌÄÄÒÏ× ÆÙÏÈ ÐÒÏÄÏÄÏÛ Ó ÈÄÐÁÓÓ×ÏÏ ÈÛÏÄÒÁÓÄÏÈÑ ÈÏÈ ÒÏ ÒÈÏÏÏÓØÀ. ðÏÛÏÏÏ Ñ ÒÄÛÈÏ ÏÄÐÈÓÁÒØ/ÏÏÄÈÈÄÈÒÏ×ÁÒØ Ò×ÏÈ...

A'rpi, 2001

- **mpg12play v0.1–v0.3:** Sep 22–25, 2000

ðÄÒ×ÄÑ ÐÏÐÛÒÈÄ, ÒÏÛÄÄ×ÁÍÁÓØ ÐÏÐÁÓÁ! éÓÐÏØÛÏ×ÁÍÁÓØ libmpeg3 Ó www.heroinewarrior.com ÄÏ ×ÄÒÓÈÈ 0.3, ÏÏ ÓÄÍ ÆÙÏÈ ÐÒÏÄÏÄÏÛ Ó ÈÄÐÁÓÓ×ÏÏ ÈÛÏÄÒÁÓÄÏÈÑ É ÓÈÏÏÏÓØÀ.

- **mpg12play v0.5–v0.87:** Sep 28–Oct 20, 2000

Mpeg ÈÏÄÄÈ ÛÄÍÄÏÈÍ ÍÄ DVDview ÏÏ Dirk Farin, ÛÏÏ ÆÙÏÈ ÐÒÄ×ÏÓÈÏÄÏÛÈ ÈÏÄ, ÏÏ ÏÏ ÆÙÏÈ ÍÄÄÏÄÏÛÈ È ÆÙÏÈ ÏÄÐÈÓÁÍ ÍÄ C++ (A'rpi ÍÄÍÄ×ÈÄÈÒ C++!!!)

- **mpg12play v0.9–v0.95pre5:** Oct 21–Nov 2, 2000

Mpeg ÈÏÄÄÈ ÆÙÏÈ libmpeg2 (mpeg2dec) ÏÏ Aaron Holtzman É Michel Lespinasse. ÛÏÏ ÐÒÄ×ÏÓÈÏÄÏÛÈ, ÏÐÁÏØ ÈÏÏÏÛÏ ÏÐÓÈÍÈÛÈÒÏ×ÁÏÏÛÈ C ÈÏÄ Ó ÒÏ×ÄÒÛÄÏÏÛÏ ÈÄÐÁÓÓ×ÏÏ ÈÛÏÄÒÁÓÄÏÈÑ É 100% ÒÏ×ÏÁÓÓÈÏÏÓØÀ Ó MPEG ÓÒÄÏÄÄÒÏÏ.

- **MPlayer v0.3–v0.9:** Nov 18–Dec 4, 2000

είον ύοί έ ίά οόάάείθιέ όάιέύ, ñ έίρõ ðθίίñιõõø άçí, ðιόέπθέõ ύοί ðάõ×άν ðõά ×άðõέñ όάðέέ 1.0 MPlayer'ά έ πía ðõάάίáύίáρáίá ðίπρø áñøύέ έίðáίέέ ðí ίõίí×õ ίύέáíέ. ύοί ίçòííúέ úάç ×ðáðέá!

- **MPlayer 1.0** άάõά άýε ίά έú×άóõίá

1.2. ðõõáñí×έá

÷ εάέìá README ×ù όíπõáõá ίάέõέ έíðìõέíá ðõέí×íáóõ×í ðí õõõáñí×έá. ðíõáìõέõõá, όίáρáίá ðòíρõέõá άçí, á úáõáí ×áðíέõáóø έ ίõõá×úέίõñ ίáñóíúíέ ááõáíñí.

÷ ύõíέ çíá×á ñ ðíõõáðááóø ðòí×áóõέ ÷áó ρáðáú ðòíááóó έíðέíñáέέ έ έíλέçõõááέέ MPlayer'ά. ύοί ίá ðòíõõí, ïí ύοί ίá ίáñúáõáìøíí áõááõ όíπõí. áõíέ ÷ù úáíáõέõá έáέέá–õí ίõέííáíέñ, ίõ õíçí, ρõí ñ ίáβñóíñá, ðíõáìõέõõá, ðíέýέõá × ύõíέ áñέõíáíõááέέ έ ÷ù ίáέáεõá ίõ×áõ. áõíέ ÷ù õ×έáέõá óóúíέõ, ðíõáìõέõõá, ðòíõíááõέõá ðí ίáέ έ ×íέíáõáìøíí ðòíρέõáέõá áε όíááðõέííá. ύοί úáέέíεõ ίáέíõíõíá ×õáíñ, ïí ύοί äæóð-έðáìøñ õíçí óõíέõ

÷άí ίõõíá όí×ðáíáññáñ όέõõáíá. ðíá Linux'íí ðáέííáíáõáõõñ ñáõá 2.4.x.

1.2.1. ðõááõáíúá ðòíçòáííú:

- **binutils** – ðáέííáíáõáíáñ ×áðõέñ – ύοί 2.11.x . ύõá ðòíçòáííá ίõ×áõõõ×áñíá úá çáíáõááέá MMX/3DNOW!/έ õ. ð. έíõõðõέáέέ, έ ðíüõííõ íρáíø ×áõíá.
- **gcc** – ðáέííáíáõáíúá ×áðõέέ: 2.95.3 (íπõáõ áùõø 2.95.4) έ 3.2+. íέíçáá ίá έõðñúõõέõá 2.96 έíέ 3.0.x! íέ çáíáõέõõáõ ίúέáíρíúέ έíá áññ MPlayer'á. áõíέ ÷ù òáúέõá έúíáíέõø gcc ó ×áðõέέ 2.96, õí ίá ðòέíέáέõá òáúáíέá × ίáðõá×íáíέέ 3.x õíøέí ðíõέπθέõ ïí ïí×áá. ðáííέá òáíέúú 3.x όíááðõáíέ άýε áñøúá ίúέáíέ, ρáí 2.96. ðáέ ρõí õõá×øõá 2.95.x (ðíõõá×øõá óáέõá áññá óõáðõá libstdc++, ύοί ïíõáõ ðíõðááí×áõøñ áññ áðõçέέ ðòíçòáíí) έíέ ×ñáýá íέρáçí ίá ίáíñέõá (ïí × ύõíí õìõρáá ðòέçíõí×øõáóø έ ðòíáíáíáí ×í ×ðáíñ ðááíõù). áõíέ ÷ù òáúέõá έõðñúõí×áõø 3.x, ðíðòíáõέõá έõðñúõí×áõø ðíõíááíáà ×áðõέá, × óáííέέ òáíέúáέ áúíέ òáúíέρíúá ίúέáέέ/ðòíáíáíú, óáέ ρõí έõðñúõõέõá ίέíέíõí 3.1, ύοί ðòíõáóõέõí×áñí έ ðááíõááõ. áññ ááõáìøííέ έíέíõíááέέ í ááçáέ × gcc 2.96 (έíõíõùá ×õá άýε íá έõððá×íáíú, á "íáíéääíù"[WORKED AROUND] × MPlayer'á!), όí. gcc 2.96 έ FAQ.

- **XFree86** – ðáέííáíáõáíáñ ×áðõέñ – ύοί ×óáçáá ïí×áέúáñ (4.3). íáùρíí, ×õá ύõíçí έíõñõ, ðíõέπθέõ ίáρέíáñ ó 4.0.2, XFree86 όíááðõáõ XVideo òáóúέõáíέá (έííçáá õðííέíááñí, έáέ Xv) έíõíõíá òõááõáõõñ áññ ×έìáρáíέñ áððáõáõííέ YUV áέõáíáõááέέ (áùõõõùέ ×ù×íá έúíáõáõáíέέ ίá ×έááíέáõõáέ, έíõíõùá ύοί ðíáááðõέ×ááõ.

áõáøõá õ×áðáíú, ρõí ðáέáõ òáúõááíõέέ óáέõá õõõáñí×íáí, έíáρá ύοί ίá áõááõ òááíõáõø.

áññ ίáέíõíõùέ ×έááí έáõõ, ×áí ίá ίõõáí XFree86. εέ õðέõíέ όí. íέõá.

- **make** – ðáέííáíáõáíáñ ×áðõέñ – ύοί ×óáçáá ïí×áέúáñ (ίέíέíõí 3.79.x). íáùρíí ύοί ίá íρáíø ×áõíí.
- **SDL** – ύοί ίá ίáñúáõáìøíí, ïí ïíõáõ ðíπρø × ίáέíõíõùέ õìõρáñέ (ðííέéá áõáέí, ×έááí έáõõù, έíõíõùá óõõáñí ίáçõáõ ó xv áõáέ×áõíí). ÷óáçáá έõðñúõõέõá ïí×áέúõá ×áðõέá (ίáρέíáñ ó 1.2.x).

ΥΟΙÇÌ ÁÓÔØ ÄÄËÏÄÀÒ Ó ÌÔËÒÙÔÙÏË ËÓËÏÄÏËËÁÏË.

- **QuickTime** ËÏÄÄËË: ÌÁ x86 ΔÏÄÔÆÏÒÏÄË ÙÔË ËÏÄÄËË ÏÇÔÔ ËÓΔÏÏÙÏ×ÄÔØÏÑ ÄÏÑ ÄÄËÏÄËÒÏ×ÄÏËÑ RPZA, Ë ΔÒÏΠËË QuickTime'Ï×ÔËËË ×ËÄÄÏ, Ë QDesign ÄÔÄËÏ ΔÏÔÏËÏ×, ËÏÔÔÒËËËËË ΔÏ ÔÔÔÄÏÏ×ËÄ ÏÇÔÔ ÄÙÔØ ÌÄËÄÄÏÙ × ÔÄËÄËË Sorenson ×ËÄÄÏ ËÏÄÄË.
- **DivX4/DivX5**: ËÏËÏÒÏÄÄËÑ ÌÄ ÙÔÏÏ ËÏÄÄËÄ ÌÄÔΔÏÏÏÄÏÄ × ÔÄËÄËË DivX4/DivX5. ÷ÄÏ, ×ÄÏÏÑÏÏ, ÌÄ ΔÏÔÔÄÄÔÄÔÏÑ ÙÔÏÔ ËÏÄÄË, ΔÏÔËÏÏËÔ **libavcodec** (ÓÏ. ×ÙÙÄ) ÇÏÔÄÙÄÏ ÄÙÔÔÔÄÄ Ë ×ÙÙÄ ËÄΠÄÔÔ×ÏÏ, ΠÄÏ ÙÔÏÔ ËÏÄÄË, ËÄË ÄÏÑ ËÏÄËÒÏ×ÄÏËÑ, ÔÄË Ë ÄÏÑ ÄÄËÏÄËÒÏ×ÄÏËÑ. ïÒÏÄÄÏÏÔË:
 - ◆ ËÏÄËÒÏ×ÄÏËÄ × 1 ËÏË 2 ΔÒÏËÏÄÄ MEncoder'Ï
 - ◆ ÏÏÄÔ ΔÒÏËÇÒÙ×ÄÔØ ÔÔÄÔÙÄ **DivX3** ÆËÏÏÏÙ ÇÏÔÄÙÄÏ ÄÙÔÔÔÄÄ, ΠÄÏ Win32 DLL, Ï ÌÄÄÏÄÏÄÄ, ΠÄÏ **libavcodec**!
 - ◆ Ô ÌÄÇÏ ÙÄËÒÙÔÙÄ ËÓËÏÄÏËËË, Ë ÄÏÔÔÔΔÏÄ ÔÏÏËÏ x86 ×ÄÔÔËÑ.
- **XviD**: ËÏÄËÒËÄÝÄÑ ÄÏÔÔÄÔÏÄÔË×Ä ÄÏÑ Divx4Linux Ó ÌÔËÒÙÔÙÏË ËÓËÏÄÏÏÏËÏÏ. ïÒÏÄÄÏÏÔË:
 - ◆ ËÏÄËÒÏ×ÄÏËÄ × 1 ËÏË 2 ΔÒÏËÏÄÄ MEncoder'Ï
 - ◆ ÄÇÏ ËÓËÏÄÏÏË ËÏÄ ÌÔËÒÙÔ, ΔÏÏÔÏÏÔ ÏÏ ÏÏÇÏΔÏÄÔÆÏÒÏÄÏÄÏ.
 - ◆ Ï ÇÄÄ-ÔÏ ÔÄÙÄ × 2 ÄÙÔÔÔÄÄ, ΠÄÏ DivX4 ΔÒË ËÏÄËÒÏ×ÄÏËË, ΔÒË ΔÒËÏÄÔÏÏ ÔÄËÏÏ ÔÄ ËÄΠÄÔÔ×Ï
- **XAnim**'Ï×ÔËËÄ ËÏÄÄËË – ÏÏΠÏËÄ (ΔÏÏÏÏË ÙËÒÄÏ, ÄΔΔÄÔÄÔÏÏÄ YUV ÌÄÔÙÔÄÄËÒÏ×ÄÏËÄ) ÄÏÑ ÄÄËÏÄËÒÏ×ÄÏËÑ **3ivx**, **Indeo 3/4/5** ÆËÏÏÏ×, Ë ÌÄËÏÏÏÏË ÒÔÄÔËË ÆÏÒÏÄÏÏ×. Ë ÏË ÏÏÇÏΔÏÄÔÆÏÒÏÄÏÏÏÄ, ΔÏÏÔÏÏÔ ÙÔÏ ÄÄËÏÔÔ×ÄÏÏÏË ÒΔÏÏÄ ΔÒÏËÇÒÙ×ÄÔØ **Indeo ÌÄ ÌÄ-x86** ΔÏÄÔÆÏÒÏÄË (ÏÔ, ËÒÏÏÄ ËÄË ËÓΔÏÏÙÏ×ÄÔØ **Xanim**:). ÏÏ, Ë ΔÒËÏÄÔÔ, **Cinepak** ÆËÏÏÏÙ ÏÏΠÏÄ ΔÒÏËÇÒÙ×ÄÄÔÏÑ Ó ÏÔËÇËÏÄÏÏÏÏÏÏ **MPlayer**'Ï×ÔËËË ÄÄËÏÄÔÏÏ!
- ÄÏÑ ÄÄËÏÄËÒÏ×ÄÏËÑ **Ogg Vorbis** ÄÔÄËÏ, ÷ÄÏ ÏÔÏÏ ΔÒÄ×ËÏÏÏ ÔÔÔÄÏÏ×ËÔØ **libvorbis**. ËÓΔÏÏÏÏËÔÄ ΔÏ ×ÏÏÏÏÏÔË **deb/rpm** ΔÄËÄÔÙ, ËÏË ÔËÏÏËËËÔËÔÄ ËÙ ËÓËÏÄÏËËÏ× (ÙÔÏ ÄÔÄÏÏÏÏ ÌÄÏ×ÏÑÄÏÏË ÄÔËË× Ó **Vorbis CVS**).
- **MPlayer** ÏÏÄÔ ËÓΔÏÏÙÏ×ÄÔØ ÄËÄÏËÏÄËË ËÙ **RealPlayer 8** ËÏË **RealONE**, ΠÔÏÄÙ ΔÒÏËÇÒÙ×ÄÔØ ÆÄËÏÏ Ó **RealVideo 2.0 – 4.0** ×ËÄÄÏ, Ë **Sipro/Cook** ÄÔÄËÏ. ÓÏ. ÔÄËÄËÄ RealMedia ÆÄËÏÏ ÄÏÑ ËÏÔÔÔËËÄËË ΔÏ ÔÔÔÄÏÏ×ËÄ Ë ÄÏΔÏÏËÔÄÏÏËË ËÏËÏÄÏÄËË.

1.2.3. ÷ËÄÄÏ ËÄÔÔÙ

÷ ÄÄÏÏ, ÓÔÝÄÔÔ×ÔÄÔ Ä×Ä ÔËΔÄ ×ËÄÄÏ ËÄÔÔ. δÄÔ×ÏË ÔËΔ (ÏÏ×ÄËÏËÄ ËÄÔÔÙ) ΔÏÄÄÔËË×ÄÔ ÄΔΔÄÔÄÔÏÏÄ ÌÄÔÙÔÄÄËÒÏ×ÄÏËÄ Ë YUV ÄËÔÄÏÄÔÄÄËÄ, ÄÔÇÇÄÄ ËÄÔÔÙ – ÌÄÔ.

1.2.3.1. YUV ËÄÔÔÙ

ÏËË ÏÇÔÔ ΔÏËÄÙÙ×ÄÔØ Ë ÌÄÔÙÔÄÄËÒÏ×ÄÔØ ËÏÏÄÔÄÔÄËÄ ÄÏ ÌÄÄÏÇÏ ÔÄÙÏÄÔÄ, ΔÏÏÄÝÄÄÝÄÇÏÑ × ËË ΔÄÏÑÔØ, Ó ÌÄÏËË ÙÄÇÔÔÏËËË CPU (ÄÄÔÄ ΔÒË ÌÄÔÙÔÄÄËÒÏ×ÄÏËË), ΔÏÏÔÏÏÔ ΔÏÏÏÏËÔÄÏÏË ΔÒÏÏÏÔÔ ÔÏΠÄÏ Ë ÄÙÔÔÔ.

- **Matrox G200/G400/G450/G550** ËÄÔÔÙ: ËÏÏÑ Vidix ÄÔÄË×ÄÔ Ë ÓÔÝÄÔÔ×ÔÄÔ, ×ÏÄÔÏÏ ÌÄÇÏ ÔÄËÏÄÏÄÔÄÔÏÑ ËÓΔÏÏÙÏ×ÄÔØ ÏÄÔÏÏ ÑÄÔÄ **mga_vid**, ΔÏÔËÏÏËÔ ÏÏ ÏÏΠÏÄ ÔÄÄÏÔÄÄÔ. δÏÔÄÏÏËÔÔÄ, ΔÒÏΠÔËÔÄ ÔÄËÄËÄ mga_vid Ï ÄÇÏ ÔÔÔÄÏÏ×ËÄ Ë ËÓΔÏÏÙÏ×ÄÏËË. ÷ÄÔÏ ΔÒÏÄÄÏÄÔØ ÙÔË ÏΔÄÔÄÄËË ÄÏ ËÏÏËÏÑÄËË **MPlayer**'Ä, ËÏÄΠÄ ΔÏÄÄÄÔËËÄ **mga_vid** ÌÄ ÄÔÄÄÔ ÔÏÄÔÄÏÄ. δÄËÔÄ ÏÄÔÄÔËÔÄ ×ÏËÏÄËÄ ÌÄ ÔÄËÄËÄÄ Matrox TV-xÙ×ÏÄ. **ÄÏËË** ÷Ù ÌÄ ËÓΔÏÏÙÔÄÔÄÄ **Linux**, ÷ÄÙÄ ÄÄËÏÔÔ×ÄÏÏÄÑ ×ÏÏÏÏÏÔË – ËÓΔÏÏÙÏ×ÄÔØ **VIDIX** ÄÔÄË×ÄÔ: ÓÏ. ÔÄËÄËÄ VIDIX.

- **3Dfx Voodoo3/Banshee** **ΕΑΘΟΥ**: ΠΕΟΑΕΟΑ ΟΑΕΑΕΑ tdxfb, ΡΟΙΑÙ ÐÏÏÐΕΟΘ ÙÏΑΠΕΟΑÏΘÏΑ ΟΟΕÏΟΑÏΕΑ. ÷ΑΟÏÏ ÐΟÏΑΑÏΑΟΘ ÙΟΕ ÏÐΑΟΑΑΕΕ ΑÏΕÏÏÐΕÏÑΑΕΕ MPlayer'Α, ΕÏΑΡΑ ÐÏΑΑΑΟΘΕΑ mga_vid ÏΑ ΑΘΑΑΟ ΟÏΑΟΑÏΑ. δΑΕΘΑ ΟÏ. ΟΑΕΑΕΑ 3dfx TV-xÙxÏΑ. αΟÏΕ ÷Ù ΕΟÐÏÏΘÛΟΑΟΑ Χ, ΕΟÐÏÏΘÛΟΕΘΑ **ÏÏÏÏÏÏ 4.2.0**, ÐÏΟΕÏÏΘΕΘ 3dfx Xv ΑΟΑΕ×ΑΟ ΑÙÏ ΟÏÏÏΑÏ × 4.1.0 Ε ΑÏÏΑΑ ΟΑÏÏΕΕ ×ΑΘΟΕΝΕ.
- **ATI** **ΕΑΘΟΥ**: ΟΟÝΑΟΟ×ΟΑΘ VIDIX ΑΟΑΕ×ΑΟ ΑÏÑ ΟÏΑΑΘΑÝΕΕ ΕΑΘΟ: **Radeon, Rage128, Mach64** (Rage XL/Mobility, Xpert98), δΑΕΘΑ ΟÏ. ΟΑΕΑΕΑ ATI ΕΑΘΟ × ΑÏΕΘÏΑÏΘΑΑΕΕ TV-xÙxÏΑΑ, ΡΟΙΑÙ ΟÛÏΑΘΘ, ÐÏΑΑΑΟΘΕ×ΑΑΘΟÑ ÏΕ TV-out ÷ΑÛΑΕ ΕΑΘΟΥ ÐÏΑ Linux/MPlayer.
- **S3** **ΕΑΘΟΥ**: Θ Savage Ε Virge/DX ΠΕÐÏ× ΑΟΘΘ ΑÐÐΑΟΑΟÏΑÑ ΑΕΟΑÏΑΘΑΑΕÑ. εΟÐÏÏΘÛΟΕΘΑ ÏΑΕΑÏÏΑΑ Ο×ΑΘΘΑ ×ΑΘΟΕΑ XFree86, ΟΘΑΘÛΑ ΑΟΑΕ×ΑΘΑ ΟÏΑΑΘΘΑΘ ÏÛΕΑΕΕ. ð Savage ΠΕÐÏ× ÐΟÏΑÏΑÏÛ Ο ×ÙxÏΑÏÏ YV12, ΟÏ. S3 Xv ΟΑΕΑΕΑ ΑÏÑ ÐÏΑΟÏΑÏÏΟΘΑΕ. ð ΑÏÏΑΑ ΟΘΑΘÛΕ Trio ΕΑΘΟ ÏΑΘ ΑÐÐΑΟΑΟÏÏΕ ÐÏΑΑΑΟΘΕΕ, ΕÏΕ ÏΑ ÏΑΑÏΑÏΑÑ.
- **nVidia** **ΕΑΘΟΥ**: ÏÏΘΑΘ ΑÙΘΘ, Α ÏÏΘΑΘ Ε ÏΑ ΑÙΘΘ ΕÏÏÏÛΕÏ ×ÙΑÏΘÏÏ ΑÏÑ ÐΟÏÏÏΘΘΑ ΑΕÏΘÏÏ×. αΟÏΕ Θ ÷ΑΘ ÏΑ GeForce2 (ΕÏΕ ΑÏÏΑΑ Ï×ΑÑ) ΕΑΘΘΑ, ΟÏ ÏΑÏ×ΑΘÏÑΘÏÏ, ΡΟÏ ÏΑ ΑΘΑΑΘ ΟΑΑÏΘΑΘΘ ΑΑÛ ÏÛΕΑÏÏ. ÷**ΘΘÏΑÏÏÛΑ nVidia ΑΟΑΕ×ΑΘΑ × XFree86 ÏΑ ÐÏΑΑΑΟΘΕ×ΑΑΘ YUV ΑΕΘΑÏΑΘΑΑΕΑ ÏΑ ×ΟΑΕ nVidia ΕΑΘΘΑΕ**. ÷ΑÏ ÏΑÏΑΕÏΑΕÏÏ ΟΕΑΡΑΘΘ ΑΘΑΕ×ΑΘÛ Ο ÛΑΕΘÛΘÛÏ ΕΟΕÏΑÏÛÏ ΕÏΑÏÏ Ο nVidia.com. οÏ. ΟΑΕΑΕΑ nVidia Xv ΑΟΑΕ×ΑΘΑ ΑÏÑ ÐÏΑΟÏΑÏÏΟΘΑΕ. δΑΕΘΑ ÐÏÏÏΘΘΕΘΑ ΟΑΕΑΕΑ nVidia TV-xÙΕÏΑ, ΑΟÏΕ ÷Ù ΕÏΘΕΘΑ ΕΟÐÏÏΘÛÏ×ΑΘΘ TV.
- **3DLabs GLINT R3** **Ε Permedia3**: ΟΟÝΑΟΟ×ΟΑΘ VIDIX ΑΟΑΕ×ΑΘ (pm3_vid). αÏÑ ÐÏΑΟÏΑÏÏΟΘΑΕ, ΟÏ. ΟΑΕΑΕΑ VIDIX.
- **αΘΘÇΕΑ** **ΕΑΘΟΥ**: ÏΑ ΘÐÏÏÑÏΘΑ ×ÙÛΑ?
 - ◆ ðÏÏ×ΑΘΘΘΑ, ÐÏΑΑΑΟΘΕ×ΑΑΘ ÏΕ XFree86 ΑΟΑΕ×ΑΘ (Ε ÷ΑÛΑ ΕΑΘΘΑ) ΑÐÐΑΟΑΟÏΘΑ ΑΕΘΑÏΑΘΑΑΕΑ. ÐÏΑΟÏΑÏÏΟΘΕ ΟÏ. × ΟΑΕΑΕΕ Xv.
 - ◆ αΟÏΕ ÏΑΘ, ΟÏ ×ÏÛÏÏÏΘΘΕ ÷ΑÛΑΕ ×ΕΑΑÏΕΑΘΘÛ ÏΑ ÐÏΑΑΑΟΘΕ×ΑΑΘΟÑ ÐÏΑ ÷ΑÛΑΕ ÏÐΑΟΑΑΕÏÏÏÏΕ ΟΕΘΘΑÏÏΕ :(αΟÏΕ ΑÐÐΑΟΑΟÏΑÑ ΑΕΘΑÏΑΘΑΑΕÑ ΘΑΑÏΘΑΑΘ ÐÏΑ Windows, ÛΘÏ ÏΑ ÛÏΑΠΕΘ, ΡΟÏ ÏΑ ΑΘΑΑΘ ΟΑΑÏΘΑΘΘ ÐÏΑ Linux ΕÏΕ ΕÏÏΕ ÏÐΑΘΑΑΕÏÏÏÏΕ ΟΕΘΘΑÏÏΕ: ÛΘÏ ÛΑ×ΕΘΕΘ ÏΘ ΑΟΑΕ×ΑΘΑ. αÏÏΘÛΕÏΘ×Ï ÐΟÏÏÛ×ÏΑΕΘΑÏÏΕ ÏΑ ΑΑÏΑΑΘ Linux'Ï×ÙΕ ΑΟΑΕ×ΑΘÏ× Ε ÏΑ ΘΑΘΘÏÏΘΘΑÏÏΑΘ ΘÐΑΑΕΑΕΕΑΑΕΕ ΑÏÑ ΕΕ ΠΕÐÏ×, ÐÏÛΘÏΘ ÷ΑÏ ÏΑ ÐÏ×ΑÛÏÏ, ΡΟÏ ÷Ù ΕΟÐÏÏΘÛΟΑΘΑ ΕΕ ΕΑΘΟΥ. οÏ. ÏΑ-YUV ΕΑΘΟΥ.

1.2.3.2. ÏΑ-YUV ΕΑΘΟΥ

ðÏÏÛΕΘΑÏÏΑ ×ÏΘÐÏÏÛ×ΑΑΑÏΕΑ ÏÏΘΑΘ ΑÙΘΘ ΑÏΘΘΕÇÏΘÏÏ ÏΕΑÏ ×ΕÏΑΡΑÏΕΑÏ ÐΟÏÇΘΑÏÏÏÇÏ ÏΑΘÛΘΑΑΕΘÏ×ΑÏÏÑ (ΕΟÐÏÏΘÛΟΕΘΑ -zoom ΕÏΕ -vf scale ÏÐΑΕΕ, ÏÏÑ ÐΘΑΑΘÐΘΑΘΘΑΑ ÷ΑΘ: ÛΘÏ ÏΑΑÏΑÏÏ), ΕÏΕ ÐΑΘΑΕÏΑΡΑÏΕΑÏ ××ΕΑΑÏ ΘΑΘΕÏ Ο ÏΑÏΘÛΕÏ ΘΑÛΘΑÛΑÏΕΑÏ, ÏΑÐΘΕÏΑΘ 352x288. αΟÏΕ Θ ÷ΑΘ ÏΑΘ ΑÐÐΑΟΑΟÏÏΕ YUV ΑΕΘΑÏΑΘΑΑΕΕ, ÛΘÏ ÏΑΘÏΑ ÐΘΑΑÐÏΡΘΕΘΑÏΑÏ. εÛÏΑÏΑÏΕΑ ×ΕΑΑÏ ΘΑΘΕÏΑ ÏÏΘΑΘ ΑÙΘΘ ×ΕÏΑΡΑÏÏ ΕΟÐÏÏΘÛÏ×ΑÏΕΑÏ ÏÐΑΕΕ -vm Ε ΘΑΑÏΘΑΑΘ ΟÏ ΟÏΑΑΘΑÝΕÏΕ ΑΟΑΕ×ΑΘΑÏΕ:

- **ΕΟÐÏÏΘÛΘÑ** XFree86: ÐÏΑΟÏΑÏÏΟΘΕ ΟÏ. × ΟΑΕΑΕΝΕ DGA ΑΟΑΕ×ΑΘ Ε X11 ΑΟΑΕ×ΑΘ. δΑΕÏÏΑÏΑΘΑΘΟÑ DGA ! δΑΕΘΑ ÐÏΘÏΑΘΕΘΑ ΕΟÐÏÏΘÛÏ×ΑΘΘ DGA ΡΑΘΑÛ SDL, ΕÏÇΑΑ ÛΘÏ ÏΘΡÛΑ.
- **ÏΑ ΕΟÐÏÏΘÛΘÑ** XFree86: ÐÏΘÏΑΘΕΘΑ ΑΟΑΕ×ΑΘΑ × ΟÏΑΑΘΑÝΑÏ ÐÏΘÑΑΕΑ: vesa, fbdev, svgalib, aalib.

1.2.3.3. Cirrus Logic ΕΑΘΟΥ

- GD 7548: ΟΘΟΑΪΪ×ΙΑΪΪ ΙΑ ΙΑΟΑΔΕΙΟΕΙΕ ΔΙΑΟΑ Ε ΟΑΟΟΕΟΙ×ΑΙΑΟΟ × ΪΪΟΑΘΕΑΕ ΟΑΔΕΕ Compaq Armada 41xx.
 - ◆ XFree86 3: ΟΑΑΪΟΑΑΟ × 8/16bpp ΟΑΟΕΙΑΕ. εΪΟΝ, ΑΟΑΕ×ΑΟ ΪΡΑΪΘ ΙΑΑΙΑΪΪΕ Ε ÇΑΙΑΔΕΟΘΑΟ ΪΥΕΑΕΕ × ΟΑΟΕΙΑ 800x600@16bpp. **δΑΕΪΙΑΙΑΘΑΟΘΝ: 640x480@16bpp**
 - ◆ XFree86 4: Xserver ΥΑΪΪΟΑΟΕ×ΑΑΟΘΝ ×ΟΕΪΟΑ ΔΪΟΙΑ ΟΟΑΟΟΑ, ΑΟΙΕ ΑΕΟΑΪΑΘΑΑΕΝ ΙΑ ΪΘΕΙΑΡΑΙΑ, ΪΪ ΟΙÇΑΑ ×ΟΑ ΟΟΑΪΪ×ΕΟΘΝ ΙΑΑΙΑΪΪΑ, ΡΑΪ ΔΙΑ XFree86 3. ιΑΟ XVideo.
 - ◆ FBdev: ΑΘΑΕΙΑΘΑΕΑΟ[framebuffer – ΕΑΑΟΪ×ΥΕ ΑΘΑΕΑΟ] ΪΪΟΑΟ ΑΥΟΘ ×ΕΙΑΡΕΪ clgenfb ΑΟΑΕ×ΑΟΪΪ × ΝΑΔΑ, ΕΪΟΝ ΑΪΝ ΙΑΪΝ ΥΟΪ ΟΑΑΪΟΑΪΪ ΟΪΪΘΕΪ ΔΟΕ 8bpp, Ε ΔΪΥΟΪΪΘ ΙΑΔΘΕÇΙΑΪΪ. ÷ ΕΟΕΙΑΪΥΕ ΕΙΑ ΑΪ ΕΪΪΘΕΪΝΑΕΕ ΑΪΪΟΑΪ ΑΥΟΘ ΑΙΑΑ×ΙΑΪ 7584 ID
 - ◆ VESA: ΕΑΘΟΑ ΟΪ×ΙΑΟΟΕΙΑ ΟΪΪΘΕΪ Ο VBE 1.2, ΔΪΥΟΪΪΘ VESA ×Υ×ΙΑ ΙΑ ΪΪΟΑΟ ΕΘΪΪΘΥΪ×ΑΟΘΟΝ. ιΑ ΪΪΟΑΟ ΑΥΟΘ ΙΑΪΕΑΑΪΪ Ο UniVBE.
 - ◆ SVGAlib: ΪΘΔΑΑΑΪΝΑΟΘΝ ΕΑΕ ΑΪΪΑΑ ΟΟΑΔΥΕ Cirrus ΡΕΔ. δΑΑΪΟΑΑΟ, ΪΪ ΙΑΑΙΑΪΪΪ Ο -bpp 8.

1.2.4. υ×ΟΕΪ×ΥΑ ΕΑΘΟΥ:

- **Soundblaster Live!**: Ο ΥΟΪΕ ΕΑΔΟΪΕ ÷Υ ΪΪΟΑΟΑ ΕΘΪΪΘΥΪ×ΑΟΘ 4 ΕΙΕ 6 (5.1) ΕΑΪΑΪΘΪΙΑ AC3 ΑΑΕΙΑΕΟΪ×ΑΪΕΑ, ×ΙΑΟΟΪ 2. ΡΕΟΑΕΘΑ ΟΑΕΑΕΑ δΟΙÇΟΑΪΪΙΑ AC3 ΑΑΕΙΑΕΟΪ×ΑΪΕΑ. αΪΝ ΑΔΔΑΟΑΟΪÇΪ ΔΟΪΔΘΟΕΑ AC3[hardware AC3 passthrough] ÷Υ **ΑΪΪΟΪΥ** ΕΘΪΪΘΥΪ×ΑΟΘ ALSA 0.9 Ο ΥΪΟΪΝΑΕΑΕ OSS!
- **C-Media Ο SP/DIF ×ΥΕΪΑΪΪ**: ΑΔΔΑΟΑΟΪΑΪΝ AC3 ΔΑΔΑΑΑΡΑ[passthrough] ×ΪΪΪΟΪΑ Ο ΥΟΕΙΕ ΕΑΘΟΑΪΕ, ΟΪ. ΟΑΕΑΕΑ αΔΔΑΟΑΟΪΙΑ AC3 ΑΑΕΙΑΕΟΪ×ΑΪΕΑ.
- ÷ΥΪΪΟΪΪΟΘΕ **ΑΟΘÇΕΕ ΕΑΘΟ** ΙΑ ΔΪΑΑΑΔΟΘΕ×ΑΑΟΘΝ MPlayerΪΪ. ΪΡΑΪΘ ΟΑΕΪΙΑΙΑΘΑΟΘΝ ΔΟΪΡΕΘΑΟΘ ΟΑΕΑΕΑ Υ×ΟΕΪ×ΥΑ ΕΑΘΟΥ!

1.2.5. ÷ΪΪΪΟΪΪΟΘΕ:

- δΑΥΕΘΑ, ΪΘΟΑΪ ΪΕ ÷ΑΪ GUI. αΟΙΕ ΑΑ, ΔΟΪΡΕΘΑΕΘΑ ΑΪ ΕΪΪΘΕΪΝΑΕΕ ΟΑΕΑΕΑ GUI.
- αΟΙΕ ÷Υ ΕΪΘΕΘΑ ΟΘΟΑΪΪ×ΕΘΘ MEncoder (ΙΑΥ ×ΑΪΕΕΪΑΔΪΥΕ ΪΪÇΙΑΑΙΑ×ΙΕ ΕΙΑΕΟΪ×ΥΕΕ), ΡΕΟΑΕΘΑ ΟΑΕΑΕΑ MEncoder.
- αΟΙΕ Θ ÷ΑΟ ΑΟΘΘ V4L ΟΪ×ΙΑΟΟΕΪΥΕ **TV ΘΑΙΑΘ**, Ε ÷Υ ΕΪΘΕΘΑ ΟΪΪΘΔΑΘΘ/ΥΑΕ×ΑΘΥ×ΑΘΘ Ε ΕΙΑΕΟΪ×ΑΘΘ MPlayerΪΪ ΑΕΪΘΪΥ, ΡΕΟΑΕΘΑ ΟΑΕΑΕΑ TV ×ΕΙΑ.
- σΘΥΑΟΘ×ΘΑΘ ΕΥΝΥΪΙΑ **OSD ΙΑΙΑ** ÇΪΟΪ×ΙΑ ΑΪΝ ΕΘΪΪΘΥΪ×ΑΪΕΝ. δΟΪ×ΑΘΘΘΑ ΟΑΕΑΕΑ OSD ΙΑΙΑ.

δΑΔΑΘΘ ΟΪΑΑΔΕΘΑ MPlayer:

```
./configure
make
make install
```

÷ ΥΟΪΘ ΪΪΙΑΪΘ, MPlayer ÇΪΟΪ× Ε ΕΘΪΪΘΥΪ×ΑΪΕΑ. εΑΟΑΪÇ \$PREFIX/share/mplayer ΟΪΑΑΘΘΕΘ ΑΕΑΪ codecs.conf, ΕΪΟΪΘΥΕ ΕΘΪΪΘΥΘΑΘΘΝ, ΡΟΪΑΥ ΟΪΙΑΥΕΘΘ ΔΟΪÇΟΑΪΙΑ ΙΑΪ ×ΟΑΕ ΕΙΑΑΕΕ Ε ΕΕ ×ΪΪΪΟΪΪΟΘΕ. υΟΪΘ ΑΕΑΪ ΘΔΑΑΘΑΘΘΝ ΟΪΪΘΕΪ × ΟΪΪ ΟΪΘΡΑΑ, ΑΟΙΕ ÷Υ ΕΪΘΕΘΑ ΔΪΙΑΪΝΘΘ ΕΕ ΙΑΟΘΟΪΕΕΕ, ΔΪΟΕΪΘΕΘ ΙΟΪ×ΪΪΕ ΥΑΔΘΘΕΑΑΪΥΕ ΑΕΑΪ ΟΪΑΑΘΘΕΘ

MPlayer – The Movie Player for LINUX

ύάάάοοέ×άάό οόάοέοοù ίά sec όάέοιά. üöï úíááíέά ήόάό άúòø
ìòðέάάόάìøíúí.

-subfps RATE

ðέάúú×άάό έήέáάóò×ì έάάòì×/όάέ àìñ áέάέιά οόάοέοòì× (×άýάóó×άήήά áέόή)

-subpos 0-100

ðέάúú×άάό ðíúέάέά οόάοέοòì×.

άοίε ÷ù ίάάìάάάάόά ò×άìέáέ×άάýóáóñ úάάάóóέò ίάόάò áέìøήή é οόάοέοòάίέ,
έóðήòúóñ áέάέì οόάοέοòì× × áέìòιάόά MicroDVD, ίάέάήήάά ×άòìñòήή, áòì áάóòìόά
έάάòì× ò áέìòιά é áέάέιά οόάοέοòì× ίά óì×ðάάάάó. ðìόάìòέóόά, ίάðάóέóά ×ίέíáíέά,
áòì áέìòιάό MicroDVD έóðήòúóáò άάóήάóíúά ήήάóά έάάòì× àìñ óέìèòήέúάάέέ, é
ðíúòήήò ήðάέñ -subfps ίά ήόάό έóðήòúúí×άóøóñ ó ùóέí áέìòιάóήή. ðìóέήòέò MPlayer ίά
ήόάό òçάάάóø áάóòìόò έάάòì× àìñ οόάοέοòì×, ÷ù áήòíú ×òòáìόά έή×άóóέòì×άóø
áάóòìόò έάάòì×. ÷ έάόάήçά contrib MPlayerì×óέìçì FTP óάέóά άóóø òðάάέάìøíúè
Perlì×ùè óέòέðó àìñ óάέìέ έή×άóóέέ.

ì DVD οόάοέοòάέ, áέóάέóά × óάέάέέ DVD.

1.4.1. MPlayer's own subtitle format (MPsub)

MPlayer ××èì × òðìòðάάìάíέά ή×ùè áέìòιάό οόάοέοòì×, ίάúú×άάíúè **MPsub**. ή άùì
òάúóάάìόάí Gabucino. ðì óóýάóó×ò, áçì íóή×íáñ íóíάάήήóóø – ùöï έóðήòúúí×άίέά
áέíáíέáóέíέ ×òάíáήήέ ðòé×ñúέέ (έìòñ óóýάóó×òάó é òάóέí ðìέάάòì×íέ ðòé×ñúέέ).
ðòέíάò (έú DOCS/tech/mpsub.sub):

FORMAT=TIME

ðάò×ùè ήήíáð : óòìèøέì ðòìòάάóø ðìóíá òìçì, έάέ έóáú ðòάáùάóýέέ óóάóέòò
×òìòìέ ήήíáð : óòìèøέì óάέóíá ðìέáúú×άóø óάέóýέέ óóάóέòò

15 3

A long long, time ago...

0 3

in a galaxy far away...

0 3

Naboo was under an attack.

έάέ ×έάέóά, íóή×ήè ááìøà áùή óάάíáóø ðòìóóùí òάάάέóέòì×άíέά/óέìèòήέúάάέά/
íááάέíáíέά/òáúòáúάíέά ðòìóóùí. é, áóíε ÷ù, ίάðòέíáò, ðìòáéíέ ssa οόάοέοòù ή
ήè ðìèì óέìèòήέúέòì×άíú ó ÷áúáé ×άóóέάé áέìòιά, ÷ù ðòìóóì úáðòóέάάóά

mplayer dummy.avi -sub source.ssa -dumpmpsub

. ÷ óάέóýáí έάóάήçά áðάáó óíúάάí áέάέì dump.mpsub, óíάάòóáýέέ έóέíáíúè óάέóó
óóάοέοòì×, ή × **MPsub** áέìòιάόά. ðìóíá ùóìçì, ÷ù ήόάόά ó×íáíáή ήíáá×ìñòø/×ùáέóάóø
óάέóíáù è/ìò óóάοέοòά.

óóάοέοòù ×ù×íáñóóñ, έóðήòúóñ óάέìέέò '**OSD**', **On Screen Display**. OSD έóðήòúóóáóóñ
àìñ ×ù×íáá óάέóýáçì ×òάíáíέ, ðìήó çòìèìóóé é ðάòάíáýáíέñ, é ò. ð.

1.4.2. δÓÓÁĪ×ĒÁ OSD É ÓŌÂŌÉŌŌĪ×

ρŌĪĀÙ ÉŌĐĪŦŪĪ×ĀŌŦ ×ĪŪĪŦŌĪŦŌŌÉ OSD/SUB, ÷ÁĪ ĪŦŌŌĀĪ ĐÁĒĀŌ ÛŌÉÆŌĪ× MPlayer'Á. āŌŌŦ ĪĪÇĪ ŌĐĪŌĪĀĪ× ĒĒ ĐĪŦŦÉŌŦ:

- ÉŌĐĪŦŪĪ×ĀŌŦ ŌŌĀĀŌŌ×Ī ÇĀĪĀŌĀĀĒÉĒ ÛŌÉÆŌĪ× × TOOLS/subfont-c. ũŦĪ ŪĀĒĪρĀĪĪĀ ŌŌĀĀŌŌ×Ī ĀĪŦ ĐŌĀĪĀŌĀŪĪ×ĀĪĒĒ ÉŪ TTF/Type1/É Ō. Đ. ÛŌÉÆŌĪ× × mplayerĪ×ŌĒĒĀ ÛŌÉÆŌĪ×ŪĀ ĐÁĒĀŌŪ. (ĐĪĀŌĪĀĪŦŌŌÉ ρÉŌĀĒŌĀ × TOOLS/subfont-c/README)
- ÉŌĐĪŦŪŌŌĒŌĀ GIMPĪ×ŪĒ ĐĪĀÇĒĪ ÇĀĪĀŌĀĀĒÉĒ ÛŌÉÆŌĪ× ÉŪ TOOLS/subfont-GIMP (ŪĀĪĀρĀĪĒĀ: ŌĀĒŌŌ, Ō ÷ÁŌ ĀĪŦŌŌĀĪ ĀŪŌŦ ŌŌŌĀĪĪ×ĪĀĪ HSI RAW ĐĪĀÇĒĪ, ŌĪ. <http://realtime.ssu.ac.kr/~lethean/mplayer/>).
- ÉŌĐĪŦŪŌŌĒŌĀ TrueType (TTF) ÛŌÉÆŌ, ρĀŌŌŪ ĀĒĀĪĒĪŌĀĒŌ freetype. ĪĀŦŪĀŌĀĪŦĪĀ ×ĀŌŌĒŦ 2.0.9 ĒĪÉ ×ŪŪĀ! δĪÇĀĀ Ō ÷ÁŌ ŌŌŌŦ Ā×Ā ĪĀŌĪĀĀ:
 - ◆ ÉŌĐĪŦŪŌŌĒŌĀ ĪĐĀĒĀ -font /path/to/arial.ttf, ρŌĪĀÙ ŌĒĀŪŪ×ĀŌŦ ĒĀŌĀŪĒ ŌĀŪ ĐŌŌŦ Ē TrueType ÛŌÉÆŌŌ
 - ◆ ŌĪŪĀĀĒŌĀ ŌŌŪĪĒŌ:

```
ln -s /path/to/arial.ttf ~/.mplayer/subfont.ttf
```

āŌĪĒ MPlayer ĀŪĪ ŌĒĪĐĒĒĒŌŌĪ×ĀĪ Ō ĐĪĀĀĀŌŌĒĒĒ fontconfig, ÛŌĒ ĪĀŌĪĀŪ ĪĀ ĀŌĀŌŌ ŌĀĀĪŌĀŌŦ, ×ĪĀŌŌĪ ŪŌĪÇĪ, ĪĐĀĒŦ -font ĪŌĒĀĀĀŌ fontconfigĪ×ŌĒĪĀ ĪĀŪ×ĀĪĒĀ ÛŌÉÆŌĀ, É ĐĪ ŌĪŦρĀĪĒĀ ŪŌĪ ĀĪŦŌ ĀĀŪ ŪĀŌĀρĀĒ (sans-serif). ρŌĪĀÙ ĐĪŦŦÉŌŦŦ ŌĐÉŌĪĒÆŌĒŪŌĪ× ÉŪ×ĀŌŌĪŪĒ fontconfig'Ō, ÉŌĐĪŦŪŌŌĒŌĀ **fc-list**. δŌĒĪĀŌ: -font 'Bitstream Vera Sans'

- δĒĀρĀŌŦ ÇĪŌĪ×ŪĒ Ē ŌĐĪŌŌĀĪĀĪĒĀ ĐÁĒĀŌ ÛŌÉÆŌĪ× Ō ŌĀĒŌĀ MPlayer'Á. ūĀĪĀρĀĪĒĀ: āĪŌŌŌĐĪŪĀ × ĪĀŌŌĪŦŪĒĒ ĪĪĀĪŌ ÛŌÉÆŌŪ ĪÇŌĀĪĒρĀĪŪ ĀĪ ĐĪĀĀŌŌĒĒÉ ISO 8859-1/2, ĪĪ ŌŌŪĀŌŌ×ŌĀŌ ĀŌŌÇĒĀ (×ĒĪĀρĀŦ ĒĪŌĀĒŌĒĒĀ, ŌŌŌŌĒĒĀ, ISO 8859-8 É ĀŌ.) ŌĀĀĪĀĪŪĀ ĐĪŦŦŪĪ×ĀŌĀĪŦĪĒÉ ÛŌÉÆŌŪ × contrib/font ŌĀĒĀĒĒÉ FTP.

ŭŌÉÆŌ ĀĪŦŌŌĀĪ ŌĪĀĀŌŌĀŌŦ ŌĪŦŦ×ĀŌŌŦ×ŌĀŪĒĒÉ font.desc ĀĀĒĪ, ĒĪŌĪŌŪĒÉ ŌĪŪĀĀŧŌ ŌĪŦŦ×ĀŌŌŦ×ĒŦ ĪĀŌĀŌ Unicode ĐĪŪĒĀĒĀĒ × ÛŌÉÆŌĀ É ĒĪĀĪ×ĪĒ ŌŌŌĀĪĒĀĒÉ ŌŌĀŌĒŌŌĀ. āŌŌÇĒĪ ŌĀŪĀĪĒĀĪ Ŧ×ĪŦĀŌŦŦ ĪĀĪĒρĒĀ ŌŌĀŌĒŌŌĀ × utf8 ĒĪĀĒŌĪ×ĒĀ É ÉŌĐĪŦŪĪ×ĀĪĒĀ ĪĐĀĒĒ -utf8, ĒĪÉ ĐŌĪŌŌĪ ĪĀĪŪ×ĀŌŦ ĀĀĒĪ ŌŌĀŌĒŌŌĀ <video_name>.utf É ŌĀŪĪĀŌŌĒŌŦ ĀÇĪ × ĒĀŌĀĪĪÇĀ Ō ĀĒĪŦĪĪ. δĀŌĀĒĪĀĒŌĪ×ĒĀ ÉŪ ŌĀŪĪĒρĪŪĒ ĒĪĀĒŌĪ×ĪĒ × utf8 ĪŦŌĀŌ ĀŪŌŦ ĪŌŪŪĀŌŌ×ĪĀĪĀ Ō ĐĪĪŪŦĀ ĐŌĪÇŌĀĪĪ konwert (Debian) ĒĪĒ iconv (Red Hat).

δĀĀĪĒĒĀ 1.1. ĪĀĒĪŌĪŌŪĀ URL'Ū

URL	Comment
ftp://ftp.mplayerhq.hu/MPlayer/releases/fonts/	ISO ÛŌÉÆŌŪ
ftp://ftp.mplayerhq.hu/MPlayer/contrib/fonts/	ŌĀŪĪĒρĪŪĀ ÛŌÉÆŌŪ, ŌĀĀĪĀĪŦŪĀ ĐĪŦŦŪĪ×ĀŌĀĪŦĪĒÉ
http://realtime.ssu.ac.kr/~lethean/mplayer/	ĒĪŌĀĒŌŌĒĒĀ ÛŌÉÆŌŪ É RAW ĐĪĀÇĒĪ

āŌĪĒ ÷Ū ŌĀŪĒŌĀ ÉŌĐĪŦŪŪĪ×ĀŌŦ ĪĀ-TTF ÛŌÉÆŌŪ, UNZIPĪĒŌĀ ŌĒĀρĀĪŦŪĒĒ ĀĀĒĪ × ~/.mplayer ĒĪĒ \$PREFIX/share/mplayer. ūĀŌĀĪ ĐĀŌĀĒĪĀĪŌĒŌĀ, ĒĪÉ ŌĪĒĒŌŌŌĀ (ŌĪŪĀĀĒŌĀ ŌŌŪĪĒŌ) ĪĀĒĪ ÉŪ ĒĀŌĀĪĪÇĪ× × font (ĪĀĐŌ):

```
ln -s ~/.mplayer/arial-24 ~/.mplayer/font
```

). δΑΔΑΟΘ ÷Û ÄÏÏÏÛ Ö×ÉÄÄÖΘ ÓÁÉÍÄÒ × ÌÄ×Ï ×ÄÒÉÍÄÍ ÖÇÏΘ ÆÉÍΘÍÄ (×ÛÈÌÀΡÉÔÄ ÄÇÏ ÈÏÏÈÏÈ ò).

(ÓÔÄÔÉÔÔÛ ×ÓÄÇÄÄ ×ÈÌÀΡÄÏÛ, ΡΘÍÄÛ ÖÛÍÄÔΘ, ÈÄÈ ÈÈ ÏÔÈÌÀΡÉÔΘ, ΡÉÔÄÈÔÄ ÓÔÔÄÍÉÄÏ man)

ð OSD 4 ÓÍÓÓÏÑÍÉN: (ΔÄÒÄÈÌÀΡÄÄÓÓÑ ÈÏÏÈÏÈ ò):

1. ΔÏÏÏÛ ÇÒÏÏÈÍÓÓÉ + ΔÄÒÄÍÄÝÄÍÉN (ΔÏ ÖÏÏΡÄÍÉÄ)
2. ΔÏÏÏÛ ÇÒÏÏÈÍÓÓÉ + ΔÄÒÄÍÄÝÄÍÉN + ÓÁÉÍÄÒ + ΔÏÛÉÄÉN × ÆÄÈÌÄ × ΔÔÍÄÄÍÔÄÈ ΔÔÈ ΔÄÒÄÍÄÝÄÍÉÈ
3. ΔÏÏÏÛ ÇÒÏÏÈÍÓÓÉ + ΔÄÒÄÍÄÝÄÍÉN + ÓÁÉÍÄÒ + ÄÍÉÍÄ ×ÓÄÇÏ ÆÉÍΘÍÄ
4. ÖÏÏÈÏ ÓÔÄÔÉÔÛ

÷Û ÏÏÔÔÄ ÈÛÍÄÍÉÔΘ ÄÄÉÔÔ×ÉN ΔÏ ÖÏÏΡÄÍÉÄ, ÓÔÔÄÏ×É× × ÏÔÏÏÄ ÛÍÄΡÄÍÉÄ ΔÄÒÄÍÄÏÏÄ osdlevel × ÈÏÏÆÉÇÔÔÄÈÏÏÏ ÆÄÈÌÄ, ÈÍÈ ÉÓΔÏÏÛÓÑ ÏΔÄÈÄ -osdlevel ÈÏÍÄÍÄÏÈ ÓÔÔÍÈÈ.

1.4.3. OSD ÍÄÍÄ

ð MPlayer'Ä ÓÔÝÄÓÔ×ÔÄ ÄÄÍÈÏÏ ÏΔÔÄÄÄÏÑÄÍÛÈ ΔÏÏÛÏ×ÄÔÄÍÄ ÈÍÔÄÒÆÄÈÓ OSD ÍÄÍÄ.

ÛÄÍÄΡÄÍÉÄ

ÍÄÍÄ Preferences[ÍÄÓÔÔÈÏÈÈÈ] × ÍÄÓÔÏÑÝÈÈ ÏÏÍÄÏ ïä ïäðéóäï!

ðÓÔÄÏ×ÈÄ

1. ÓÈÏÏÈÏÈÔÔÈÔÄ MPlayer, ÖÈÄÛ× . /configure ΔÄÒÄÍÄÔÔ --enable-menu
2. ÔÄÄÄÈÔÄÔΘ, ΡΘÏ Ö ÷ÄÓ ÔÓÔÄÏ×ÌÄÍ OSD ÛÔÈÆÔ
3. ÓÈÏÏÈÔÔÈÔÄ etc/menu.conf × ÷ÄÛ ÈÄÓÄÏÇ .mplayer
4. ÓÈÏÏÈÔÔÈÔÄ etc/input.conf × ÷ÄÛ ÈÄÓÄÏÇ .mplayer, ÈÍÈ × ÓÈÓÔÄÏÛÈ ÈÏÏÆÉÇÔÔÄÈÏÏÛÈ ÈÄÓÄÏÇ MPlayer'Ä (ΔÏ ÖÏÏΡÄÍÉÄ: /usr/local/etc/mplayer)
5. ΔÔ×ÄÔÔÄ È ÏÔÔÄÄÄÈÔÈÔÔÈÔÄ input.conf, ΡΘÍÄÛ ×ÈÌÀΡÉÔΘ ÈÏÏÈÈ ΔÄÒÄÍÄÝÄÍÉN ΔÏ ÍÄÍÄ (ÛÏÏ ÛÄÄÓΘ ÏÈÓÔÏ).
6. ÛΔÔÔÔÈÔÄ MPlayer ÈÄÈ × ÓÏÄÄÔÄÝÄÍ ΔÔÈÍÄÔÄ:

```
$ mplayer -menu file.avi
7. ÍÄÓÍÈÔÄ ÌÄÄÔÄ ÍÄÍÄ-ÈÏÏÈÈ, ÈÏÏÏÔÄ ÷Û ÏΔÔÄÄÄÍÈÍÈ
```

1.5. RTC

ð MPlayer'Ä ÄÓÔΘ ÔÔÈ ÍÄÔÍÄÄ ÓÈÏÈÏÏÈÛÄÄÈÈ.

- ΡΘÍÄÛ ÈÓΔÏÏÛÏ×ÄÔΘ ÓÔÄÔÛÈ ÌÄÔÍÄ ÓÈÏÈÏÏÈÛÄÄÈÈ, ÷ÄÍ ÏÈΡÄÇÏ ÌÄ ÌÄÄÏ ÄÄÍÄÔΘ. ï ÈÓΔÏÏÛÏÔÄÖ usleep(), ΡΘÍÄÛ ΔÏÄÓÔÔÈÈÔΘ A/V ÓÈÏÈÏÏÈÛÄÄÈÄ, Ó ÔÏΡÏÓÔΘÄ +/- 10ms. ïÄÍÄÈÏ, ÈÏÇÄÄ ÓÔÄÄÔÄÓÓÑ ÄÄÔÄ ÄÏÏÛÄÑ ÔÏΡÏÓÔΘ ÓÈÏÈÏÏÈÛÄÄÈÈ.
- Ï×ÛÈ ÓÁÉÍÄÒ ÈÓΔÏÏÛÏÔÄÖ PC'ÛÛÛÄ RTC (Real Time Clock[ΡÄÓÛ ÈÓÔÈÏÏÇÏ ×ÔÄÍÄÍÈ]) ÄÏÑ ÛÔÈÈ ÛÄÄÄΡÈ ΔÏÏÏÏ, ΡΘÏ ÛÔÏ ÓÁÉÍÄÒ ÔÏΡÏÓÔΘÄ 1ms. ÛÔÏ Ä×ÔÏÍÄÔÈΡÄÓÈÈ ×ÈÌÀΡÄÄÓÓÑ, ÈÏÇÄÄ ÄÏÓÔÔΔÏÏ, Ï ÒÔÄÄÔÄÖ ΔÔÈ×ÈÌÄÇÈÈ root'Ä, ÓβÄÄÏÔÔÏÇÏ ΔÏ root'Ö

ΕΟΘΠΠΝΑΪΪΪ ΑΕΑΪΑ MPlayer'Α, ΕΙΕ ΔΟΑ×ΕΙΘΠΪ ΙΑΟΟΟΪΑΪΪΪ ΞΑΟΑ. αΟΙΕ ÷ Û
ΟΑΑΪΟΑΑΟΑ Ο ΞΑΟΪΪ 2.4.19pre8 ΕΙΕ ΑΠΠΑ ΔΪΥΑΪΕΪ, ÷ Û ΠΠΟΑΟΑ ΙΑΟΟΟΪΕΟΘ
ΙΑΕΟΕΪΑΪΘΪΑ ΠΑΟΟΪΟΘ RTC ΑΪΝ ΙΑΪΠΪΥΕ ΔΪΠΘΪΪ×ΑΟΑΪΑΕ ΠΑΟΑΥ ΑΕΑΪΪ×ΟΑ
ΟΕΟΟΑΪΟ /proc. εΟΔΪΠΘΪΥΟΕΟΑ ÛΟΘ ΕΪΪΑΪΑΘ, ΠΟΪΑÛ ΟΑΑΪΑΘΘ RTC ΑΪΟΟΘΔΪΪ ΑΪΝ
ΙΑΪΠΪΥΕ ΔΪΠΘΪΪ×ΑΟΑΪΑΕ:

```
echo 1024 > /proc/sys/dev/rtc/max-user-freq
```

αΟΙΕ Ο ÷ ΑΟ ΙΑ ΟΑΕΪΑ Ο×ΑΟΑΑ ΞΑΟΪ, ÷ Û ΟΑΕΟΑ ΠΠΟΑΟΑ ΔΪΪΑΪΝΘΘ ΙΑΪΘ ΟΟΟΪΠΕΘ ×
drivers/char/rtc.c Ε ΔΑΟΑΕΪΠΔΕΪΕΟΪ×ΑΟΘ ΞΑΟΪ. ΙΑΕΑΕΟΑ ΙΑΟΟΪ, ΕΪΘΪΟΪΑ
×ÛÇΪΝΑΕΘ ΕΑΕ

```
* We don't really want Joe User enabling more
* than 64Hz of interrupts on a multi-user machine.
*/
if ((rtc_freq > 64) && (!capable(CAP_SYS_RESOURCE)))
```

Ε ΥΑΪΑΪΕΟΑ 64 ΙΑ 1024. εΪΘΝ ÷ Û ΑΪΠΟΪÛ ΥΪΑΘΘ, ΠΟΪ ÷ Û ΑΑΪΑΑΟΑ. ÷ Û Ο×ΕΑΕΟΑ
ÛΑΕΑΕΘΕ×ΠΠΟΘΘ ΠΪ×ΪΪ ΕΪΑΑ ΟΑΕΪΑΟΑ ΔΪ ΟΟΟΪΕΑ ΟΪΟΟΪΝΪΕΝ. αΘΪΕΑΕΕ ΘΔΟΑ×ΙΑΪΕΝ
ΔΪΟΘΑΑΪΝΑΪΪ ΪΪΥΪΠΟΘΘ[power management] Θ ΙΑΕΪΘΪΟÛΕ ΠΠΟΑΘΕΪ×ΟΕΕΕ BIOS'Ϊ× ΟΪ
speedstep-CPU ΔΪΠΪΪ ×ΥΑΕΪΪΑΑΕΟΘ×ΘΑΘ Ο RTC. αΘΑΕΪ Ε ×ΕΑΑΪ ΪΪÇΘΘ
ΑΑΟΕΪΕΟΪΕΥΕΟΪ×ΑΘΘΘΝ. ÷ ΔΟΪΝΘΪΪ, ΑΟΙΕ ÷ Û ×ΟΟΑ×ΕΟΑ ÛΟΑΕΑΘ ×ΙΑΪΪΑΪ
ΔΕΟΑΪΕΝ ΑΪ ×ΕΪΑΡΑΪΕΝ ΠΠΟΑΘΕΑ, ΟΪ ÛΟΪ ΔΪΠΠΟΑΘ. ÷ Û ×ΟΑÇΑΑ ΠΠΟΑΟΑ ΪΘΕΪΑΡΕΘΘ
ΔΪΑΑΑΘΘΕΘ RTC, ΘΕΑΥΑ× ΪΘΑΕΑ -nortc. ÷ ΙΑΕΪΘΪΟÛΕ ΑΔΔΑΟΑΟΪÛΕ ΕΪΙΑΕΪΑΑΕΝΕ
(ΔΪΑΘ×ΑΘΟΑΑΪΪ ΔΟΕ ΕΟΔΪΠΘΪΪ×ΑΪΕΕ ΙΑ-DMA DVD ΑΟΑΕ×Α Ο ΙΑΟΑΘΕΪΘΕΪΕ ΔΪΑΘΪΕ
ALi1541) ΕΟΔΪΠΘΪΪ×ΑΪΕΑ RTC ΟΑΕΪΑΟΑ ΔΟΕ×ΙΑΕΘ Ε "ΔΟÛÇΑΑΪΪ" [skippy]
ΔΟΪΕÇΟÛ×ΑΪΕΑ. ÷ ÛΟΪΪ ΟΪΘΡΑΑ ΟΑΕΪΪΑΪΑΘΑΘΘΝ ΕΟΔΪΠΘΪΪ×ΑΘΘ ΟΘΑΘΕΕ ΙΑΟΪΑ.

- οΘΑΘΕΕ ΕΪΑ ΟΑΕΪΑΟΑ ×ΕΪΑΡΑΑΘΘΝ ΪΘΑΕΑΕ -softsleep. ο ΙΑΪ ÛΑΕΑΕΘΕ×ΠΠΟΘΘ RTC,
ΪΪ Ϊ ΙΑ ΕΟΔΪΠΘΪΪ×ΑΘΘ RTC. ο ΑΘΘÇΪΕ ΟΪΘΪΠÛ, ΪΪ ΟΕΪΘΪΑΑ ΕΟΔΪΠΘΪΪ×ΑΘΘ CPU.

ΥΑΪΑΡΑΪΕΑ

ΪεεΪçää ΙΑ ΟΟΟΑΪΑ×ΪΕ×ΑΕΘΑ ΟΒΑΪΪΘΟÛΕ ΔΪ root'Θ ΕΟΔΪΠΠΝΑΪΪÛΕ ΑΕΑΪΪ MPlayer'Α ΙΑ
ΪΪÇΪΠΠΘΪΪ×ΑΟΑΪΘΘΕΪΕ ΟΕΟΟΑΪΑ! ÛΟΪ ΔΟΝΪΪΕ ΔΟΘΘ Ε ΘΪΠΘ, ΠΟΪ ΕΑΟΑÛΕ ΑΘΑΑΘ root'Ϊ.

ÇΙΑ×Α 2. ÷ΪÛΪΘΪΘΘΕ

οΪΑΑΘΟΑΪΕΑ

2.1. ΔΪΑΑΑΘΘΕ×ΑΑΪÛΑ ΕΪΘΪΑΘÛ

2.1.1. ÷ΕΑΑΪ ΑΪΘΪΑΘÛ

2.1.1.1. MPEG ΑΕΑΪÛ

2.1.1.2. AVI ΑΕΑΪÛ

2.1.1.3. ASF/WMV ΑΕΑΪÛ

2.1.1.4. QuickTime/MOV ΑΕΑΪÛ

2.1.1.5. VIVO ΑΕΑΪÛ

2.1.1.6. FLI ΑΕΑΪÛ

2.1.1.7. RealMedia (RM) ΑΕΑΪÛ

2.1.1.8. NuppelVideo ΑΕΑΪÛ

2.1.1.9. yuv4mpeg ΑΕΑΪÛ

- 2.1.1.10. FILM ΑΕΙΘΙÙ
- 2.1.1.11. RoQ ΑΑΕΙÙ
- 2.1.1.12. OGG/OGM ΑΑΕΙÙ
- 2.1.1.13. SDP ΑΑΕΙÙ
- 2.1.1.14. PVA ΑΑΕΙÙ
- 2.1.1.15. GIF ΑΑΕΙÙ
- 2.1.2. άΟÄÉĪ ÄĪÖÍÁÖÙ
 - 2.1.2.1. MP3 ΑΑΕΙÙ
 - 2.1.2.2. WAV ΑΑΕΙÙ
 - 2.1.2.3. OGG/OGM ΑΑΕΙÙ (Vorbis)
 - 2.1.2.4. WMA/ASF ΑΑΕΙÙ
 - 2.1.2.5. MP4 ΑΑΕΙÙ
 - 2.1.2.6. CD ÁÖÄÉĪ
 - 2.1.2.7. XMMS
- 2.2. δĪÄÄÄÖÖÉ×ÁÁÍÜÄ ĒĪÄÄĒÉ
 - 2.2.1. ÷ÉÄÄĪ ĒĪÄÄĒÉ
 - 2.2.1.1. DivX4/DivX5
 - 2.2.1.2. FFmpeg/libavcodec
 - 2.2.1.3. XAnim'Ī×ÓĒĒÄ ĒĪÄÄĒÉ
 - 2.2.1.4. VIVO ×ÉÄÄĪ
 - 2.2.1.5. MPEG 1/2 ×ÉÄÄĪ
 - 2.2.1.6. MS Video1
 - 2.2.1.7. Cinepak CVID
 - 2.2.1.8. RealVideo
 - 2.2.1.9. XviD
 - 2.2.1.10. Sorenson
 - 2.2.2. άΟÄÉĪ ĒĪÄÄĒÉ
 - 2.2.2.1. δÖĪÇÒÄÍÍĪÄ ÄÄĒĪÄÉÖĪ×ÁÍÉÄ AC3
 - 2.2.2.2. άÐÐÄÖÄÖĪÄ ÄÄĒĪÄÉÖĪ×ÁÍÉÄ AC3
 - 2.2.2.3. δĪÄÄÄÖÖÉÄ libmad
 - 2.2.2.4. VIVO ÁÖÄÉĪ
 - 2.2.2.5. RealAudio
 - 2.2.2.6. QDesign ĒĪÄÄĒÉ
 - 2.2.2.7. Qualcomm ĒĪÄÄĒÉ
 - 2.2.2.8. AAC ĒĪÄÄĒÉ
 - 2.2.3. ääē ÉÜ×ĪÄPØ ĒĪÄÄĒÉ ÉÜ Win32
 - 2.2.3.1. VFW ĒĪÄÄĒÉ
 - 2.2.3.2. DirectShow ĒĪÄÄĒÉ
- 2.3. δÖÖÖĪÉÖÖ×Á×Ü×ĪÄÄ
 - 2.3.1. Video output devices
 - 2.3.1.1. Setting up MTRR
 - 2.3.1.2. Video outputs for traditional video cards
 - 2.3.1.2.1. Xv
 - 2.3.1.2.2. DGA
 - 2.3.1.2.3. SDL
 - 2.3.1.2.4. SVGAlib
 - 2.3.1.2.5. Framebuffer output (FBdev)
 - 2.3.1.2.6. Matrox framebuffer (mga_vid)
 - 2.3.1.2.7. 3Dfx YUV support
 - 2.3.1.2.8. OpenGL output
 - 2.3.1.2.9. AALib – text mode displaying

MPlayer – The Movie Player for LINUX

- 2.3.1.2.10. VESA – output to VESA BIOS
- 2.3.1.2.11. X11
- 2.3.1.2.12. VIDIX
- 2.3.1.2.13. DirectFB
- 2.3.1.2.14. DirectFB/Matrox (dfbmg)
- 2.3.1.3. MPEG decoders
 - 2.3.1.3.1. DVB output and input
 - 2.3.1.3.2. DXR2
 - 2.3.1.3.3. DXR3/Hollywood+
- 2.3.1.4. Other visualization hardware
 - 2.3.1.4.1. Zr
 - 2.3.1.4.2. Blinkenlights
- 2.3.1.5. TV-out support
 - 2.3.1.5.1. Matrox G400 cards
 - 2.3.1.5.2. Matrox G450/G550 cards
 - 2.3.1.5.3. ATI cards
 - 2.3.1.5.4. Voodoo 3
 - 2.3.1.5.5. nVidia
 - 2.3.1.5.6. Neomagic
- 2.3.2. Audio output devices
 - 2.3.2.1. Audio/Video synchronisation
 - 2.3.2.2. Soundcard experiences, recommendations
 - 2.3.2.3. Audio filters
 - 2.3.2.3.1. Up/Downsampling
 - 2.3.2.3.2. Changing the number of channels
 - 2.3.2.3.3. Sample format converter
 - 2.3.2.3.4. Delay
 - 2.3.2.3.5. Software volume control
 - 2.3.2.3.6. Equalizer
 - 2.3.2.3.7. Panning filter
 - 2.3.2.3.8. Sub-woofer
 - 2.3.2.3.9. Surround-sound decoder
 - 2.3.2.3.10. Audio Exporter
 - 2.3.2.4. Audio plugins (deprecated)
 - 2.3.2.4.1. Up/Downsampling
 - 2.3.2.4.2. Surround Sound decoding
 - 2.3.2.4.3. Sample format converter
 - 2.3.2.4.4. Delay
 - 2.3.2.4.5. Software volume control
 - 2.3.2.4.6. Extrastereo
 - 2.3.2.4.7. Volume normalizer
- 2.4. TV-out
 - 2.4.1. ATI
 - 2.4.2. Matrox
 - 2.4.3. Other
- 2.5. Edit Decision Lists (EDL)
 - 2.5.1. EDL
 - 2.5.2. EDL

2.1. ΔΙΑΒΑΣΤΕ ΤΑ ΑΙΩΡΙΑ

Διαβάζετε αρχεία AVI, ή αρχεία MPEG. Η διαβαστέ αρχεία MPEG. Η διαβαστέ αρχεία MPEG. Η διαβαστέ αρχεία MPEG.

Διαβάζετε αρχεία MPEG, DivX, Indeo5, 3ivx. Η διαβαστέ αρχεία MPEG, AVI, ASF.

Διαβάζετε αρχεία MP3 ή αρχεία MPG. Η διαβαστέ αρχεία MP3 ή αρχεία MPG. Η διαβαστέ αρχεία MP3 ή αρχεία MPG.

2.1.1. Διαβαστέ τα Αιωρία

2.1.1.1. MPEG Αιωρία

MPEG Αιωρία: Αρχεία MPEG.

- MPG: αρχεία MPEG. Η διαβαστέ αρχεία MPEG.
- DAT: αρχεία MPEG, ή αρχεία VCD. Η διαβαστέ αρχεία VCD.
- VOB: αρχεία MPEG ή αρχεία DVD. Η διαβαστέ αρχεία DVD.

Διαβάζετε αρχεία MPEG. Η διαβαστέ αρχεία MPEG. Η διαβαστέ αρχεία MPEG.

Διαβάζετε αρχεία MPG ή αρχεία DivX. Η διαβαστέ αρχεία MPG ή αρχεία DivX.

2.1.1.2. AVI Αιωρία

Διαβάζετε αρχεία AVI (Audio Video Interleaved). Η διαβαστέ αρχεία AVI.

ΕΟΦΠΘΥΙ×ΑΟΘ ASF/WMV. ιέειçi üöi iá ×iiiöáö.

öÿáóö×öáö èáè[hack], ðiú×iínàýéé AVI æáèiáí oíááðöáöø Ogg Vorbis áöæi ðiöieé, ii ááíááö èè iáóí×iáóóéiúíé oí óóáíááðöiúíé AVI. MPlayer ðiááðöé×ááö ×iöðöieú×áááíéá óáèèè æáèii×. ðáðáíáýáíéá óáèöá ióöÿáóö×iáii, ii úáóöðáíáii ðiieí úáèiáéöi×áiiúíé æáèiáíé ó úáðöóáiiúíé úáçii×éáíé. è öiöáíáíéá, üöá ðöiáíáíá ðöiñ×iñáöón ö ááéiöó×áiiçi eíáéöi×ýééá, öðiöiáiiçi öiúáá×áöø óáèèá æáèiü – NanDub.

úáíáðáíéá

DV èáíáöü öiúáááö öüöüá DV ðiöieé, èiöiöüá öóááö×á DV úáè×áöá ðöá×öáýááö × AVI æáèiü ä×öè öéðí×. AVIúíééè iéáí áöáöð öiááðöáöø óáúááíeíiúá áöæi é ×éááí ðiöieé, èiöiöüá MPlayer iíöáö ×iöðöieú×iáéöø, èié öüöie DV ðiöie, ðiááðöéá èiöiöiçi iáèiáéöón × öóááèé öáúöááíöéé.

öÿáóö×öáö ä×á èiáöóá AVI æáèii×:

- **'öiiéiúá' [Interleaved]:** áöæi é ×éááí öiááðöéiíá 'ðáðáðáíáöááöón'. üöi öóáíááööiá ðöèiáíáíéá. ðáèiíáíá×áii é éöðiöüöáöón þáýá ×óáçi. iáèiöiöüá ðöiçöáíiú öiúáááö öiieíüá AVIúíééè ó ðiieie öéièðiiéúááéá. MPlayer iðöáááíñáö üöi éáè öiieíüè æáèi, é úáóáí öáöñáö A/V öéièðiiéúááéá, ×áöiñöii ðöé ðáðáíáýáíéé ði æáèiö. óáèèá æáèiü áiiöiú ðöieçöü×áöøón éáè iá öiieíüá (ó iðáéáé -ni).
- **iá öiiéiúá:** öiáðáíá éáèö ×áöø ×éááí ðiöie, úáöáí ×áöø áöæi ðiöie. üöi öóááöáö içöiíiçi èiieþáöö×á ðáðáíáýáíéé ði æáèiö, þöi ááíááö ðöieçöü×áíéá óáèèè æáèii× ði óáöé èié ó CD-ROM úáööðáíéöáíöiúí.

MPlayer ðiááðöé×ááö ä×á öéðá öéièðiiéúááéé àiñ AVI æáèii×:

- **iöii×áíiüè iá bps[áéöðiöieá]:** ií iöii×áí iá áéöðiöieá/ðiöieá öüiðii× àiñ ×éááí/áöæi ðiöieí×. üöiö iáöiá ðöèiáíñáöón áiiöüéiöó×ii ðiááðöí×, ×èiáðáñ avifile é Windows Media Player. æáèiü öi öiíiáíiúíé úáçii×éáíé é æáèiü öiúááíiúá ó VBR áöæi × iá VBR-óí×iáóóéiíi eíáéöi×ýééá ðöé×ááö è A/V ááöéièðiiéúááéé ðöé éöðiöüí×áíéé üöiçi iáöiáá (ðí áiiöüáè þáööé ðöé ðáðáíáýáíéé ði æéiöiö).
- **iöii×áíiüè iá öiieíiöóé:** ií iá éöðiöüöáö úiáðáíéá áéöðiöieá éú úáçii×éá, ×iáööi üöiçi éöðiöüöáöón iöiiöéöáíöiáñ ðiúéáén öiieíüè èööéí× áöæi é ×éááí, þöi ááíááö ðiieí úáèiáéöi×áiiúá ðöieçöü×ááíiúíé æáèiü ó VBR áöæi.

äiðöóöéiú iááüá áöæi é ×éááí èiááèé, ii úáíáöøöá, þöi VBR áöæi iá iþáíø èiöiüí ðiááðöé×ááöón áiiöüéiöó×ii ðiááðöí×. æiöiáö æáèiá ááíááö ×iúíiöiúí éöðiöüí×áíéá VBR áöæi, ii iíçéá ðiááöü iöéáááö CBR, ðiüöiíö iie ×üèiáñö éú öööiñ ó VBR. VBR öáèi ×ööðáþááöón é Microsoft'i×öèéá AVI öðááèæééááéè iðéöü×ááö öiieí CBR áöæi. ñ óáèöá úáíáöéi, þöi áiiöüéiöó×i eíáéöi×ýéè× öiúáááö ðiieéá æáèiü ðöé éöðiöüí×áíéé VBR áöæi. éú×áööii öiieí ä×á éöèiáþáíéñ: NanDub é MEncoder.

2.1.1.3. ASF/WMV ΑΕΙΕΙ

ASF (Active Streaming Format) ΕΙΕΙΕΙΕΙ ΙΟ Microsoft. ΙΕ ΟΑΥΟΑΑΙΟΑΙΕ Α×Α ×ΑΟΕΑΙΟΑ ASF, v1.0 Ε v2.0. v1.0 ΕΟΠΠΙΟΥΟΑΟΟΝ ΕΕ ΙΑΑΕΑ ΟΟΑΟΟ×ΑΙΕ (Windows Media Player Ε Windows Media Encoder) Ε ΟΕΙΟΠΙ ΥΑΟΑΕΟΑΡΑΙ. v2.0 ΙΘΟΑΙΕΕΙ×ΑΙΑ Ε ΥΑΔΑΟΑΙΟΙ×ΑΙΑ :). εΠΠΑΠΠΙ ΠΙΕ ΟΑΥΙΕΡΑΑΟΟΝ, ΟΙ×ΟΑΙ ΙΑΟ ΙΕΕΑΕΙΕ ΟΙ×ΙΑΟΟΕΠΠΟΕ (ΥΟΙ ΘΟΙΟΟΙ ΑΟΟΑΝ ΘΟΑ×Ι×ΑΝ ΕΟΑ). MPlayer ΔΙΑΑΑΟΟΕ×ΑΑΟ ΟΠΠΕΙ v1.0, ΔΙΟΕΠΠΕΟ ΙΕΕΟΙ ΙΕΕΙΟΑΑ ΙΑ ×ΕΑΑΙ v2.0 ΑΕΙΕΙ× :). υΑΙΑΟΘΟΑ, ΡΟΙ ASF ΑΕΙΕΙ ΟΑΔΑΟΘ ΔΙΝ×ΙΝΑΟΟΝ Ο ΟΑΟΥΕΟΑΙΕΝΙΕ .WMA ΕΙΕ .WMV.

2.1.1.4. QuickTime/MOV ΑΕΙΕΙ

υΟΕ ΑΙΟΙΑΟΥ ΑΕΙΕΙ× ΑΥΙΕ ΟΑΥΟΑΑΙΟΑΙΟΥ × Apple Ε ΠΙΟΟ ΟΙΑΑΟΟΑΟΘ ΙΑΑΙΕ ΕΙΑΑΕ, CBR ΕΙΕ VBR. ιΑΥΠΠΙ Ο ΙΕΕ ΟΑΟΥΕΟΑΙΕΑ .QT ΕΙΕ .MOV. υΑΙΑΟΘΟΑ, ΡΟΙ ΔΙΟΕΠΠΕΟ MPEG4 ΟΟΘΔΟΥ ×ΥΑΟΑΙΑ QuickTime × ΕΑΡΑΟΟ×Α ΟΑΕΠΠΑΙΑ×ΑΠΠΙΟΙ ΑΙΟΙΑΟΑ ΑΙΝ MPEG4, ΕΥ MOV ΑΕΙΕΙ ΕΑΟΟ Ο ΟΑΟΥΕΟΑΙΕΑΙ .MPG ΕΙΕ .MP4 (εΙΟΑΟΑΟΠΠ, ΡΟΙ ×ΕΑΑΙ Ε ΑΟΑΕΙ ΔΙΟΙΕΕ × ΥΟΕΕ ΑΕΙΕΙΑΕ – ΙΑΟΟΙΝΥΕΑ MPG Ε AAC ΑΕΙΕΙ. -Υ ΑΑΟΑ ΠΟΑΟΑ ΕΥ×ΙΑΡΘ ΕΕ, ΕΟΠΠΟΥΟΝ ΙΔΑΕΕ -dumpvideo Ε -dumpaudio.).

υΑΙΑΡΑΙΕΑ

αΠΠΟΥΕΙΟΟ×Ι Π×ΥΕ QuickTime ΑΕΙΕΙ× ΕΟΠΠΙΟΥΟΑΟ Sorenson ×ΕΑΑΙ Ε QDesign Music ΑΟΑΕΙ. οΙ. ΟΑΕΑΕΑ, ΔΙΟ×ΝΥΕΠΠΟΑ Sorenson ΕΙΑΑΕΟ.

2.1.1.5. VIVO ΑΕΙΕΙ

MPlayer ΟΟΔΑΥΠΠ ΑΑΙΟΙΟΘΕΔΙΑΕΟΕΟΟΑΟ VIVO ΑΙΟΙΑΟΥ ΑΕΙΕΙ×. ιΟΠΠΠΥΕ ΙΑΑΙΟΟΑΟΙΕ ΥΟΙΟΙ ΑΙΟΙΑΟΑ ΥΑΕΙΑΡΑΑΟΟΝ × ΟΠΠ, ΡΟΙ × ΙΑΙ ΙΑΟ ΙΕ ΕΙΑΑΕΟΙΥΕ ΑΠΠΕΙ×, ΙΕ ΑΕΕΟΕΟΙ×ΑΠΠΙΟΙ ΟΑΥΙΑΟΑ ΔΑΕΑΟΙ× ΕΙΕ ΑΑΕΟΙ× ΟΕΙΕΟΠΠΕΥΑΑΕΕ Ε × ΑΠΠΟΥΕΙΟΟ×Α ΑΕΙΕΙ× ΙΑΟ ΑΑΟΑ ΕΙΑΡΑ×ΥΕ ΕΑΑΟΙ×[keyframes], ΟΑΕ ΡΟΙ ΥΑΑΟΑΘΟΑ Ι ΔΑΟΑΙΑΥΑΙΕΕ ΔΙ ΑΕΙΕΙΟ!

-ΕΑΑΙ ΕΙΑΑΕ × VIVO/1.0 ΑΕΙΕΙΑΕ – ΥΟΙ ΟΟΑΙΑΑΟΟΠΠΥΕ h.263. -ΕΑΑΙ ΕΙΑΑΕ × VIVO/2.0 ΑΕΙΕΙΑΕ – ΥΟΙ ΠΑΕΑΕΑΕΟΙ×ΑΠΠΥΕ, ΙΑΟΟΑΙΑΑΟΟΠΠΥΕ h.263v2. αΟΑΕΙ × ΙΑΙΕΕ ΑΙΟΙΑΟΑΕ ΙΑΕΙΑΕΙ×ΙΑ, ΥΟΙ ΠΟΑΟ ΑΥΟΘ g.723 (ΟΟΑΙΑΑΟΟ), ΕΙΕ Vivo Siren.

οΙ. ΟΑΕΑΕΕ VIVO ×ΕΑΑΙ ΕΙΑΑΕ Ε VIVO ΑΟΑΕΙ ΕΙΑΑΕ ΑΙΝ ΕΙΟΟΟΘΕΑΕΕ ΔΙ ΟΟΟΑΠΠ×ΕΑ.

2.1.1.6. FLI ΑΕΙΕΙ

FLI ΥΟΙ ΠΑΙΘ ΟΟΑΟΥΕ ΑΙΟΙΑΟ, ΕΟΠΠΙΟΥΟΑΙΥΕ Autodesk Animator, Π ΥΟΙ ΟΕΘΕΡΠΥΕ ΑΙΟΙΑΟ ΑΙΝ ΕΙΟΙΟΕΕΕ ΙΔΑΟΑΑΕΕ × ΟΑΟΕ. MPlayer ΑΑΙΟΙΟΘΕΔΙΑΕΟΕΟΟΑΟ Ε ΑΑΕΙΑΕΟΟΑΟ FLI ΑΕΙΟΙΥ Ε ΑΑΟΑ ΟΠΠΟΙΑΑΙ ΔΑΟΑΙΑΥΑΟΟΟΝ × ΥΟΕΕ ΑΕΙΕΙΑΕ (ΠΠΑΥΠΠ ΔΟΕ ΑΕΕΙΕΡΠΠΙ ΔΟΙΕΟΟΥ×ΑΙΕΕ Ο ΙΔΑΕΑΕ –loop). -Ι FLI ΑΕΙΕΙΑΕ ΙΑΟ ΙΟΠΠ×ΠΥΕ ΕΑΑΟΙ×[keyframes], ΔΙΥΟΠΠΟ ΙΑΕΙΟΙΟΙΑ ×ΟΑΙΝ ΔΙΟΙΑ ΔΑΟΑΙΑΥΑΙΕΝ ΕΑΟΟΕΙΕΑ ΑΟΑΑΟ "ΟΝΥΠΠΕ".

2.1.1.7. RealMedia (RM) ΑΕΙΕΙ

αΑ, MPlayer ΠΠΟΑΟ ΡΕΟΑΟΘ (ΑΑΙΟΙΟΘΕΔΙΑΕΟΕΟΙ×ΑΟΘ) RealMedia (.rm) ΑΕΙΕΙ. ΔΑΟΑΙΑΥΑΙΕΑ ΟΑΑΙΟΑΑΟ, Π -Υ ΑΠΠΟΥ ΟΔΑΑΕΑΙΟΠΠ ΟΕΑΥΑΟΘ ΙΔΑΕΑ -forcedx (ΑΙΟΙΑΟ ΔΙΑΑΑΟΟΕ×ΑΑΟ ΙΟΠΠ×ΠΥΕ ΕΑΑΟΟΥ[keyframes]). υΑΑΟΘ ΑΟΟΘ ΟΘΕΟΕΕ ΔΙΑΑΑΟΟΕ×ΑΑΙΥΕ RealVideo Ε RealAudio ΕΙΑΑΕΙ×.

÷ ΙΑΟΟΙΝΥΕΕ ΠΙΙΑΙΟ MPlayer ΙΑ ΔΙΑΑΑΟΟΕ×ΑΑΟ ΔΑΟΑΙΑΥΑΙΕΑ ×ΙΟΟΟΕ GIF ΑΕΑΕΙΙ×. ο GIF ΑΕΑΕΙΙ× ΙΑ ΙΑΝΥΑΟΑΙΘΙΙ ΑΕΕΟΕΟΙ×ΑΙΠΥΕ ΟΑΥΙΑΟ ΕΑΑΟΑ ΕΙΕ ΑΕΕΟΕΟΙ×ΑΙΠΑΝ ΠΑΟΟΙΟΑ ΕΑΑΟΙ×. ΙΑΙΑΙΟΙΟ, Ο ΕΑΟΑΙÇΙ ΕΑΑΟΑ Ο×ΙΕ ΟΙΑΟΟ×ΑΙΠΥΕ ΟΑΥΙΑΟ Ε ΑΠΠΟΑΙ ×Υ×ΙΑΕΟΘΟΝ × ΙΑΕΙΟΙΟΙΙ ΔΙΙΑ ΑΕΕΟΕΟΙ×ΑΙΠÇΙ ΟΑΥΙΑΟΑ. ΠΑΟΟΙΟΑ ΕΑΑΟΙ× ΕΠΠΟΔΠΠΕΟΔΑΟΟΝ ΑΠΠΠΠΕΟΑΙΘΙΥΙ ΑΠΠΠΙ ΔΑΟΑΑ ΕΑΟΑΥΙ ΕΑΑΟΙΙ, ΕΙΟΙΟΥΕ ΙΘΟΑΑΑΙΝΑΟ ΥΑΑΑΟΟΕΘ ΔΑΟΑΑ ΟΙΑΑΟΑΥΕΙ ΕΑΑΟΙΙ × ΟΙΟΥΕ ΑΠΠΠΕ ΟΑΕΟΙΑΥ.

οΟΑΙΑΑΟΟΙΥΑ GIF ΑΕΑΕΙΥ ΟΙΑΑΟΟΑΟ 24-ΑΕΟΙΥΑ RGB ΕΑΑΟΥ Ο ΙΑ ΑΠΠΑ ΠΑΙ 8-ΑΕΟΙ×ΙΕ ΕΙΑΑΕΟΕΟΙ×ΑΠΠΠΕ ΔΑΙΕΟΟΙΕ. εΑΑΟΥ ΙΑΥΠΠΙ ΟΟΑΟΥ ΔΙ LZW ΑΙÇΙΘΕΟΙΟ, ΕΙΘΝ ΙΑΕΙΟΙΟΥΑ GIF ΕΙΑΕΟΙ×ΥΕΕΕ ΟΙΥΑΑΑΟ ΙΑΟΟΑΟΥΑ ΕΑΑΟΥ, ΡΟΙΑΥ ΕΥΑΑΟΑΟΘ ΔΟΙΑΙΑΙ Ο ΔΑΟΑΙΟΙΙ ΙΑ LZW ΟΟΑΟΕΑ.

αΟΙΕ × ÷ΑΥΑΙ ΑΕΟΟΔΕΑΟΟΕ×Α ΙΑΟ libungif, ΟΕΑΡΑΕΟΑ ΕΙΘΕΑ ΙΑ ΑΠΠΑΥΙΑΕ ΟΟΟΑΙΕΑΑ libungif. οΑΕΙΕΡΑΟΕΕΑ ΔΙΑΟΙΑΠΠΟΟΕ ΟΙ. × GIF89a ΟΔΑΑΕΑΕΕΑΑΕΝΕ.

2.1.2. αΟΑΕΙ ΑΕΙΟΙΑΟΥ

MPlayer – ΥΟΙ ΔΟΙΕÇΟΥ×ΑΟΑΙΘ ΑΕΙΟΠΠ×, Α ΙΑ ΙΑΑΕΑ ΔΙΑΑΟ, ΕΙΘΝ ΠΙ ΠΠΟΑΟ ΔΟΙΕÇΟΥ×ΑΟΘ ΙΑΕΙΟΙΟΥΑ ΑΕΙΟΙΑΟΥ ΑΟΑΕΙ ΑΕΑΕΙΙ× (ΠΠΕ ΔΑΟΑΡΕΟΙΑΙΥ ΙΕΟΑ). υΟΙ ΙΑ Ν×ΙΝΑΟΟΝ ΟΑΕΠΠΑΙΑΟΑΙΥΙ ΔΟΕΙΑΙΑΙΕΑΙ MPlayer'Α, ÷ΑΙ ΙΟΡΥΑ ΕΟΔΠΠΟΥΙ×ΑΟΘ XMMMS.

2.1.2.1. MP3 ΑΕΑΕΙΥ

ο ÷ΑΟ ΠÇΟΟ ×ΙΥΙΕΕΙΟΘ ΔΟΙΑΙΑΙΥ ΔΟΕ ΔΟΙΕÇΟΥ×ΑΙΕΕ ΙΑΕΙΟΙΟΥΕ MP3 ΑΕΑΕΙΙ×, ΕΙΟΙΟΥΑ MPlayer ΑΟΑΑΟ ΙΑ×ΑΟΠΠ ΙΘΟΑΑΑΙΝΘΘ, ΕΑΕ MPEG'Ε Ε ΔΟΙΕÇΟΥ×ΑΟΘ ΙΑΔΟΑ×ΕΙΘΠΠ ΕΙΕ ×ΠΠΑΥΑ ΙΕΕΑΕ. υΟΙ ΙΑ ΠΠΟΑΟ ΑΥΟΘ ΕΟΔΟΑ×ΙΑΠΠ ΑΑΥ ΔΙΘΑΟΕ ΔΙΑΑΑΟΟΕΕ ΙΑΕΙΟΙΟΥΕ ΔΠΠΕΕΕ MPEG ΑΕΑΕΙΙ× Ε ΔΠΠΥΟΠΠΟ ×Οε ΙΟΟΑΙΑΟΟΝ ΕΑΕ ΑΟΟΘ ΙΑΠΠΥΟΕΠΠ ΑΟΑΘΥΑΙ. ΙΔΑΕΝ -demuxer, ΙΘΕΟΑΠΠΑΝ ΙΑ man ΟΟΟΑΙΕΑΑ, ΠΠΟΑΟ ÷ΑΙ ΔΠΠΠΘ × ΥΟΠΠ ΟΙΘΡΑΑ.

2.1.2.2. WAV ΑΕΑΕΙΥ

2.1.2.3. OGG/OGM ΑΕΑΕΙΥ (Vorbis)

οΘΑΑΘΑΟΟΝ ΔΟΑ×ΕΙΘΠΠ ΟΟΟΑΠΠ×ΙΑΠΠΥΑ libogg Ε libvorbis.

2.1.2.4. WMA/ASF ΑΕΑΕΙΥ

2.1.2.5. MP4 ΑΕΑΕΙΥ

2.1.2.6. CD ΑΟΑΕΙ

MPlayer ΠΠΟΑΟ ΕΟΔΠΠΟΥΙ×ΑΟΘ cdparanoia (ΑΕΑΙΕΙΟΑΕΘ) ΑΠΠ ΔΟΙΕÇΟΥ×ΑΙΕΝ CDDA (Audio CD[αΟΑΕΙ CD]). ÷ ΥΑΑΑΡΕ ΥΟΙÇΙ ΟΑΥΑΑΙΑ ΙΑ ×ΕΙΑΕΟ ΙΘΕΟΑΙΕΑ ×ΙΥΠΠΠΠΟΟΑΕ ΑΕΑΙΕΙΟΑΕΕ cdparanoia.

οΙ. ΙΑ man ΟΟΟΑΙΕΑΑ ΙΘΕΟΑΙΕΑ ΙΔΑΕΕ -cdda, ΕΙΟΙΘΑΝ ΠΠΟΑΟ ΕΟΔΠΠΟΥΙ×ΑΟΘΟΝ ΑΠΠ ΔΑΟΑΑΑΡΕ ΔΑΟΑΙΑΟΟΙ× × ΑΕΑΙΕΙΟΑΕΘ cdparanoia.

ÜÖİÖ Makefile.

```

cd ../../../../encore/build
mkdir linux
cd linux
cp path/Makefile .
make
cp libdivxencore.so /usr/local/lib
ln -s libdivxencore.so /usr/local/lib/libdivxencore.so.0
cp ../../src/encore.h /usr/local/include

```

MPlayer Á×ÖİİÁÓÉΠÁÓÉÉ ΙÁÈΙÁÉÖ DivX4/DivX5 ÁÓΙΕ İİÈ ÀÙΙΕ ΔΟÁ×ΕΙΘİİ ÖÓÖÁİİ×İÁİ, ΔΟİÖÖİ ÈİİΔΕΙΕÖÖÈÖÁ ÈÁÈ ΙÁÙΠİİ. áÓΙΕ İİ İÁ ΙÁÈΙÁÉÖ ÜÖİÖ ÈΙΑÁÈ, Öİ ÷Ù İÁΔΟÁ×ΕΙΘİİ ÖÓÖÁİİ×ΕΙΕ ÈΙΕ ÖÈİİÆΕÇÖÖÈÖİ×ÁΙΕ DivX4/DivX5.

2.2.1.2. FFmpeg/libavcodec

FFmpeg ÖİÄÄÖÖÈÖ ΔÁÈÄÖ ÈΙΑÁÈİ× Ö İÖÈÖÙÖÙΙ ΕÓÈΙΑİÙΙ ÈΙΑİİ, ÈİÖİÖÙÈ ÖΔİÖİÁÄİ ÄÄÈΙΑÈÖİ×ÁÓØ ΔİÖİÈÈ, ÚÁÈΙΑÈÖİ×ÁİİÙÁ ÒÁÙΙÈΠİÙΙÈ ×ÈÁÄİ È ÁÓÄÈΙ ÈΙΑÁÈÁΙÈ. εÖİİÁ ÖİÇİ, ÜÖİÖ ΔÁÈÄÖ ΔΟÁÄİÖÓÁ×İÑÁÖ ΔİÖÖÑÓÁÁÝÈÁ ÈΙΑÈÖÖÁÝÈÁ ×İÙİİÖİİÓÓÈ, ΔΟÈΠÈİ ΔΟİÈÚ×ΙΑÈÖÁİΘİİÓØ ×ÙÙÁ, ΠÁİ Ö Win32 ÈΙΑÁÈİ× ÈΙÈ DivX.com DivX4/5 ÄÈÁİÈİÖÁÈÈ!

İİ ÖİÄÄÖÖÈÖ İİİÖÁÓÖ×İ ÈİÖİÙÈÈ ÈΙΑÁÈİ×, ÈÚ ÈİÖİÖÙÈ ΙÁÈÁİİÁÁ ×ÁÖİÙΙÈ Ñ×İÑÁÓÖÑ ×ÁÖÈÁİÖÙ MPEG4: DivX3, DivX4, DivX5, Windows Media Video 7/8 (WMV1/WMV2). ôÁÈÖÁ ×ÁÓØΙΑ ÈΙÖÁÒÁÓÁİ ÄÄÈΙΑÄÖ WMA.

İÁÈİİÁÄ, ΔİÖİÁÄİÈÈ ÈΙΑÁÈİİ, ÚÁÓΙÖÖÈ×ÁÁÝÈÈ ×İÈΙΑİÈÑ ÜÖİ Sorenson 3(SVQ3) ÈΙΑÁÈ. üÖİ ΔÁÖ×ÁÑ ÖÁÄİÈÚÁÄÈÑ ÜÖİÇİ ÈΙΑÁÈÁ Ö ΔİİİÖÓØΑ ΙÖÈÖÙÖÙΙ ΕÓÈΙΑİÙΙ ÈΙΑİİ. İİÁ ÄÁÖÁ ÄÙÓÖÖÁ İÖÈÇÈΙΑİÁ. εÓΔİİØÚÖÈÖÁ Å£, ×İÁÓÖİ Ä×İÈΠİÇİ ÈΙΑÁÈÁ!

ðİİÙÈ ÖΔÈÖİÈ ÄİÖÖÖΔİÙÈ ÈΙΑÁÈİ× ÄİÖÖÖΔÁİ İÁ ÖÓÖÁİÈÄÄ FFmpeg. ðİÄÄÄÖÖÈ×ÁÄİÙÁ ×ÈÁÄİ È ÁÓÄÈΙ ÈΙΑÁÈÈ.

áÓΙÈ ×Ù ΕÓΔİİØÚÖÁÖÁ ÒÁΙÈÚ MPlayer'Á, Öİ Ö ÷ÁÓ × ΔÁÈÁÖÁ ÖÖÁ ÁÓÓØ libavcodec, ΔΟİÖÖİ ÈİİΔΕΙΕÖÖÈÖÁ ÈÁÈ ΙÁÙΠİİ. áÓΙÈ ÷Ù ΕÓΔİİØÚÖÁÖÁ MPlayer ÈÚ CVS, ÷Ù ÄİİÖİÙ ÈÚ×ΙΑΠØ libavcodec ÈÚ CVS ÄÄÖÁ×Á FFmpeg, ΔİÖÈİİΘÈÖ ÒÁΙÈÚÙ FFmpeg İÁ İΠÁİØ ÒÁÄÈÈ. εÁÈ ΔΟÁ×Èİİ, CVS ÄİÖÖÁÖİΠİİ ÖÓÁÁÈΙΑİ È ΔΟÁÄİÖÓÁ×İÑÁÖ ÄİİØÙÁ ×İÙİİÖİİÓÓÁÈ. ΠÖİÁÙ ÜÖİ ÖÁÄΙΑÖØ:

1. `cvs -d:pserver:anonymous@mplayerhq.hu:/cvsroot/ffmpeg login`
2. `cvs -d:pserver:anonymous@mplayerhq.hu:/cvsroot/ffmpeg co ffmpeg`
3. ðÄÖÁΙΑÓÓÈÖÁ ÈÁÖÁİİÇ libavcodec ÈÚ ΕÓÈΙΑİİÇİ ÈΙΑÁ FFmpeg × ÈİÖÁİØ MPlayer'İ×ÖÈİÇİ CVS ÄÄÖÁ×Á. üÖİ ÄİİÖİİ ×ÙÇİÑÁÁÖØ ÖÁÈ: main/libavcodec

`óÈİ×İÈΠÁÓÈİÈ ÖÓÙΙÈÈ İÁ ÄİÖÖÁÖİΠİİ, ÷Ù ÄİİÖİÙ ÖÈİΔÈÖİ×ÁÓØ/ΔÁÒÁΙΑÓÓÈÈØ ÅÇİ!`
4. áÓΙÈ ÷Ù ÈİÖÈÖÁ, ΠÖİÁÙ libavcodec İÁİİ×İÑİÖÑ ÈÁÖÁÙÈ ÖÁÚ, ÈİÇÁÁ ÷Ù İÁİİ×İÑÁÖÁ MPlayer'İ×ÖÈÈÈ CVS, ÄİÄÁ×ØÖÁ ÖÁÈÖÁ ÖÖÖİΠÈÖ ×ÆÁÈİ: main/CVS/Entries:

`D/libavcodec////`
5. óÈİİΔΕΙΕÖÖÈÖÁ. `configure ÄİİÖÁİ İΔÖÁÄÁİÈÖØ ΔΟİΙΑİÁİÙ Äİ ÈİİΔΕİÑÁÈÈ.`

ύΆΪΆΠΆΪΈΆ

MPlayer Έΰ CVS ΟΪΆΆΟΰΈΟ ΔΪΆΈΆΟΆΪΪÇ libavcodec, ΪΪ ΪΪ ΪΆ ΟΪΆΆΟΰΈΟ ΈΟΈΪΆΪΪΈ ΈΪΆ ΆΪΝ libavcodec! ÷ΰ ΆΪΪΟΪΪ ΟΪΆΆΪ×ΆΟØ ÕΈΆΰΆΪΈΝΪ, ΔΟΈ×ΆΆΈΪΪΪ ×ΰΰΆ, ΡΟΪΆΰ ΔΪΪΟΡΈΟØ ΈΟΈΪΆΪΪΈ ΈΪΆ ΰΟΪΈ ΆΈΆΪΈΪΟΆΈΈ.

ó Ffmpeg Έ ΪΆΈ Matrox G400, Ñ ΆΆΟΆ ΪΪÇØ ΟΪΪΟΟΆΟØ DivX ΆΈΪØΪΪ Ó ×ΰΟΪΡΆΈΪΪΪ ΟΆΰΟΆΰΆΪΈΆΪ ΆΆΰ ΔΟΪΔΟΟΈΆΆΪΪΪΈ ΈΆΆΟΪ× ΪΆ ΪΪΆΪ K6-2 500.

2.2.1.3. XAnim'Ϊ×ΟΈΈΆ ΈΪΆΆΈΈ

ύΆΪΆΠΆΪΈΆ

ΪΆΔΟΆΟΈΟΆ ×ΪΈΪΆΪΈΆ, ΡΟΪ XAnim'Ϊ×ΟΈΈΆ ΆΈΪΆΟΪΪΰΆ ΈΪΆΆΈΈ ΟΑΟΔΟΪΟΟΔΆΪΝΆΟΟÑ Ó ΪΆΆΪØΰΈΪ ΟΆΈΟΟΪΪ, Ø×ΆΟØΆΆΰΈΪ, ΡΟΪ ΰΟΪ ΪΈΆΆΪΪΪΈΝ Έ ΔΪΪΈΪ ΔΟΪΡΈΈ ΰΆΔΟΆΟΪ×, ΰΆΔΟΆΰΆΰΈΪ ΈΟΔΪΪØΪΪ×ΆΪΈΆ ΰΟΈΈ ΈΪΆΆΈΪ× Ó ΪΆΆΪΈ ΔΟΪÇΟΆΪΪΈ ΈΟΪΪΆ XAnim'Ά. óΆΪ ΪΆ ΪΆΪΆ, Ά×ΟΪΟ XAnim'Ά Άΰ£ ΆΪΪΟΆΪ Άΰ£ ΔΟΪΈΰ×ΆΟΟΈ ΆΔΈΆΈΡΆΟΈΈΆ ΆΆΈΟØ×ΈΝ ΔΪ ΪΟΪΪΟÑΰΈΪΟÑ Έ ΈΪΆΆΈΆΪ ×ΪΔΟΪΟΆΪ.

óóóáΪ÷έá έ έóóΪΪΪΪ÷άΪέá.š MPlayer ΟΔΪΟΪΆΪ ΈΟΔΪΪØΪΪ×ΆΟØ XAnim'Ϊ×ΟΈΈΆ ΈΪΆΆΈΈ ΆΪΝ ΆΆΈΪΆΈΟΪ×ΆΪΈΝ. ΡΟΪΆΰ ×ΈΪΆΡΈΟØ ΈΈ, ΟΪΆΆΟΈΟΆ ΈΪΟΟØΟΈΆΈΝΪ:

1. óΈΆΡΆΈΟΆ ΈΪΆΆΈΈ, ΈΪΟΪΟΰΆ ÷ΰ ΈΪΟΈΟΆ ΈΟΔΪΪØΪΪ×ΆΟØ, Ó ΟΆΈΟΆ XAnim site. 3ivx ΈΪΆΆΈΆ ΟΆΪ ΪΆΟ, ΪΪ ΆÇΪ ΪΪΟΪΪ ΪΆΈΟΈ ΪΆ ΟΆΈΟΆ 3ivx.
2. έέ ΟΈΆΡΆΈΟΆ ΔΆΈΆΟ ΈΪΆΆΈΪ× Ó ΪΆΰΆΈ ΟΟΟΆΪΈΆΰ ΈΪΆΆΈΪ×
3. έΟΔΪΪØΰΟΈΟΆ ΪΔΆΈΆ --with-xanimlibdir, ΡΟΪΆΰ ΟΪΪΆΰΈΟØ configure, ÇΆΆ ΪΆΈΪΆÑΟΟÑ XAnim'Ϊ×ΟΈΈΆ ΈΪΆΆΈΈ. ðΪ ΟΪΪΡΆΪΈΆ, ΪΪ ΈΈ ΈΰΆΟ × /usr/local/lib/codecs, /usr/local/lib/xanim/mods, /usr/lib/xanim/modsÉ /usr/lib/xanim. ÷ΪΆΟΟΪ ΰΟΪÇΪ, ÷ΰ ΪΪΟΆΟΆ ΟΟΟΆΪΪ×ΈΟØ ΰΪΆΡΆΪΈΆΪ ΔΆΟΆΪΆΪΪΈ ΟΟΆΰ ΪΈΟΟΟΆΪΈΝ XANIM_MOD_DIR ΈΆΟΆΪΪÇ Ó XAnim'Ϊ×ΟΈΈΪΈ ΈΪΆΆΈΆΪΈ.
4. ðΆΟΆΈΪΆΪΟΈΟΆ/ΟΪΰΆΆΈΟΆ ΟΈΪ×ΪΈΡΆΟΈΈΆ ΟΟΰΪΈΈ, ΟΆΟΆ× ΡΆΟΟΈ, ΪΟΪΪΟÑΰΈΆΟÑ Έ ΆΟΈΈΟΆΈΟΟΟΆ ΟΆΈ, ΡΟΪΆΰ ΆΈΆΪΪΪ ΪΆΰΰ×ΆΪΈΟØ ΟΆΈ: vid_cvid.xa, vid_h263.xa, vid_iv50.xa

XAnim – ΰΟΪ ΟΆΪΆΈΟΟ×Ϊ ×ΈΆΆΪ ΈΪΆΆΈΪ× xanim, ΔΪΪΰΟΪΪØ ÷ΰ ΪΪΟΆΟΆ ΈΟΔΪΪØΪΪ×ΆΟØ ΪΔΆΈΆ -vfm xanim, ΡΟΪΆΰ ΰΆΟΟΆ×ΈΟØ MPlayer ΈΟΔΪΪØΪΪ×ΆΟØ ΈΈ, ΆΟΪΈ ×ΪΰΪΪΪ.

óΆΟΟΈΟΪ×ΆΪΪΰΆ ΈΪΆΆΈΈ ΰΟΪ: **Indeo 3.2, 4.1, 5.0, CVID, 3ivX, h263.**

2.2.1.4. VIVO ×ΈΆΆΪ

MPlayer ΪΪΟΆΟ ΔΟΪΈÇΟΰ×ΆΟØ Vivo (1.0 and 2.0) ΆΈΪØΪΪ. ΪΆΈΆΪΪΆ ΔΪΆΈΪΆÑΰΈΈ ΈΪΆΆΈ ΆΪΝ 1.0 ΆΈΪΪΪ× – ΰΟΪ Ffmpeg'Ϊ×ΟΈΈΈ H263 ΆΆΈΪΆΪΟ, ÷ΰ ΪΪΟΆΟΆ ×ΈΪΆΡΈΟØ ΆÇΪ ΈΟΔΪΪØΪΪ×ΆΪΈΆ ΪΔΆΈΆΈ -vc ffh263. áΪΝ 2.0 ΆΈΪΪΪ× ΈΟΔΪΪØΰΟΈΟΆ Win32 DLL (ΪΔΆΈΝ -vc vivo). áΟΪΈ ÷ΰ ΪΆ ΟΈΆΟΆΟΆ ΪΔΆΈΆ × ΈΪΪΆΪΆΪΈ ΟΟΟΪΈΆ, MPlayer Ά×ΟΪΪΆΟΈΡΆΟΈΈ ×ΰΆΆΟΆΟ ΪΟΡΰΈΈ ΆΪΟΟØΔΪΪΪΈ ΈΪΆΆΈ.

- Sorenson 3 (fourcc SVQ3) – ΑΑΕΙΙΑΕΟΙ×ΑΙΕΑ ΔΙΑΑΑΟΟΕ×ΑΑΟΟΝ, ΕΟΘΠΘΟΥΟΝ "ΟΙΑΠΕ" ΕΙΑΕ (libavcodec)

ΕΙΔΕΙΝΑΕΝ MPLAYER'Α Ο ΔΙΑΑΑΟΟΕΙΕ ΑΕΑΙΕΙΟΑΕ QUICKTIME

ΥΑΙΑΡΑΙΕΑ

× ΙΑΟΟΙΝΥΕΕ ΠΙΑΙΟ ΔΙΑΑΑΟΟΕ×ΑΑΟΟΝ ΟΠΘΕΙ 32ΑΕΟΙ×ΥΑ Intel'Α×ΟΕΕΑ ΔΙΑΟΑΕΙΟΙΥ.

1. ΟΕΑΡΑΕΟΑ MPlayer'Ι×ΟΕΕΕ CVS
2. ΟΕΑΡΑΕΟΑ ΔΑΕΑΟ QuickTime DLL Ο <http://www.mplayerhq.hu/MPlayer/releases/codecs/>
3. ΟΑΟΔΑΕΟΕΟΑ ΔΑΕΑΟ QuickTime DLL × ÷ΑΥ ΕΑΟΑΙΙÇ Win32 ΕΙΑΑΕΙ× (ΔΙ ΟΠΠΡΑΙΕΑ: /usr/local/lib/codecs)
4. ΟΕΠΔΕΙΕΟΕΟΑ MPlayer

2.2.2. ΑΟΑΕΙ ΕΙΑΑΕΕ

ΙΑΕΑΠΙΑ ×ΑΟΙΥΙΕ ΑΟΑΕΙ ΕΙΑΑΕΑΙΕ ΟΟΑΕ ×ΟΑΕ Ν×ΙΝΑΟΟΝ:

- MPEG layer 1/2/3 (MP1/2/3) ΑΟΑΕΙ ("ΟΙΑΠΕ" ΕΙΑ, Ο MMX/SSE/3DNow! ΙΘΟΕΙΕΥΑΑΕΑΕ)
- Windows Media Audio 7 É 8 (aka WMAv1 É WMAv2) ("ΟΙΑΠΕ" ΕΙΑ, Ο libavcodec)
- Windows Media Audio 9 (WMAv3) (ΕΟΘΠΘΟΥΟΝ DMO DLL)
- AC3 Dolby ΑΟΑΕΙ ("ΟΙΑΠΕ" ΕΙΑ, Ο MMX/SSE/3DNow! ΙΘΟΕΙΕΥΑΑΕΑΕ)
- AC3 ΔΟΙΕΙΑΝΥΕΕ ΡΑΟΑΥ Υ×ΟΕΙ×ΙΑ ΙΑΙΟΟΑΙ×ΑΙΕΑ
- AAC
- Ogg Vorbis ΑΟΑΕΙ ΕΙΑΑΕ (ΟΙΑΙΑΝ ΑΕΑΙΕΙΟΑΕΑ)
- RealAudio: DNET (AC3 Ο ΙΕΥΕΕΙ ΑΕΟΘΙΟΙΕΙ), Cook, Sipro É ATRAC3
- QuickTime: Qualcomm É QDesign ΑΟΑΕΙ ΕΙΑΑΕΕ
- VIVO ΑΟΑΕΙ (g723, Vivo Siren)
- Voxware ΑΟΑΕΙ (ΕΟΘΠΘΟΥΟΝ DirectShow DLL)
- alaw É ulaw, ΟΑΥΙΕΠΙΥΑ gsm, adpcm É pcm ΑΙΟΙΑΟΟΥ É ΑΟΟÇΕΑ ΔΟΙΟΟΥΑ ΟΟΑΟΥΑ ΑΟΑΕΙ ΕΙΑΑΕΕ

2.2.2.1. ΔΟΙÇΟΑΙΠΙΑ ΑΑΕΙΑΕΟΙ×ΑΙΕΑ AC3

υΟΙ ΑΑΕΙΑΑΟ, ΕΟΘΠΘΟΥΟΑΙΥΕ, ΔΙ ΟΠΠΡΑΙΕΑ, ΑΙΝ ΑΕΑΕΙ× Ο AC3 ΑΟΑΕΙ

αΑΕΙΑΑΟ AC3 ΠΟΑΟ ΟΙΥΑΑ×ΑΟΘ ΑΟΑΕΙ ×Υ×ΙΑ ΙΕΕΥΕΟΙ×ΑΙΥΕ ΑΙΝ 2, 4 ΕΙΕ 6 ΕΠΠΠΕ. αΟΑΟΡΕ ΟΕΠΛΕÇΟΔΕΟΙ×ΑΙΥΙ ΑΙΝ 6 ΕΠΠΠΕ, ΥΟΙΟ ΑΑΕΙΑΑΟ ΔΟΑΑΙΟΟΑ×ΙΝΑΟ ΟΑΥΑΑΙΘΙΥΕ ×Υ×ΙΑ ×ΟΑΕ AC3 ΕΑΙΑΙ× Υ×ΟΕΙ×ΠΙΟ ΑΟΑΕ×ΑΟΟ, ΔΙΥ×ΠΠΝ ΔΠΡΕΟΘ "Υ×ΟΕ ×ΙΕΟΟÇ" ΑΑΥ ×ΙΑΥΙΑÇΙ AC3 ΑΑΕΙΑΑΟΑ, ΙΑΙΑΕΙΑΕΙÇΙ ΑΙΝ ΕΟΘΠΘΟΥΙ×ΑΙΕΝ hwac3 ΕΙΑΑΕΑ.

ΕΟΘΠΘΟΥΟΕΟΑ ΙΔΑΕΑ -channels, ΡΟΙΑΥ ×ΥΑΟΑΟΘ ΕΠΠΡΑΟΟ×Ι ΕΑΙΑΙ× ΔΟΕ ×Υ×ΙΑΑ. ΕΟΘΠΘΟΥΟΕΟΑ -channels 2 ΑΙΝ ΙΕΕΥΕΟΙ×ΑΙΕΝ ΑΙ ΟΟΑΟΑΙ. ΑΙΝ ΙΕΕΥΕΟΙ×ΑΙΕΝ ΑΙ 4 ΕΑΙΑΙ× (×Υ×ΙΑΥ Left Front[ιΑ×ΥΕ ΔΑΟΑΑΙΕΕ], Right Front [δΟΑ×ΥΕ ΔΑΟΑΑΙΕΕ], Left Surround[ιΑ×ΥΕ υΑΑΙΕΕ] É Right Surround[δΟΑ×ΥΕ υΑΑΙΕΕ]), ΕΟΘΠΘΟΥΟΕΟΑ -channels 4. ÷ ΥΟΠ ΟΙΟΡΑΑ ×ΟΑ ΑΑΙΟΟΑΙΘΙΥΑ ΕΑΙΑΙΥ ΑΟΑΟΘ ΟΙΕΕΥΕΟΙ×ΑΙΥ ΑΙ ΟΟΙ×ΙΝ ΔΑΟΑΑΙΕΕ ΕΑΙΑΙ×. -channels 6 ΑΟΑΑΟ ×Υ×ΙΑΕΟΘ ×ΟΑ AC3 ΕΑΙΑΙΥ ΟΑΕ, ΕΑΕ ΠΕ ΥΑΕΙΑΕΟΙ×ΑΙΥ – ΔΙ ΔΙΟΝΑΕΟ: Left[ιΑ×ΥΕ], Right[δΟΑ×ΥΕ], Left Surround[ιΑ×ΥΕ υΑΑΙΕΕ], Right Surround[δΟΑ×ΥΕ υΑΑΙΕΕ], Center[αΑΙΟΟΑΙΘΙΥΕ] É LFE.

Sorenson video codec.

2.2.2.8. AAC ΕΙΛΑΕ

AAC (Advanced Audio Coding) – ÜŌİ ΕΙΛΑΕ, ΕΙΙÇĂĂ İĂİĂŌŌŌÉ×ĂĂİÛÊ × MOV É MP4 ΑΕΕΙΛΑΕ. äĀĒİĂĂŌ Ó İŌĒŌŪŌŪİ ÉŌĒİĂİŪİ ΕΙΛΑΕ, İĂŪŪ×ĂĂİÛÊ FAAD, ÄİŌŌŌĐĂİ Ó <http://www.audiocoding.com>. MPlayer ×ĒİΛΡĂĂŌ × ŌĂĂÑ libfaad 2.0RC1, ĐİŪŌİŌ ÷Ăİ İĒΡĂÇİ İĂ İŌŌİ ÄİĐİİĒŌĂİŌİİ ŌĒĂΡÉ×ĂŌŌ.

ăŌİÉ ÷Ū ÉŌĐİİŪŪŌĂŌ gcc 3.2, ĒİŌİŌŪÊ İĂ İİŌĂŌ ŌĒİİĐĒİĒŌİ×ĂŌŌ ×ŌŌŌİĂİŪÊ FAAD, ĒĒĐŌİŌŌİ ĒİŌĒŌĂ ÉŌĐİİŪŪİ×ĂŌŌ ×İĂŪİĂĂ ÄĒİĒİŌĂĒŌ, ŌĒĂΡĂĂŌĂ ĂĒ Ó ŌŌŌĂİĒĂŪ ŌĒĂΡÉ×ĂİĒÉ É ŌĒĂŌĒŌĂ configure --with-externalfaad. ÷Ăİ İĂ İŌŌĂİ ×ĂŌŌ faad2, ΡŌİĂŪ ĂĂĒİĂĒŌİ×ĂŌŌ AAC ΑΕΕΙŪ, ÄİŌŌĂŌİΡİİ libfaad. ÷İŌ ĒĂĒ ÷Ū İİŌĂŌĂ ĂĒ ŌİĂŌĂŌŌ:

```
cd faad2/
chmod +x bootstrap
./bootstrap
./configure
cd libfaad
make
make install
```

ăĒİĂŌĒĒĒ İŌŌŌŌŌŌ×ŌĂŌ İĂ audiocoding.com, İİ ×Ū İİŌĂŌĂ ŌĒĂΡĂŌŌ (apt-get) Debian ĐĂĒĂŌŪ Ó ÄİĂŪİĂĒ ŌŌŌĂİĒĂŪ Christian Marillat, Mandrake RPMİĒĒĒ Ó P.L.F É RedHat RPMİĒĒĒ Ó ÄİĂŪİĂĒ ŌŌŌĂİĒĂŪ Dominik Mierzejewski.

2.2.3. äăĒ ÉŪ×İΛΡŌ ĒİΛΑΕ ÉŪ Win32

2.2.3.1. VFW ĒİΛΑĒĒ

VFW (Video for Windows[÷ĒĂĂİ ÄİÑ Windows]) – ÜŌİ ŌŌĂŌŪĂ ÷ĒĂĂİ API ÄİÑ Windows. ō ŪŌĒĒ ĒİΛΑĒİ× ŌĂŌŪĒŌĂİĒĒ .DLL ĒİĒ (ŌĂŌĂ) .DRV . äŌİÉ MPlayer İĂ İİŌĂŌ ĐŌİĒÇŌŪ×ĂŌŌ ÷ĂŪ AVI Ó ŌĂĒİÇİ ŌİĂĂ ŌİİĂŸĂİĒĂİ:

UNKNOWN video codec: HFYU (0x55594648)

üŌİ ŪİΛΡĒŌ, ΡŌİ ÷ĂŪ AVI ŪĂĒİĂĒŌİ×Ăİ ĒİΛΑĒĒİ Ó fourcc[ĒİĂİİ ÉŪ 4 ŌĒİ×İİİ×] HFYU (HFYU = HuffYUV ĒİΛΑĒĒ, DIV3 = DivX Low Motion, É Ō. Đ.). ōĐĂŌŌŌ, ĒİÇĂĂ ÷Ū ŪŌİ ŪİĂĂŌĂ, ÷Ū ÄİŌİŪ İĂĒŌĒ DLL, ĒİŌİŌŌĂ Windows ŪĂÇŌŌŌĂŌ ÄİÑ ĐŌİĒÇŌŪ×ĂİĒĒ ŪŌİÇİ ΑΕΕΙĂ. ÷ İĂŪĂİ ŌİŌΡĂĂ, × ΑΕΕΙĂ system.ini ĂŌŌŌ ŪŌĂ ĒİĒİŌİĂĂĒĒ, × ŪŌİĒ ŌŌŌİĒĂ:

```
VIDC.HFYU=huffyuv.dll
```

ŪİΛΡĒŌ, ÷Ăİ İŌŌĂİ ΑΕΕİ huffyuv.dll. ŪĂİĂŌŌŌĂ, ΡŌİ ĂŌĂĒİ ĒİΛΑĒĒÉ ÉŌĐİİŪŪŌĂ ĐŌĂĒĒĒŌ MSACM:

```
msacm.l3acm=L3codeca.acm
```

üŌİ MP3 ĒİΛΑĒĒ. ōĐĂŌŌŌ Ō ÷ĂŌ ĂŌŌŌ ×ŌÑ İĂİĂĒİĂĒİĂÑ ĒİĒİŌİĂĂĒĒ (fourcc, ΑΕΕİ Ō ĒİΛΑĒĒİ, ĐŌĒİĂŌ AVI), ĐŌĂĂŌŌĂ×ŌŌĂ İĂ ŌĂŌŌİŌŌĂİĒĂ ŪĂĐŌİŌ İ ĐİĂĂĂŌŌĒĂ ÷ĂŪĂÇİ ĒİΛΑĒĒĂ Đİ ĐİΡŌĂ É ŪĂÇŌŌŪĒŌ ŪŌĒ ΑΕΕİŪ İĂ FTP ŌĂĒŌ:

```
ftp://ftp.mplayerhq.hu/MPlayer/incoming/[codecname]/
```

2.2.2. äŌĂĒİ ĒİΛΑĒĒĒ

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άΌΐΈ ΔΐΈΌΈ ΐΆ ΌΆΆξΌΌΨ, ΔΐΔΌΐΆΌΈΌΆ ×ΈΐΆΐΈΌ ×ΌΆ ÇΆΐΐΈΈ. ÷Û ΐΐΌΆΌ ΔΐΐΌΐΈΌ ΐΐΌΐÛΆ
 ΐΐΆΐΆΐΈΨ, ΐΐ ÷Άΐ ΐΐΌΆΌ Δΐ×ΆΌΌΈ...

δΆΔΆΌØ Õ ÷ΆΌ ΆΌΌØ ×ΌΨ ΐΆΐΆΈΐΆΈΐΆΨ ΈΐΈΐΌΐΆΆΈΨ (fourcc, GUID, ΆΈΆΈΐ Ó ΈΐΆΆΈΐΐ, ΔΌΈΐΆΌ
 AVI), ΔΌΆΆΌΌΆ×ØΌΆ ΐΆ ΌΆΌΌΐΐΌΔΆΐΈΆ ΐΆΔΌΐΌ ΐ ΔΐΐΆΆΆΌΌΈΆ ÷ΆÛΆÇΐ ΈΐΆΆΈΆ Δΐ ΔΐΐΌΆ Έ
 ΐΆÇΌΌΐΈΌΆ ÛΌΈ ΆΈΆΈÛ ΐΆ FTP ÓΆΈΌ:

ftp://ftp.mplayerhq.hu/MPlayer/incoming/[codecname]/

2.3. δΌΌΌΐΈΌΌ×Ά ×Û×ΐΆΆ

2.3.1. Video output devices

2.3.1.1. Setting up MTRR

It is VERY recommended to check if the MTRR registers are set up properly, because they can give a big performance boost.

Do a **cat /proc/mtrr**:

```
--($:~)-- cat /proc/mtrr
reg00: base=0xe4000000 (3648MB), size= 16MB: write-combining, count=9
reg01: base=0xd8000000 (3456MB), size= 128MB: write-combining, count=1
```

It's right, shows my Matrox G400 with 16MB memory. I did this from XFree 4.x.x , which sets up MTRR registers automatically.

If nothing worked, you have to do it manually. First, you have to find the base address. You have 3 ways to find it:

1. from X11 startup messages, for example:

```
(--) SVGA: PCI: Matrox MGA G400 AGP rev 4, Memory @ 0xd8000000, 0xd4000000
(--) SVGA: Linear framebuffer at 0xD8000000
```

- from /proc/pci (use **lspci -v** command):

```
01:00.0 VGA compatible controller: Matrox Graphics, Inc.: Unknown device 0525
Memory at d8000000 (32-bit, prefetchable)
```

- from mga_vid kernel driver messages (use **dmesg**):

```
mga_mem_base = d8000000
```

Then let's find the memory size. This is very easy, just convert video RAM size to hexadecimal, or use this table:

1 MB	0x100000
2 MB	0x200000
4 MB	0x400000
8 MB	0x800000

MPlayer – The Movie Player for LINUX

16 MB 0x1000000

32 MB 0x2000000

You know base address and memory size, let's setup MTRR registers! For example, for the Matrox card above (base=0xd8000000) with 32MB ram (size=0x2000000) just execute:

```
echo "base=0xd8000000 size=0x2000000 type=write-combining" >| /proc/mtrr
```

Not all CPUs support MTRRs. For example older K6-2's (around 266MHz, stepping 0) doesn't support MTRR, but stepping 12's do (**cat /proc/cpuinfo** to check it).

2.3.1.2. Video outputs for traditional video cards

2.3.1.2.1. Xv

Under XFree86 4.0.2 or newer, you can use your card's hardware YUV routines using the XVideo extension. This is what the option '-vo xv' uses. Also, this driver supports adjusting brightness/contrast/hue/etc (unless you use the old, slow DirectShow DivX codec, which supports it everywhere), see the man page.

In order to make this work, be sure to check the following:

1. You have to use XFree86 4.0.2 or newer (former versions don't have XVideo)
2. Your card actually supports hardware acceleration (modern cards do)
3. X loads the XVideo extension, it's something like this:

```
(II) Loading extension XVideo
```

```
in /var/log/XFree86.0.log
```

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This loads only the XFree86's extension. In a good install, this is always loaded, and doesn't mean that the **card's** XVideo support is loaded!

- Your card has Xv support under Linux. To check, try **xvinfo**, it is the part of the XFree86 distribution. It should display a long text, similar to this:

```
X-Video Extension version 2.2
screen #0
  Adaptor #0: "Savage Streams Engine"
    number of ports: 1
    port base: 43
    operations supported: PutImage
    supported visuals:
      depth 16, visualID 0x22
      depth 16, visualID 0x23
    number of attributes: 5
  (...)
    Number of image formats: 7
      id: 0x32595559 (YUY2)
      guid: 59555932-0000-0010-8000-00aa00389b71
      bits per pixel: 16
      number of planes: 1
      type: YUV (packed)
```

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```
id: 0x32315659 (YV12)
guid: 59563132-0000-0010-8000-00aa00389b71
bits per pixel: 12
number of planes: 3
type: YUV (planar)
(...etc...)
```

It must support YUY2 packed, and YV12 planar pixel formats to be usable with MPlayer.

- And finally, check if MPlayer was compiled with 'xv' support. Do a **mplayer -vo help | grep xv** If 'xv' support was built a line similar to this should appear:

```
xv      X11/Xv
2.3.1.2.1.1. 3dfx cards
```

Older 3dfx drivers were known to have problems with XVideo acceleration, it didn't support either YUY2 or YV12, and so. Verify that you have XFree86 version 4.2.0 or greater, it works OK with YV12 and YUY2. Previous versions, including 4.1.0, **crashes with YV12**. If you experience strange effects using `-vo xv`, try SDL (it has XVideo, too) and see if it helps. Check the [SDL](#) section for details.

OR, try the NEW `-vo tdfxfb` driver! See the [tdfxfb](#) section.

2.3.1.2.1.2. S3 cards

S3 Savage3D's should work fine, but for Savage4, use XFree86 version 4.0.3 or greater (in case of image problems, try 16bpp). As for S3 Virge: there is xv support, but the card itself is very slow, so you better sell it.

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It's currently unclear which Savage models lack YV12 support, and convert by driver (slow). If you suspect your card, get a newer driver, or ask politely on the mplayer-users mailing list for an MMX/3DNow enabled driver.

2.3.1.2.1.3. nVidia cards

nVidia isn't always a very good choice under Linux (according to nVidia, this is not true)... XFree86's open-source driver supports most of these cards, but for some cases, you'll have to use the binary closed-source nVidia driver, available at [nVidia's web site](#). You'll always need this driver if you want 3D acceleration, too.

Rival28 cards don't have XVideo support with XFree86's nVidia driver :(Complain to nVidia.

However, MPlayer contains a [VIDIX](#) driver for most nVidia cards. Currently it is in beta stage, and has some drawbacks. For more information, see [nVidia VIDIX](#) section.

2.3.1.2.1.4. ATI cards

The [GATOS driver](#) (which you should use, unless you have Rage128 or Radeon) has VSYNC enabled by default. It means that decoding speed (!) is synced to the monitor's refresh rate. If playing seems to be slow, try disabling VSYNC somehow, or set refresh rate to a n*(fps of the movie) Hz.

Radeon VE – if you need X, use XFree86 4.2.0 or greater for this card. No TV out support. Of course with MPlayer you can happily get **accelerated** display, with or without **TV output**, and no libraries or X are needed. Read the [VIDIX](#) section.

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MPlayer – The Movie Player for LINUX

2.3.1.2.1.5. NeoMagic cards

These cards can be found in many laptops. You must use XFree86 4.3.0 or above, or else use Stefan Seyfried's [Xv-capable drivers](#). Just choose the one that applies to your version of XFree86.

XFree86 4.3.0 includes Xv support, yet Bohdan Horst sent a small [patch](#) against the XFree86 sources that speeds up framebuffer operations (so XVideo) up to four times. The patch has been included in XFree86 CVS and should be in the next release after 4.3.0.

To allow playback of DVD sized content change your XF86Config like this:

```
Section "Device"
    [...]
    Driver "neomagic"
    Option "OverlayMem" "829440"
    [...]
EndSection
```

2.3.1.2.1.6. Trident cards

If you want to use xv with a trident card, provided that it doesn't work with 4.1.0, install XFree 4.2.0. 4.2.0 adds support for fullscreen Xv support with the Cyberblade XP card.

Alternatively, MPlayer contains a [VIDIX](#) driver for the Cyberblade/i1 card.

2.3.1.2.1.7. Kyro/PowerVR cards

If you want to use Xv with a Kyro based card (for example Hercules Prophet 4000XT), you should download the drivers from the [PowerVR site](#)

2.3.1.2.2. DGA

PREAMBLE.§ This document tries to explain in some words what DGA is in general and what the DGA video output driver for MPlayer can do (and what it can't).

WHAT IS DGA.§ DGA is short for *Direct Graphics Access* and is a means for a program to bypass the X server and directly modifying the framebuffer memory. Technically spoken this happens by mapping the framebuffer memory into the memory range of your process. This is allowed by the kernel only if you have superuser privileges. You can get these either by logging in as `root` or by setting the SUID bit on the MPlayer executable (**not recommended**).

There are two versions of DGA: DGA1 is used by XFree 3.x.x and DGA2 was introduced with XFree 4.0.1.

DGA1 provides only direct framebuffer access as described above. For switching the resolution of the video signal you have to rely on the XVidMode extension.

DGA2 incorporates the features of XVidMode extension and also allows switching the depth of the display. So you may, although basically running a 32 bit depth X server, switch to a depth of 15 bits and vice versa.

However DGA has some drawbacks. It seems it is somewhat dependent on the graphics chip you use and on the implementation of the X server's video driver that controls this chip. So it does not work on every system...

MPlayer – The Movie Player for LINUX

INSTALLING DGA SUPPORT FOR MPLAYER.§ First make sure X loads the DGA extension, see in `/var/log/XFree86.0.log`:

(II) Loading extension XFree86-DGA

See, XFree86 4.0.x or greater is **highly recommended!** MPlayer's DGA driver is autodetected by `./configure`, or you can force it with `--enable-dga`.

If the driver couldn't switch to a smaller resolution, experiment with options `-vm` (only with X 3.3.x), `-fs`, `-bpp`, `-zoom` to find a video mode that the movie fits in. There is no converter right now :(

Become `root`. DGA needs root access to be able to write directly video memory. If you want to run it as user, then install MPlayer SUID root:

```
chown root /usr/local/bin/mplayer
chmod 750 /usr/local/bin/mplayer
chmod +s /usr/local/bin/mplayer
```

Now it works as a simple user, too.

Security risk

This is a **big** security risk! **Never** do this on a server or on a computer that can be accessed by other people because they can gain root privileges through SUID root MPlayer.

Now use `-vo dga` option, and there you go! (hope so:) You should also try if the `-vo sdl:dga` option works for you! It's much faster!

RESOLUTION SWITCHING.§ The DGA driver allows for switching the resolution of the output signal. This avoids the need for doing (slow) software scaling and at the same time provides a fullscreen image. Ideally it would switch to the exact resolution (except for honoring aspect ratio) of the video data, but the X server only allows switching to resolutions predefined in `/etc/X11/XF86Config` (`/etc/X11/XF86Config-4` for XFree 4.X.X respectively). Those are defined by so-called modelines and depend on the capabilities of your video hardware. The X server scans this config file on startup and disables the modelines not suitable for your hardware. You can find out which modes survive with the X11 log file. It can be found at: `/var/log/XFree86.0.log`.

These entries are known to work fine with a Riva128 chip, using the `nv.o` X server driver module.

```
Section "Modes"
  Identifier "Modes[0]"
  Modeline "800x600" 40 800 840 968 1056 600 601 605 628
  Modeline "712x600" 35.0 712 740 850 900 400 410 412 425
  Modeline "640x480" 25.175 640 664 760 800 480 491 493 525
  Modeline "400x300" 20 400 416 480 528 300 301 303 314 Doublescan
  Modeline "352x288" 25.10 352 368 416 432 288 296 290 310
  Modeline "352x240" 15.750 352 368 416 432 240 244 246 262 Doublescan
  Modeline "320x240" 12.588 320 336 384 400 240 245 246 262 Doublescan
EndSection
```

DGA & MPLAYER.§ DGA is used in two places with MPlayer: The SDL driver can be made to make use of it (`-vo sdl:dga`) and within the DGA driver (`-vo dga`). The above said is true for both; in the following sections I'll explain how the DGA driver for MPlayer works.

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FEATURES.§ The DGA driver is invoked by specifying `-vo dga` at the command line. The default behavior is to switch to a resolution matching the original resolution of the video as close as possible. It deliberately ignores the `-vm` and `-fs` options (enabling of video mode switching and fullscreen) – it always tries to cover as much area of your screen as possible by switching the video mode, thus refraining to use a single additional cycle of your CPU to scale the image. If you don't like the mode it chooses you may force it to choose the mode matching closest the resolution you specify by `-x` and `-y`. By providing the `-v` option, the DGA driver will print, among a lot of other things, a list of all resolutions supported by your current `XF86Config` file. Having DGA2 you may also force it to use a certain depth by using the `-bpp` option. Valid depths are 15, 16, 24 and 32. It depends on your hardware whether these depths are natively supported or if a (possibly slow) conversion has to be done.

If you should be lucky enough to have enough offscreen memory left to put a whole image there, the DGA driver will use doublebuffering, which results in much smoother movie replaying. It will tell you whether double-buffering is enabled or not.

Doublebuffering means that the next frame of your video is being drawn in some offscreen memory while the current frame is being displayed. When the next frame is ready, the graphics chip is just told the location in memory of the new frame and simply fetches the data to be displayed from there. In the meantime the other buffer in memory will be filled again with new video data.

Doublebuffering may be switched on by using the option `-double` and may be disabled with `-nodouble`. Current default option is to disable doublebuffering. When using the DGA driver, onscreen display (OSD) only works with doublebuffering enabled. However, enabling doublebuffering may result in a big speed penalty (on my K6-II+ 525 it used an additional 20% of CPU time!) depending on the implementation of DGA for your hardware.

SPEED ISSUES.§ Generally spoken, DGA framebuffer access should be at least as fast as using the X11 driver with the additional benefit of getting a fullscreen image. The percentage speed values printed by MPlayer have to be interpreted with some care, as for example, with the X11 driver they do not include the time used by the X server needed for the actual drawing. Hook a terminal to a serial line of your box and start **top** to see what is really going on in your box.

Generally spoken, the speedup done by using DGA against 'normal' use of X11 highly depends on your graphics card and how well the X server module for it is optimized.

If you have a slow system, better use 15 or 16 bit depth since they require only half the memory bandwidth of a 32 bit display.

Using a depth of 24 bit is even a good idea if your card natively just supports 32 bit depth since it transfers 25% less data compared to the 32/32 mode.

I've seen some AVI files already be replayed on a Pentium MMX 266. AMD K6-2 CPUs might work at 400 MHZ and above.

KNOWN BUGS.§ Well, according to some developers of XFree, DGA is quite a beast. They tell you better not to use it. Its implementation is not always flawless with every chipset driver for XFree out there.

- With XFree 4.0.3 and `nv.o` there is a bug resulting in strange colors.
- ATI driver requires to switch mode back more than once after finishing using of DGA.
- Some drivers simply fail to switch back to normal resolution (use **Ctrl+Alt+Keypad +** and **Ctrl+Alt+Keypad -** to switch back manually).

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- Some drivers simply display strange colors.
- Some drivers lie about the amount of memory they map into the process's address space, thus vo_dga won't use doublebuffering (SIS?).
- Some drivers seem to fail to report even a single valid mode. In this case the DGA driver will crash telling you about a nonsense mode of 100000x100000 or something like that.
- OSD only works with doublebuffering enabled (else it flickers).

2.3.1.2.3. SDL

SDL (Simple Directmedia Layer) is basically a unified video/audio interface. Programs that use it know only about SDL, and not about what video or audio driver does SDL actually use. For example a Doom port using SDL can run on svgalib, aalib, X, fbdev, and others, you only have to specify the (for example) video driver to use with the `SDL_VIDEODRIVER` environment variable. Well, in theory.

With MPlayer, we used its X11 driver's software scaler ability for cards/drivers that doesn't support XVideo, until we made our own (faster, nicer) software scaler. Also we used its aalib output, but now we have ours which is more comfortable. Its DGA mode was better than ours, until recently. Get it now? :)

It also helps with some buggy drivers/cards if the video is jerky (not slow system problem), or audio is lagging.

SDL video output supports displaying subtitles under the movie, on the (if present) black bar.

There are several command line switches for SDL:

- `-vo sdl:name`
specifies SDL video driver to use (i.e. aalib, dga, x11)
- `-ao sdl:name`
specifies SDL audio driver to use (i.e. dsp, esd, arts)
- `-noXv`
disables XVideo hardware acceleration
- `-forcexv`
tries to force XVideo acceleration

␣␣␣␣␣␣ 2.1. SDL only keys

Key	Action
c	cycles available fullscreen modes
n	changes back to normal mode

Known bugs:

- Keys pressed under sdl:aalib console driver repeat forever. (use `-vo aa!`) It's bug in SDL, I can't change it (tested with SDL 1.2.1).
- DO NOT USE SDL with GUI! It won't work as it should.

2.3.1.2.4. SVGAlib

INSTALLATION.š You'll have to install svgalib and its development package in order for MPlayer build its SVGAlib driver (autodetected, but can be forced), and don't forget to edit `/etc/vga/libvga.config` to

suit your card and monitor.

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Be sure not to use the `-fs` switch, since it toggles the usage of the software scaler, and it's slow. If you really need it, use the `-sws 4` option which will produce bad quality, but is somewhat faster.

EGA (4BPP) SUPPORT. SVGAlib incorporates EGAlib, and MPlayer has the possibility to display any movie in 16 colors, thus usable in the following sets:

- EGA card with EGA monitor: 320x200x4bpp, 640x200x4bpp, 640x350x4bpp
- EGA card with CGA monitor: 320x200x4bpp, 640x200x4bpp

The bpp (bits per pixel) value must be set to 4 by hand: `-bpp 4`

The movie probably must be scaled down to fit in EGA mode:

```
-vf scale=640:350
```

or

```
-vf scale=320:200
```

For that we need fast but bad quality scaling routine:

```
-sws 4
```

Maybe automatic aspect correction has to be shut off:

```
-noaspect
```

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According to my experience the best image quality on EGA screens can be achieved by decreasing the brightness a bit: `-vf eq=-20:0`. I also needed to lower the audio samplerate on my box, because the sound was broken on 44kHz: `-srate 22050`.

You can turn on OSD and subtitles only with the `expand` filter, see the man page for exact parameters.

2.3.1.2.5. Framebuffer output (FBdev)

Whether to build the FBdev target is autodetected during `./configure`. Read the framebuffer documentation in the kernel sources (`Documentation/fb/*`) for more information.

If your card doesn't support VBE 2.0 standard (older ISA/PCI cards, such as S3 Trio64), only VBE 1.2 (or older?): Well, VESAfb is still available, but you'll have to load SciTech Display Doctor (formerly UniVBE) before booting Linux. Use a DOS boot disk or whatever. And don't forget to register your UniVBE ;))

The FBdev output takes some additional parameters above the others:

```
-fb
```

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specify the framebuffer device to use (/dev/fb0)
`-fbmode`
mode name to use (according to /etc/fb.modes)
`-fbmodeconfig`
config file of modes (default /etc/fb.modes)
`-monitor-hfreq, -monitor-vfreq, -monitor-dotclock`
important values, see `example.conf`

If you want to change to a specific mode, then use

```
mplayer -vm -fbmode name_of_mode filename
```

- `-vm` alone will choose the most suitable mode from /etc/fb.modes. Can be used together with `-x` and `-y` options too. The `-flip` option is supported only if the movie's pixel format matches the video mode's pixel format. Pay attention to the bpp value, fbdev driver tries to use the current, or if you specify the `-bpp` option, then that.
- `-zoom` option isn't supported (use `-vf scale`). You can't use 8bpp (or less) modes.
- You possibly want to turn the cursor off:

```
echo -e '\033[?25l'
```

or

```
setterm -cursor off
```

and the screen saver:

```
setterm -blank 0
```

To turn the cursor back on:

```
echo -e '\033[?25h'
```

or

```
setterm -cursor on
```

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FBdev video mode changing *does not work* with the VESA framebuffer, and don't ask for it, since it's not an MPlayer limitation.

2.3.1.2.6. Matrox framebuffer (mga_vid)

This section is about the Matrox G200/G400/G450/G550 BES (Back-End Scaler) support, the `mga_vid` kernel driver. It's actively developed by A'rpi, and it has hardware VSYNC support with triple buffering. It works on both framebuffer console and under X.

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This is Linux only! On non-Linux (tested on FreeBSD) systems, you can use VIDIX instead!

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Installation:

1. To use it, you first have to compile `mga_vid.o`:

```
cd drivers
make
```

2. Then create `/dev/mga_vid` device:

```
mknod /dev/mga_vid c 178 0
```

and load the driver with

```
insmod mga_vid.o
```

3. You should verify the memory size detection using the `dmesg` command. If it's bad, use the `mga_ram_size` option (**rmmod `mga_vid`** first), specify card's memory size in MB:

```
insmod mga_vid.o mga_ram_size=16
```

4. To make it load/unload automatically when needed, first insert the following line at the end of `/etc/modules.conf`:

```
alias char-major-178 mga_vid
```

Then copy the `mga_vid.o` module to the appropriate place under `/lib/modules/kernel version/somewhere`.

Then run

```
depmod -a
```

5. Now you have to (re)compile MPlayer, `./configure` will detect `/dev/mga_vid` and build the 'mga' driver. Using it from MPlayer goes by `-vo mga` if you have `matroxfb` console, or `-vo xmga` under `XFree86 3.x.x` or `4.x.x`.

The `mga_vid` driver cooperates with Xv.

The `/dev/mga_vid` device file can be read for some info, for example by

```
cat /dev/mga_vid
```

and can be written for brightness change:

```
echo "brightness=120" > /dev/mga_vid
```

2.3.1.2.7. 3Dfx YUV support

This driver uses the kernel's `tdfx` framebuffer driver to play movies with YUV acceleration. You'll need a kernel with `tdfxfb` support, and recompile with

```
./configure --enable-tdfxfb
```

2.3.1.2.8. OpenGL output

MPlayer supports displaying movies using OpenGL, but if your platform/driver supports `xv` as should be the case on a PC with Linux, use `xv` instead, OpenGL performance is considerably worse. If you have an X11

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implementation without xv support, OpenGL is a viable alternative.

Unfortunately not all drivers support this feature. The Utah-GLX drivers (for XFree86 3.3.6) support it for all cards. See <http://utah-glx.sourceforge.net> for details about how to install it.

XFree86(DRI) 4.0.3 or later supports OpenGL with Matrox and Radeon cards, 4.2.0 or later supports Rage128. See <http://dri.sourceforge.net> for download and installation instructions.

A hint from one of our users: the GL video output can be used to get vsynced TV output. You'll have to set an environment variable (at least on nVidia):

```
export $__GL_SYNC_TO_VBLANK=1
```

2.3.1.2.9. AALib – text mode displaying

AALib is a library for displaying graphics in text mode, using powerful ASCII renderer. There are *lots* of programs already supporting it, like Doom, Quake, etc. MPlayer contains a very usable driver for it. If `./configure` detects aalib installed, the aalib libvo driver will be built.

You can use some keys in the AA Window to change rendering options:

Key	Action
1	decrease contrast
2	increase contrast
3	decrease brightness
4	increase brightness
5	switch fast rendering on/off
6	set dithering mode (none, error distribution, Floyd Steinberg)
7	invert image
8	toggles between aa and MPlayer control

The following command line options can be used:

```
-aaosdcolor=V
    change OSD color
-aasubcolor=V
    change subtitle color
```

where *V* can be: 0 (normal), 1 (dark), 2 (bold), 3 (bold font), 4 (reverse), 5 (special).

AALib itself provides a large sum of options. Here are some important:

```
-aadriver
    set recommended aa driver (X11, curses, Linux)
-aaextended
    use all 256 characters
-aaeight
    use eight bit ASCII
-aahelp
    prints out all aalib options
```

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The rendering is very CPU intensive, especially when using AA-on-X (using aalib on X), and it's least CPU intensive on standard, non-framebuffer console. Use SVGATextMode to set up a big textmode, then enjoy! (secondary head Hercules cards rock :) (but imho you can use `-vf 1bpp` option to get graphics on hgafb:)

Use the `-framedrop` option if your computer isn't fast enough to render all frames!

Playing on terminal you'll get better speed and quality using the Linux driver, not curses (`-aadriver linux`). But therefore you need write access on `/dev/vcsa<terminal>!` That isn't autodetected by aalib, but `vo_aa` tries to find the best mode. See <http://aa-project.sourceforge.net/tune> for further tuning issues.

2.3.1.2.10. VESA – output to VESA BIOS

This driver was designed and introduced as a **generic driver** for any video card which has VESA VBE 2.0 compatible BIOS. Another advantage of this driver is that it tries to force TV output on. *VESA BIOS EXTENSION (VBE) Version 3.0 Date: September 16, 1998 (Page 70)* says:

Dual-Controller Designs. VBE 3.0 supports the dual-controller design by assuming that since both controllers are typically provided by the same OEM, under control of a single BIOS ROM on the same graphics card, it is possible to hide the fact that two controllers are indeed present from the application. This has the limitation of preventing simultaneous use of the independent controllers, but allows applications released before VBE 3.0 to operate normally. The VBE Function 00h (Return Controller Information) returns the combined information of both controllers, including the combined list of available modes. When the application selects a mode, the appropriate controller is activated. Each of the remaining VBE functions then operates on the active controller.

So you have chances to get working TV-out by using this driver. (I guess that TV-out frequently is standalone head or standalone output at least.)

ADVANTAGES

- You have chances to watch movies **if Linux even doesn't know** your video hardware.
- You don't need to have installed any graphics' related things on your Linux (like X11 (aka XFree86), fbdev and so on). This driver can be run from **text-mode**.
- You have chances to get **working TV-out**. (It's known at least for ATI's cards).
- This driver calls `int 10h` handler thus it's not an emulator – it calls **real** things of *real BIOS* in *real-mode* (actually in `vm86` mode).
- You can use VIDIX with it, thus getting accelerated video display **and** TV output at the same time! (Recommended for ATI cards.)
- If you have VESA VBE 3.0+, and you had specified `monitor-hfreq`, `monitor-vfreq`, `monitor-dotclock` somewhere (config file, or commandline) you will get the highest possible refresh rate. (Using General Timing Formula). To enable this feature you have to specify **all** your monitor options.

DISADVANTAGES

- It works only on **x86 systems**.
- It can be used only by `root`.

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- Currently it's available only for **Linux**.

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Don't use this driver with **GCC 2.96**! It won't work!

COMMAND LINE OPTIONS AVAILABLE FOR VESA

`-vo vesa:opts`

currently recognized: `dga` to force dga mode and `nodga` to disable dga mode. In dga mode you can enable double buffering via the `-double` option. Note: you may omit these parameters to enable **autodetection** of dga mode.

KNOWN PROBLEMS AND WORKAROUNDS

- If you have installed **NLS** font on your Linux box and run VESA driver from text-mode then after terminating MPlayer you will have **ROM font** loaded instead of national. You can load national font again by using **setsysfont** utility from the Mandrake distribution for example. (**Hint**: The same utility is used for localization of fbdev).
- Some **Linux graphics drivers** don't update active **BIOS mode** in DOS memory. So if you have such problem – always use VESA driver only from **text-mode**. Otherwise text-mode (#03) will be activated anyway and you will need restart your computer.
- Often after terminating VESA driver you get **black** screen. To return your screen to original state – simply switch to other console (by pressing **Alt+F<x>**) then switch to your previous console by the same way.
- To get **working TV-out** you need have plugged TV-connector in before booting your PC since video BIOS initializes itself only once during POST procedure.

2.3.1.2.11. X11

Avoid if possible. Outputs to X11 (uses shared memory extension), with no hardware acceleration at all. Supports (MMX/3DNow/SSE accelerated, but still slow) software scaling, use the options `-fs -zoom`. Most cards have hardware scaling support, use the `-vo xv` output for them, or `-vo xmg` for Matroxes.

The problem is that most cards' driver doesn't support hardware acceleration on the second head/TV. In those cases, you see green/blue colored window instead of the movie. This is where this driver comes in handy, but you need powerful CPU to use software scaling. Don't use the SDL driver's software output+scaler, it has worse image quality!

Software scaling is very slow, you better try changing video modes instead. It's very simple. See the [DGA section's modelines](#), and insert them into your `XF86Config`.

- If you have XFree86 4.x.x: use the `-vm` option. It will change to a resolution your movie fits in. If it doesn't:
- With XFree86 3.x.x: you have to cycle through available resolutions with the **Ctrl+Alt+plus** and **Ctrl+Alt+minus** keys.

If you can't find the modes you inserted, browse XFree86's output. Some drivers can't use low pixelclocks that are needed for low resolution video modes.

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2.3.1.2.12. VIDIX

PREAMBLE. VIDIX is the abbreviation for **VIDEo Interface for *niX**. VIDIX was designed and introduced as an interface for fast user-space drivers providing such video performance as `mga_vid` does for Matrox cards. It's also very portable.

This interface was designed as an attempt to fit existing video acceleration interfaces (known as `mga_vid`, `rage128_vid`, `radeon_vid`, `pm3_vid`) into a fixed scheme. It provides highlevel interface to chips which are known as BES (BackEnd scalers) or OV (Video Overlays). It doesn't provide lowlevel interface to things which are known as graphics servers. (I don't want to compete with X11 team in graphics mode switching). I.e. main goal of this interface is to maximize the speed of video playback.

USAGE

- You can use standalone video output driver: `-vo xvix`. This driver was developed as X11's front end to VIDIX technology. It requires X server and can work only under X server. Note that, as it directly accesses the hardware and circumvents the X driver, pixmaps cached in the graphics card's memory may be corrupted. You can prevent this by limiting the amount of video memory used by X with the XF86Config option "VideoRam" in the device section. You should set this to the amount of memory installed on your card minus 4MB. If you have less than 8MB of video ram, you can use the option "XaaNoPixmapCache" in the screen section instead.
- There is a console VIDIX driver: `-vo cvidix`. This requires a working and initialized framebuffer for most cards (or else you'll just mess up the screen), and you'll have a similar effect as with `-vo mga` or `-vo fbdev`. nVidia cards however are able to output truly graphical video on a real text console. See the [nvidia_vid](#) section for more information.
- You can use VIDIX subdevice which was applied to several video output drivers, such as: `-vo vesa:vidix` (**Linux only**) and `-vo fbdev:vidix`.

Indeed it doesn't matter which video output driver is used with **VIDIX**.

REQUIREMENTS

- Video card should be in graphics mode (except nVidia cards with the `-vo cvidix` output driver).
- MPlayer's video output driver should know active video mode and be able to tell to VIDIX subdevice some video characteristics of server.

USAGE METHODS. When VIDIX is used as **subdevice** (`-vo vesa:vidix`) then video mode configuration is performed by video output device (**vo_server** in short). Therefore you can pass into command line of MPlayer the same keys as for `vo_server`. In addition it understands `-double` key as globally visible parameter. (I recommend using this key with VIDIX at least for ATI's card). As for `-vo xvix`, currently it recognizes the following options: `-fs -zoom -x -y -double`.

Also you can specify VIDIX's driver directly as third subargument in command line:

```
mplayer -vo xvix:mga_vid.so -fs -zoom -double file.avi
```

or

```
mplayer -vo vesa:vidix:radeon_vid.so -fs -zoom -double -bpp 32 file.avi
```

But it's dangerous, and you shouldn't do that. In this case given driver will be forced and result is

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unpredictable (it may **freeze** your computer). You should do that **ONLY** if you are absolutely sure it will work, and MPlayer doesn't do it automatically. Please tell about it to the developers. The right way is to use VIDIX without arguments to enable driver autodetection.

VIDIX is new technology and it's extremely possible that on your system it won't work. In this case only solution for you it's port it (mainly libdha). But there is hope that it will work on those systems where X11 does.

Since VIDIX requires direct hardware access you can either run it as root or set the SUID bit on the MPlayer binary (**Warning: This is a security risk!**). Alternatively, you can use a special kernel module, like this:

1. Download the development version of ssvgalib (for example 1.9.17), **OR** download a version made by Alex especially for usage with MPlayer (it doesn't need the ssvgalib source to compile) from here.
2. Compile the module in the `ssvgalib_helper` directory (it can be found inside the `ssvgalib-1.9.17/kernel/` directory if you've downloaded the source from the ssvgalib site) and `insmod` it.
3. To create the necessary devices in the `/dev` directory, do a

```
make device
```

in the `ssvgalib_helper` dir, as root.

4. Move the `ssvgalib_helper` directory to `mplayer/main/libdha/ssvgalib_helper`.
5. Required if you download the source from the ssvgalib site: Remove the comment before the `CFLAGS` line containing "`ssvgalib_helper`" string from the `libdha/Makefile`.
6. Recompile and install libdha.

2.3.1.2.12.1. ATI cards

Currently most ATI cards are supported natively, from Mach64 to the newest Radeons.

There are two compiled binaries: `radeon_vid` for Radeon and `rage128_vid` for Rage 128 cards. You may force one or let the VIDIX system autoprobe all available drivers.

2.3.1.2.12.2. Matrox cards

Matrox G200, G400, G450 and G550 have been reported to work.

The driver supports video equalizers and should be nearly as fast as the Matrox framebuffer

2.3.1.2.12.3. Trident cards

There is a driver available for the Trident Cyberblade/i1 chipset, which can be found on VIA Epia motherboards.

The driver was written and is maintained by Alastair M. Robinson

2.3.1.2.12.4. 3DLabs cards

Although there is a driver for the 3DLabs GLINT R3 and Permedia3 chips, no one has tested it, so reports are welcome.

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2.3.1.2.12.5. nVidia cards

There's a relatively new nVidia driver out there, it's known to work on Riva 128, TNT and GeForce2 chipsets, also others have been reported working.

LIMITATIONS

- It's recommended to use the binary nVidia drivers for X before using this VIDIX driver, because some of the registers which need to be initialized haven't been discovered yet, so it will probably fail with the Open Source XFree86 `nv.o` driver.
- Currently only codecs capable of UYVY colorspace output can work in conjunction with this driver. Unfortunately, this excludes every single decoder from the libavcodec family. This leaves us with the following usable popular codecs: `cvid`, `divxds`, `xvid`, `divx4`, `wmv7`, `wmv8` and some others. Please note that this is only a temporal inconvenience. The usage syntax is as follows:

```
mplayer -vf format=uyvy -vc divxds divx3file.avi
```

An unique feature of the `nvidia_vid` driver is its ability to display video on **plain, pure, text-only console** – with no framebuffer or X magic whatsoever. For this purpose, we'll have to use the `cvidix` video output, as the following example shows:

```
mplayer -vf format=uyvy -vc divxds -vo cvidix example.avi
```

Reports awaited!

2.3.1.2.12.6. SiS cards

This is very experimental code, just like `nvidia_vid`.

It's been tested on SiS 650/651/740 (the most common chipsets used in the SiS versions of the "Shuttle XPC" barebones boxes out there)

Reports awaited!

2.3.1.2.13. DirectFB

"DirectFB is a graphics library which was designed with embedded systems in mind. It offers maximum hardware accelerated performance at a minimum of resource usage and overhead."
– quoted from <http://www.directfb.org>

I'll exclude DirectFB features from this section.

Though MPlayer is not supported as a "video provider" in DirectFB, this output driver will enable video playback through DirectFB. It will – of course – be accelerated, on my Matrox G400 DirectFB's speed was the same as XVideo.

Always try to use the newest version of DirectFB. You can use DirectFB options on the command line, using the `-dfbopts` option. Layer selection can be done by the subdevice method, e.g.: `-vo directfb:2` (layer `-1` is default: autodetect)

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2.3.1.2.14. DirectFB/Matrox (dfbmga)

Please read the [main DirectFB](#) section or general informations.

This video output driver will enable CRTC2 (on the second head) on the Matrox G400/G450/G550 card, displaying video **independently** of the first head.

Instructions on how to make it work can be found in the [tech](#) section or directly on Ville Syrjala's [home page](#).

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the first DirectFB version with which we could kick this working was 0.9.17 (it's buggy, needs that `surfacemanager` patch from the URL above). Anyway, porting of the CRTC2 code to `mga_vid` is underway.

2.3.1.3. MPEG decoders

2.3.1.3.1. DVB output and input

MPlayer supports cards with the Siemens DVB chipset from vendors like Siemens, Technotrend, Galaxis or Hauppauge. The latest DVB drivers are available from the [Linux TV site](#). If you want to do software transcoding you should have at least a 1GHz CPU.

Configure should detect your DVB card. If it did not, force detection with

```
./configure --enable-dvb
```

If you have ost headers at a non-standard path, set the path with

```
./configure --with-extraincdir=DVB source directory/ost/include
```

Then compile and install as usual.

USAGE. Hardware decoding (playing standard MPEG1/2 files) can be done with this command:

```
mplayer -ao mpegpes -vo mpegpes file.mpg|vob
```

Software decoding or transcoding different formats to MPEG1 can be achieved using a command like this:

```
mplayer -ao mpegpes -vo mpegpes yourfile.ext  
mplayer -ao mpegpes -vo mpegpes -vf expand yourfile.ext
```

Note that DVB cards only support heights 288 and 576 for PAL or 240 and 480 for NTSC. You **must** rescale for other heights by adding `scale=width:height` with the width and height you want to the `-vf` option. DVB cards accept various widths, like 720, 704, 640, 512, 480, 352 etc and do hardware scaling in horizontal direction, so you do not need to scale horizontally in most cases. For a 512x384 (aspect 4:3) DivX try:

```
mplayer -ao mpegpes -vo mpegpes -vf scale=512:576
```

If you have a widescreen movie and you do not want to scale it to full height, you can use the `expand=w:h` filter to add black bands. To view a 640x384 DivX, try:

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```
mplayer -ao mpegpes -vo mpegpes -vf expand=640:576 file.avi
```

If your CPU is too slow for a full size 720x576 DivX, try downscaling:

```
mplayer -ao mpegpes -vo mpegpes -vf scale=352:576 file.avi
```

If speed does not improve, try vertical downscaling, too:

```
mplayer -ao mpegpes -vo mpegpes -vf scale=352:288 file.avi
```

For OSD and subtitles use the OSD feature of the expand filter. So, instead of `expand=w:h` or `expand=w:h:x:y`, use `expand=w:h:x:y:1` (the 5th parameter `:1` at the end will enable OSD rendering). You may want to move the image up a bit to get a bigger black zone for subtitles. You may also want to move subtitles up, if they are outside your TV screen, use the `-subpos <0-100>` option to adjust this (`-subpos 80` is a good choice).

In order to play non-25fps movies on a PAL TV or with a slow CPU, add the `-framedrop` option.

To keep the aspect ratio of DivX files and get the optimal scaling parameters (hardware horizontal scaling and software vertical scaling while keeping the right aspect ratio), use the new `dvbscale` filter:

```
for a 4:3 TV: -vf dvbscale,scale=-1:0,expand=-1:576:-1:-1:1
```

```
for a 16:9 TV: -vf dvbscale=1024,scale=-1:0,expand=-1:576:-1:-1:1
```

Using your DVB card for watching Digital TV (DVB input module). § First you need to pass the `dvb_shutdown_timeout=0` parameter to the kernel module `dvb-core`, or MPlayer will die after 10 seconds.

You should also have the programs **scan** and **szap/tzap/czap** installed; they are all included in the drivers package.

Verify that your drivers are working properly with a program such as **dvbstream** (that is the base of the DVB input module).

Now you should compile a `~/mplayer/channels.conf` file, with the syntax accepted by **szap/tzap/czap**, or have **scan** compile it for you.

Make sure that you have have *only* Free to Air channels in your `channels.conf` file, or MPlayer will hang on the others.

To show the first of the channels present in your list, run

```
mplayer dvb://
```

If you want to watch a specific channel, such as R1, run

```
mplayer dvb://R1
```

To change channels press the **h** (next) and **k** (previous) keys, or use the OSD menu (requires a working OSD subsystem).

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If your `~/ .mplayer/menu.conf` contains a `<dvbssel>` entry, such as the one in the example file `etc/dvb-menu.conf` (that you can use to overwrite `~/ .mplayer/menu.conf`), the main menu will show a sub-menu entry that will permit you to choose one of the channels present in your `channels.conf`.

If you want to save a program to disk you can use

```
mplayer -dumpfile r1.ts -dumpstream dvb://R1
```

If you want to record it in a different format (re-encoding it) instead you can run a command such as

```
mencoder -o r1.avi -ovc xvid -xvidencopts bitrate=800 -oac mp3lame -lameopts cbr:br=128 -pp=ci
```

Read the man page for a list of options that you can pass to the DVB input module.

FUTURE. If you have questions or want to hear feature announcements and take part in discussions on this subject, join our [MPlayer-DVB](#) mailing list. Please remember that the list language is English.

In the future you may expect the ability to display OSD and subtitles using the native OSD feature of DVB cards, as well as more fluent playback of non-25fps movies and realtime transcoding between MPEG2 and MPEG4 (partial decompression).

2.3.1.3.2. DXR2

MPlayer supports hardware accelerated playback with the Creative DXR2 card.

First of all you will need properly installed DXR2 drivers. You can find the drivers and installation instructions at the [DXR2 Resource Center](#) site.

USAGE

```
-vo dxr2
    enable TV output
-vo dxr2:x11 or -vo dxr2:xv
    enable Overlay output in X11
-dxr2 <option1:option2:...>
    This option is used to control the DXR2 driver.
```

The overlay chipset used on the DXR2 is of pretty bad quality but the default settings should work for everybody. The OSD may be usable with the overlay (not on TV) by drawing it in the colorkey. With the default colorkey settings you may get variable results, usually you will see the colorkey around the characters or some other funny effect. But if you properly adjust the colorkey settings you should be able to get acceptable results.

Please see the manpage for available options.

2.3.1.3.3. DXR3/Hollywood+

MPlayer supports hardware accelerated playback with the Creative DXR3 and Sigma Designs Hollywood Plus cards. These cards both use the em8300 MPEG decoder chip from Sigma Designs.

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First of all you will need properly installed DXR3/H+ drivers, version 0.12.0 or later. You can find the drivers and installation instructions at the [DXR3 & Hollywood Plus for Linux](#) site. `configure` should detect your card automatically, compilation should go without problems.

USAGE

- `-vo dxr3:prebuf:sync:norm=x:device`
overlay activates the overlay instead of TVOut. It requires that you have a properly configured overlay setup to work right. The easiest way to configure the overlay is to first run `autocal`. Then run `mplayer` with `dxr3` output and without overlay turned on, run `dxr3view`. In `dxr3view` you can tweak the overlay settings and see the effects in realtime, perhaps this feature will be supported by the MPlayer GUI in the future. When overlay is properly set up you will no longer need to use `dxr3view`. `prebuf` turns on prebuffering. Prebuffering is a feature of the em8300 chip that enables it to hold more than one frame of video at a time. This means that when you are running with prebuffering MPlayer will try to keep the video buffer filled with data at all times. If you are on a slow machine MPlayer will probably use close to, or precisely 100% of CPU. This is especially common if you play pure MPEG streams (like DVDs, SVCDs a.s.o.) since MPlayer will not have to reencode it to MPEG it will fill the buffer very fast. With prebuffering video playback is **much** less sensitive to other programs hogging the CPU, it will not drop frames unless applications hog the CPU for a long time. When running without prebuffering the em8300 is much more sensitive to CPU load, so it is highly suggested that you turn on MPlayer's `-framedrop` option to avoid further loss of sync. `sync` will turn on the new sync-engine. This is currently an experimental feature. With the sync feature turned on the em8300's internal clock will be monitored at all times, if it starts to deviate from MPlayer's clock it will be reset causing the em8300 to drop any frames that are lagging behind. `norm=x` will set the TV norm of the DXR3 card without the need for external tools like `em8300setup`. Valid norms are 5 = NTSC, 4 = PAL-60, 3 = PAL. Special norms are 2 (auto-adjust using PAL/PAL-60) and 1 (auto-adjust using PAL/NTSC) because they decide which norm to use by looking at the frame rate of the movie. `norm = 0` (default) does not change the current norm. `device =` device number to use if you have more than one em8300 card. Any of these options may be left out. `:prebuf:sync` seems to work great when playing DivX movies. People have reported problems using the `prebuf` option when playing MPEG1/2 files. You might want to try running without any options first, if you have sync problems, or DVD subtitle problems, give `:sync` a try.
- `-ao oss:/dev/em8300_ma-X`
For audio output, where *X* is the device number (0 if one card).
- `-aop list=resample:fout=xxxxx`
The em8300 cannot play back samplerates lower than 44100Hz. If the sample rate is below 44100Hz select either 44100Hz or 48000Hz depending on which one matches closest. I.e. if the movie uses 22050Hz use 44100Hz as $44100 / 2 = 22050$, if it is 24000Hz use 48000Hz as $48000 / 2 = 24000$ and so on. This does not work with digital audio output (`-ac hwac3`).
- `-vf lavc/fame`
To watch non-MPEG content on the em8300 (i.e. DivX or RealVideo) you have to specify an MPEG1 video filter such as `libavcodec` (`lavc`) or `libfame` (`fame`). At the moment `lavc` is both faster and gives better image quality, it is suggested that you use that unless you have problems with it. See the man page for further info about `-vf lavc/fame`. Using `lavc` is highly recommended. Currently there is no way of setting the fps of the em8300 which means that it is fixed to 29.97fps. Because of this it is highly recommended that you use `-vf lavc=quality:25` especially if you are using prebuffering. Then why 25 and not 29.97? Well, the thing is that when you use 29.97 the picture becomes a bit jumpy. The reason for this is unknown to us. If you set it to somewhere between 25 and 27 the picture becomes stable. For now all we can do is accept this for a fact.
- `-vf expand=-1:-1:-1:-1:1`

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Although the DXR3 driver can put some OSD onto the MPEG1/2/4 video, it has much lower quality than MPlayer's traditional OSD, and has several refresh problems as well. The command line above will firstly convert the input video to MPEG4 (this is mandatory, sorry), then apply an expand filter which won't expand anything (-1: default), but apply the normal OSD onto the picture (that's what the "1" at the end does).

```
-ac hwac3
```

The em8300 supports playing back AC3 audio (surround sound) through the digital audio output of the card. See the `-ao oss` option above, it must be used to specify the DXR3's output instead of a soundcard.

2.3.1.4. Other visualization hardware

2.3.1.4.1. Zr

This is a display-driver (`-vo zr`) for a number of MJPEG capture/playback cards (tested for DC10+ and Buz, and it should work for the LML33, the DC10). The driver works by encoding the frame to JPEG and then sending it to the card. For the JPEG encoding `libavcodec` is used, and required. With the special *cinerama* mode, you can watch movies in true wide screen provided that you have two beamers and two MJPEG cards. Depending on resolution and quality settings, this driver may require a lot of CPU power, remember to specify `-framedrop` if your machine is too slow. Note: My AMD K6-2 350MHz is (with `-framedrop`) quite adequate for watching VCD sized material and downscaled movies.

This driver talks to the kernel driver available at <http://mjpeg.sourceforge.net>, so you must get it working first. The presence of an MJPEG card is autodetected by the `configure` script, if autodetection fails, force detection with

```
./configure --enable-zr
```

The output can be controlled by several options, a long description of the options can be found in the man page, a short list of options can be viewed by running

```
mplayer -zrhel
```

Things like scaling and the OSD (on screen display) are not handled by this driver but can be done using the video filters. For example, suppose that you have a movie with a resolution of 512x272 and you want to view it fullscreen on your DC10+. There are three main possibilities, you may scale the movie to a width of 768, 384 or 192. For performance and quality reasons, I would choose to scale the movie to 384x204 using the fast bilinear software scaler. The commandline is

```
mplayer -vo zr -sws 0 -vf scale=384:204 movie.avi
```

Cropping can be done by the `crop` filter and by this driver itself. Suppose that a movie is too wide for display on your Buz and that you want to use `-zrcrop` to make the movie less wide, then you would issue the following command

```
mplayer -vo zr -zrcrop 720x320+80+0 benhur.avi
```

if you want to use the `crop` filter, you would do

```
mplayer -vo zr -vf crop=720:320:80:0 benhur.avi
```

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Extra occurrences of `-zrcrop` invoke *cinerama* mode, i.e. you can distribute the movie over several TV's or beamers to create a larger screen. Suppose you have two beamers. The left one is connected to your Buz at `/dev/video1` and the right one is connected to your DC10+ at `/dev/video0`. The movie has a resolution of 704x288. Suppose also that you want the right beamer in black and white and that the left beamer should have JPEG frames at quality 10, then you would issue the following command

```
mplayer -vo zr -zrdev /dev/video0 -zrcrop 352x288+352+0 -zrxdooff 0 -zrbw \  
-zrcrop 352x288+0+0 -zrdev /dev/video1 -zrquality 10 movie.avi
```

You see that the options appearing before the second `-zrcrop` only apply to the DC10+ and that the options after the second `-zrcrop` apply to the Buz. The maximum number of MJPEG cards participating in *cinerama* is four, so you can build a 2x2 vidiwall.

Finally an important remark: Do not start or stop XawTV on the playback device during playback, it will crash your computer. It is, however, fine to **FIRST** start XawTV, **THEN** start MPlayer, wait for MPlayer to finish and **THEN** stop XawTV.

2.3.1.4.2. Blinkenlights

This driver is capable of playback using the Blinkenlights UDP protocol. If you don't know what Blinkenlights is, you don't need this driver.

2.3.1.5. TV-out support

2.3.1.5.1. Matrox G400 cards

Under Linux you have two methods to get G400 TV out working:

÷ÄÖÏ

for Matrox G450/G550 TV-out instructions, please see the next section!

XFree86

Using the driver and the HAL module, available from Matrox's site. This will give you X on the TV.

This method doesn't give you accelerated playback as under Windows! The second head has only YUV framebuffer, the *BES* (Back End Scaler, the YUV scaler on G200/G400/G450/G550 cards) doesn't work on it! The windows driver somehow workarounds this, probably by using the 3D engine to zoom, and the YUV framebuffer to display the zoomed image. If you really want to use X, use the `-vo x11 -fs -zoom` options, but it will be **SLOW**, and has **Macrovision** copy protection enabled (you can "workaround" Macrovision using this perl script).

Framebuffer

Using the **matroxfb modules** in the 2.4 kernels. 2.2 kernels don't have the TVout feature in them, thus unusable for this. You have to enable ALL matroxfb-specific feature during compilation (except MultiHead), and compile them into **modules**! You'll also need I2C enabled.

1. Enter TVout and type `./compile.sh`. Install TVout/matroxset/matroxset somewhere into your PATH.
2. If you don't have **fbset** installed, put TVout/fbset/fbset somewhere into your PATH.
3. If you don't have **con2fb** installed, put TVout/con2fb/con2fb somewhere into your PATH.

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4. Then enter into the TVout/ directory in the MPlayer source, and execute ./modules as root. Your text-mode console will enter into framebuffer mode (no way back!).
5. Next, EDIT and run the ./matrox_tv script. This will present you to a very simple menu. Press **2** and **Enter**. Now you should have the same picture on your monitor, and TV. If the TV (PAL by default) picture has some weird stripes on it, the script wasn't able to set the resolution correctly (to 640x512 by default). Try other resolutions from the menu and/or experiment with fbset.
6. Yoh. Next task is to make the cursor on tty1 (or whatever) to disappear, and turn off screen blanking. Execute the following commands:

```
echo -e '\033[?25l'  
setterm -blank 0
```

or

```
setterm -cursor off  
setterm -blank 0
```

You possibly want to put the above into a script, and also clear the screen. To turn the cursor back:

```
echo -e '\033[?25h'
```

or

```
setterm -cursor on
```

7. Yeah kewl. Start movie playing with

```
mplayer -vo mga -fs -screenw 640 -screenh 512 filename
```

(If you use X, now change to matroxfb with for example **Ctrl+Alt+F1**.) Change 640 and 512 if you set the resolution to other...

8. **Enjoy the ultra-fast ultra-featured Matrox TV output (better than Xv)!**

Building a Matrox TV-out cable.š No one takes any responsibility, nor guarantee for any damage caused by this documentation.

Cable for G400.š The CRTC2 connector's fourth pin is the composite video signal. The ground are the sixth, seventh and eighth pins. (info contributed from Balázs RÁCZ)

Cable for G450.š The CRTC2 connector's first pin is the composite video signal. The ground are the fifth, sixth, seventh, and fifteenth (5, 6, 7, 15) pins. (info contributed from Balázs Kerekes)

2.3.1.5.2. Matrox G450/G550 cards

TV output support for these cards has only been recently introduced, and is not yet in the mainstream kernel. Currently the **mga_vid** module can't be used AFAIK, because the G450/G550 driver works only in one configuration: the first CRTC chip (with much more features) on the first display (on monitor), and the second CRTC (no **BES** – for explanation on BES, please see the G400 section above) on TV. So you can only use MPlayer's *fbdev* output driver at the present.

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The first CRTIC can't be routed to the second head currently. The author of the kernel matroxfb driver – Petr Vandrovec – will maybe make support for this, by displaying the first CRTIC's output onto both of the heads at once, as currently recommended for G400, see the section above.

The necessary kernel patch and the detailed howto is downloadable from http://www.bglug.ca/matrox_tvout/

2.3.1.5.3. ATI cards

PREAMBLE.š Currently ATI doesn't want to support any of its TV–out chips under Linux, because of their licensed Macrovision technology.

ATI CARDS TV–OUT STATUS ON LINUX

- **ATI Mach64:** supported by [gatos](#).
- **ASIC Radeon VIVO:** supported by [gatos](#).
- **Radeon and Rage128:** supported by MPlayer! Check [VESA driver](#) and [VIDIX](#) sections.
- **Rage Mobility P/M, Radeon, Rage 128, Mobility M3/M4:** supported by [atitvout](#).

On other cards, just use the [VESA](#) driver, without VIDIX. Powerful CPU is needed, though.

Only thing you need to do – **Have the TV connector plugged in before booting your PC** since video BIOS initializes itself only once during POST procedure.

2.3.1.5.4. Voodoo 3

Check [this URL](#).

2.3.1.5.5. nVidia

First, you MUST download the closed–source drivers from <http://nvidia.com>. I will not describe the installation and configuration process because it does not cover the scope of this documentation.

After XFree86, XVideo, and 3D acceleration is properly working, edit your card's Device section in the XF86Config file, according to the following example (adapt for your card/TV):

```
Section "Device"
    Identifier      "GeForce"
    VendorName     "ASUS"
    BoardName      "nVidia GeForce2/MX 400"
    Driver         "nvidia"
    #Option        "NvAGP" "1"
    Option        "NoLogo"
    Option        "CursorShadow" "on"

    Option        "TwinView"
    Option        "TwinViewOrientation" "Clone"
    Option        "MetaModes" "1024x768,640x480"
    Option        "ConnectedMonitor" "CRT, TV"
    Option        "TVStandard" "PAL-B"
    Option        "TVOutFormat" "Composite"

EndSection
```

Of course the important thing is the TwinView part.

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2.3.1.5.6. Neomagic

Tested on a Toshiba Tecra 8000. Its TV output chip is a miserable crap. Avoid if possible.

You must use `-vo vesa`. The tested chip was capable of 1.333333 aspect ratio only, so be sure to use the `-x`, `-y` options and/or the `-vf scale,crop,expand` filters if the box doesn't let you enable TV output. Maximum resolution was 720*576 at 16bpp.

Known issues: VESA-only, 1.333333 limitation, image isn't always centered, movie becomes 4bpp in every 10 minutes, and stays that way. Frequent hard freezes, LCD display problems.

2.3.2. Audio output devices

2.3.2.1. Audio/Video synchronisation

MPlayer's audio interface is called *libao2*. It currently contains these drivers:

Driver	Comment
oss	OSS (ioctl) driver (supports hardware AC3 passthrough)
sdl	SDL driver (supports sound daemons like ESD and ARTS)
nas	NAS (Network Audio System) driver
alsa5	native ALSA 0.5 driver
alsa9	native ALSA 0.9 driver (supports hardware AC3 passthrough)
sun	SUN audio driver (/dev/audio) for BSD and Solaris8 users
macosx	native MacOSX driver
win32	native Win32 driver
arts	native ARTS driver (mostly for KDE users)
esd	native ESD driver (mostly for GNOME users)

Linux sound card drivers have compatibility problems. This is because MPlayer relies on an in-built feature of *properly* coded sound drivers that enable them to maintain correct audio/video sync. Regrettably, some driver authors don't take the care to code this feature since it is not needed for playing MP3s or sound effects.

Other media players like avisplay or xine possibly work out-of-the-box with these drivers because they use "simple" methods with internal timing. Measuring showed that their methods are not as efficient as MPlayer's.

Using MPlayer with a properly written audio driver will never result in A/V desyncs related to the audio, except only with very badly created files (check the man page for workarounds).

If you happen to have a bad audio driver, try the `-autosync` option, it should sort out your problems. See the man page for detailed information.

Some notes:

- If you have an OSS driver, first try `-ao oss` (this is the default). If you experience glitches, halts or anything out of the ordinary, try `-ao sdl` (NOTE: you need to have SDL libraries and header files

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installed). The SDL audio driver helps in a lot of cases and also supports ESD (GNOME) and ARTS (KDE).

- If you have ALSA version 0.5, then you almost always have to use `-ao alsa5`, since ALSA 0.5 has buggy OSS emulation code, and will **crash MPlayer** with a message like this:

```
DEMUXER: Too many (945 in 8390980 bytes) video packets in the buffer!
```

- On Solaris, use the SUN audio driver with the `-ao sun` option, otherwise neither video nor audio will work.
- If the sound clicks when playing from CD-ROM, turn on IRQ unmasking, e.g. **hdparm -u1 /dev/cdrom (man hdparm)**. This is generally beneficial and described in more detail in the CD-ROM section.

2.3.2.2. Soundcard experiences, recommendations

On Linux, a 2.4.x kernel is highly recommended. Kernel 2.2 is not tested.

Linux sound drivers are primarily provided by the free version of OSS. These drivers have been superseded by ALSA (Advanced Linux Sound Architecture) in the 2.5 development series. If your distribution does not already use ALSA you may wish to try their drivers if you experience sound problems. ALSA drivers are generally superior to OSS in compatibility, performance and features. But some sound cards are only supported by the commercial OSS drivers from 4Front Technologies. They also support several non-Linux systems.

SOUND CARD	DRIVER				Max kHz	Max Channels	Max Opens [a]	4-48 kHz or 48 kHz only, depending on the chipset
	OSS/Free	ALSA	OSS/Pro	other				
VIA onboard (686/A/B, 8233, 8235)		<u>via82cxxx audio</u>	<u>snd-via82xx</u>	š				š
Aureal Vortex 2	none	none	OK	<u>Linux Aureal Driversbuffer size increased to 32k</u>	48	4.1	5+	
SB Live!	Analog OK, SP/DIF not working	Both OK	Both OK	<u>Creative's OSS driver (SP/DIF support)</u>	192	4.0/5.1	32	
SB 128 PCI (es1371)	OK	?	š	š	48	stereo	2	
SB AWE 64	max 44kHz	48kHz sounds bad	š	š	48	š	š	
GUS PnP	none	OK	OK	š	48	š	š	
Gravis UltraSound ACE	š	š	š	š	š	š	š	

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Gravis UltraSound MAX	OK	OK (?)	š	š	48	š	š
ESS 688	OK	OK (?)	š	š	48	š	š
C–Media cards (CMI8338/8738)	OK	OK SP/DIF is supported with ALSA 0.9.x	?	š	44	stereo	1
Yamaha cards (*ymf*)	not OK (?) (maybe -ao sdl)	OK only with ALSA 0.5 with OSS emulation AND -ao sdl (!) (?)	š	š	š	š	š
Cards with envy24 chips (like Terratec EWS88MT)	?	?	OK	š	?	š	š
PC Speaker or DAC	OK	none	š	<u>Linux PC speaker OSS driver</u>	The driver emulates 44.1, maybe more.	mono	1
[a] the number of applications that are able to use the device <i>at the same time</i> .							

Feedback to this document is welcome. Please tell us how MPlayer and your sound card(s) worked together.

2.3.2.3. Audio filters

The old audio plugins have been superseded by a new audio filter layer. Audio filters are used for changing the properties of the audio data before the sound reaches the sound card. The activation and deactivation of the filters is normally automated but can be overridden. The filters are activated when the properties of the audio data differ from those required by the sound card and deactivated if unnecessary. The `-af filter1,filter2,...` option is used to override the automatic activation of filters or to insert filters that are not automatically inserted. The filters will be executed as they appear in the comma separated list.

Example:

```
mplayer -af resample,pan movie.avi
```

would run the sound through the resampling filter followed by the pan filter. Observe that the list must not contain any spaces, else it will fail.

The filters often have options that change their behavior. These options are explained in detail in the sections below. A filter will execute using default settings if its options are omitted. Here is an example of how to use filters in combination with filter specific options:

```
mplayer -af resample=11025,pan=1:0.5:0.5 -channels 1 -srate 11025 media.avi
```

would set the output frequency of the resample filter to 11025Hz and downmix the audio to 1 channel using the pan filter.

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The overall execution of the filter layer is controlled using the `-af-adv` option. This option has two suboptions:

`force` is a bit field that controls how the filters are inserted and what speed/accuracy optimizations they use:

- 0 Use automatic insertion of filters and optimize according to CPU speed.
- 1 Use automatic insertion of filters and optimize for the highest speed. *Warning:* Some features in the audio filters may silently fail, and the sound quality may drop.
- 2 Use automatic insertion of filters and optimize for quality.
- 3 Use no automatic insertion of filters and no optimization. *Warning:* It may be possible to crash MPlayer using this setting.
- 4 Use automatic insertion of filters according to 0 above, but use floating point processing when possible.
- 5 Use automatic insertion of filters according to 1 above, but use floating point processing when possible.
- 6 Use automatic insertion of filters according to 2 above, but use floating point processing when possible.
- 7 Use no automatic insertion of filters according to 3 above, and use floating point processing when possible.

`list` is an alias for the `-af` option.

The filter layer is also affected by the following generic options:

- `-v` Increases the verbosity level and makes most filters print out extra status messages.
- `-channels` This option sets the number of output channels you would like your sound card to use. It also affects the number of channels that are being decoded from the media. If the media contains less channels than requested the channels filter (see below) will automatically be inserted. The routing will be the default routing for the channels filter.
- `-srate` This option selects the sample rate you would like your sound card to use (of course the cards have limits on this). If the sample frequency of your sound card is different from that of the current media, the resample filter (see below) will be inserted into the audio filter layer to compensate for the difference.
- `-format` This option sets the sample format between the audio filter layer and the sound card. If the requested sample format of your sound card is different from that of the current media, a format filter (see below) will be inserted to rectify the difference.

2.3.2.3.1. Up/Downsampling

MPlayer fully supports sound up/down-sampling through the `resample` filter. It can be used if you have a fixed frequency sound card or if you are stuck with an old sound card that is only capable of max 44.1kHz. This filter is automatically enabled if it is necessary, but it can also be explicitly enabled on the command line. It has three options:

srate <8000-192000>

is an integer used for setting the output sample frequency in Hz. The valid range for this parameter is 8kHz to 192kHz. If the input and output sample frequency are the same or if this parameter is omitted the filter is automatically unloaded. A high sample frequency normally improves the audio quality, especially when used in combination with other filters.

sloppy

is an optional binary parameter that allows the output frequency to differ slightly from the frequency given by *srate*. This option can be used if the startup of the playback is extremely slow. It is enabled by default.

type <0-2>

is an optional integer between 0 and 2 that selects which resampling method to use. Here 0 represents linear interpolation as resampling method, 1 represents resampling using a poly-phase filter-bank and integer processing and 2 represents resampling using a poly-phase filter-bank and floating point processing. Linear interpolation is extremely fast, but suffers from poor sound quality especially when used for up-sampling. The best quality is given by 2 but this method also suffers from the highest CPU load.

Example:

```
mplayer -af resample=44100:0:0
```

would set the output frequency of the resample filter to 44100Hz using exact output frequency scaling and linear interpolation.

2.3.2.3.2. Changing the number of channels

The `channels` filter can be used for adding and removing channels, it can also be used for routing or copying channels. It is automatically enabled when the output from the audio filter layer differs from the input layer or when it is requested by another filter. This filter unloads itself if not needed. The number of options is dynamic:

nch <1-6>

is an integer between 1 and 6 that is used for setting the number of output channels. This option is required, leaving it empty results in a runtime error.

nr <1-6>

is an integer between 1 and 6 that is used for specifying the number of routes. This parameter is optional. If it is omitted the default routing is used.

from1:to1:from2:to2:from3:to3...

are pairs of numbers between 0 and 5 that define where each channel should be routed.

If only *nch* is given the default routing is used, it works as follows: If the number of output channels is bigger than the number of input channels empty channels are inserted (except mixing from mono to stereo, then the mono channel is repeated in both of the output channels). If the number of output channels is smaller than the number of input channels the exceeding channels are truncated.

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Example 1:

```
mplayer -af channels=4:4:0:1:1:0:2:2:3:3 media.avi
```

would change the number of channels to 4 and set up 4 routes that swap channel 0 and channel 1 and leave channel 2 and 3 intact. Observe that if media containing two channels was played back, channels 2 and 3 would contain silence but 0 and 1 would still be swapped.

Example 2:

```
mplayer -af channels=6:4:0:0:0:1:0:2:0:3 media.avi
```

would change the number of channels to 6 and set up 4 routes that copy channel 0 to channels 0 to 3. Channel 4 and 5 will contain silence.

2.3.2.3.3. Sample format converter

The `format` filter converts between different sample formats. It is automatically enabled when needed by the sound card or another filter.

bps <number>

can be 1, 2 or 4 and denotes the number of bytes per sample. This option is required, leaving it empty results in a runtime error.

f <format>

is a text string describing the sample format. The string is a concatenated mix of: `alaw`, `mulaw` or `imaadpcm`, `float` or `int`, `unsigned` or `signed`, `le` or `be` (little or big endian). This option is required, leaving it empty results in a runtime error.

Example:

```
mplayer -af format=4:float media.avi
```

would set the output format to 4 bytes per sample floating point data.

2.3.2.3.4. Delay

The `delay` filter delays the sound to the loudspeakers such that the sound from the different channels arrives at the listening position simultaneously. It is only useful if you have more than 2 loudspeakers. This filter has a variable number of parameters:

d1:d2:d3...

are floating point numbers representing the delays in ms that should be imposed on the different channels. The minimum delay is 0ms and the maximum is 1000ms.

To calculate the required delay for the different channels do as follows:

1. Measure the distance to the loudspeakers in meters in relation to your listening position, giving you the distances s_1 to s_5 (for a 5.1 system). There is no point in compensating for the sub-woofer (you will not hear the difference anyway).
2. Subtract the distances s_1 to s_5 from the maximum distance i.e. $s[i] = \max(s) - s[i]$; $i = 1...5$
3. Calculate the required delays in ms as $d[i] = 1000*s[i]/342$; $i = 1...5$

Example:

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```
mplayer -af delay=10.5:10.5:0:0:7:0 media.avi
```

would delay front left and right by 10.5ms, the two rear channels and the sub by 0ms and the center channel by 7ms.

2.3.2.3.5. Software volume control

Software volume control is implemented by the `volume` audio filter. Use this filter with caution since it can reduce the signal to noise ratio of the sound. In most cases it is best to set the level for the PCM sound to max, leave this filter out and control the output level to your speakers with the master volume control of the mixer. In case your sound card has a digital PCM mixer instead of an analog one, and you hear distortion, use the `MASTER` mixer instead. If there is an external amplifier connected to the computer (this is almost always the case), the noise level can be minimized by adjusting the master level and the volume knob on the amplifier until the hissing noise in the background is gone. This filter has two options:

`v <-200 - +60>`

is a floating point number between `-200` and `+60` which represents the volume level in dB. The default level is 0dB.

`c`

is a binary control that turns soft clipping on and off. Soft-clipping can make the sound more smooth if very high volume levels are used. Enable this option if the dynamic range of the loudspeakers is very low. Be aware that this feature creates distortion and should be considered a last resort.

Example:

```
mplayer -af volume=10.1:0 media.avi
```

would amplify the sound by 10.1dB and hard-clip if the sound level is too high.

This filter has a second feature: It measures the overall maximum sound level and prints out that level when MPlayer exits. This volume estimate can be used for setting the sound level in MEncoder such that the maximum dynamic range is utilized.

2.3.2.3.6. Equalizer

The `equalizer` filter represents a 10 octave band graphic equalizer, implemented using 10 IIR band pass filters. This means that it works regardless of what type of audio is being played back. The center frequencies for the 10 bands are:

Band No.	Center frequency
0	31.25 Hz
1	62.50 Hz
2	125.0 Hz
3	250.0 Hz
4	500.0 Hz
5	1.000 kHz
6	2.000 kHz
7	4.000 kHz
8	8.000 kHz

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9	16.00 kHz
---	-----------

If the sample rate of the sound being played back is lower than the center frequency for a frequency band, then that band will be disabled. A known bug with this filter is that the characteristics for the uppermost band are not completely symmetric if the sample rate is close to the center frequency of that band. This problem can be worked around by up-sampling the sound using the resample filter before it reaches this filter.

This filter has 10 parameters:

g1:g2:g3...g10

are floating point numbers between -12 and +12 representing the gain in dB for each frequency band.

Example:

```
mplayer -af equalizer=11:11:10:5:0:-12:0:5:12:12 media.avi
```

would amplify the sound in the upper and lower frequency region while canceling it almost completely around 1kHz.

2.3.2.3.7. Panning filter

Use the pan filter to mix channels arbitrarily. It is basically a combination of the volume control and the channels filter. There are two major uses for this filter:

1. Down-mixing many channels to only a few, stereo to mono for example.
2. Varying the "width" of the center speaker in a surround sound system.

This filter is hard to use, and will require some tinkering before the desired result is obtained. The number of options for this filter depends on the number of output channels:

nch <1-6>

is an integer between 1 and 6 and is used for setting the number of output channels. This option is required, leaving it empty results in a runtime error.

l00:l01:l02:...l10:l11:l12:...ln0:ln1:ln2:...

are floating point values between 0 and 1. *l[i][j]* determines how much of input channel *j* is mixed into output channel *i*.

Example 1:

```
mplayer -af pan=1:0.5:0.5 -channels 1 media.avi
```

would down-mix from stereo to mono.

Example 2:

```
mplayer -af pan=3:1:0:1:0.5:0.5 -channels 3 media.avi
```

would give 3 channel output leaving channels 0 and 1 intact, and mix channels 0 and 1 into output channel 2 (which could be sent to a sub-woofer for example).

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2.3.2.3.8. Sub-woofer

The `sub` filter adds a sub woofer channel to the audio stream. The audio data used for creating the sub-woofer channel is an average of the sound in channel 0 and channel 1. The resulting sound is then low-pass filtered by a 4th order Butterworth filter with a default cutoff frequency of 60Hz and added to a separate channel in the audio stream. Warning: Disable this filter when you are playing DVDs with Dolby Digital 5.1 sound, otherwise this filter will disrupt the sound to the sub-woofer. This filter has two parameters:

`fc <20-300>`

is an optional floating point number used for setting the cutoff frequency for the filter in Hz. The valid range is 20Hz to 300Hz. For the best result try setting the cutoff frequency as low as possible. This will improve the stereo or surround sound experience. The default cutoff frequency is 60Hz.

`ch <0-5>`

is an optional integer between 0 and 5 which determines the channel number in which to insert the sub-channel audio. The default is channel number 5. Observe that the number of channels will automatically be increased to `ch` if necessary.

Example:

```
mplayer -af sub=100:4 -channels 5 media.avi
```

would add a sub-woofer channel with a cutoff frequency of 100Hz to output channel 4.

2.3.2.3.9. Surround-sound decoder

Matrix encoded surround sound can be decoded by the `surround` filter. Dolby Surround is an example of a matrix encoded format. Many files with 2 channel audio actually contain matrixed surround sound. To use this feature you need a sound card supporting at least 4 channels. This filter has one parameter:

`d <0-1000>`

is an optional floating point number between 0 and 1000 used for setting the delay time in ms for the rear speakers. This delay should be set as follows: if `d1` is the distance from the listening position to the front speakers and `d2` is the distance from the listening position to the rear speakers, then the delay `d` should be set to 15ms if `d1 <= d2` and to $15 + 5*(d1-d2)$ if `d1 > d2`. The default value for `d` is 20ms.

Example:

```
mplayer -af surround=15 -channels 4 media.avi
```

would add surround sound decoding with 15ms delay for the sound to the rear speakers.

2.3.2.3.10. Audio Exporter

This audio filter exports the incoming signal to other processes using memory mapping (`mmap()`). Memory mapped areas contain a header:

```
int nch                /*number of channels*/
int size              /*buffer size*/
unsigned long long counter /*Used to keep sync, it's updated
                        every time new data is exported.*/
```

The rest is payload (non-interleaved) 16bit data.

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mmapped_file

The file you want this filter to export to. The default is to map to
~/ .mplayer/mplayer-af_export.

nsamples

Number of samples per channel. The default is 512 samples.

Example:

```
mplayer -af export=/tmp/mplayer-af_export:1024 media.avi
```

would export 1024 samples per channel to /tmp/mplayer-af_export.

2.3.2.4. Audio plugins (deprecated)

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Audio plugins have been deprecated by audio filters and will be removed soon.

MPlayer has support for audio plugins. Audio plugins can be used for changing the properties of the audio data before the sound reaches the sound card. They are enabled using the `-aop` switch which takes a `list=plugin1,plugin2,...` argument. The `list` argument is required and determines which plugins should be used and in which order they should be executed. Example:

```
mplayer media.avi -aop list=resample,format
```

would run the sound through the resampling plugin followed by the format plugin.

The plugins can also have switches that change their behavior. These switches are explained in detail in the sections below. A plugin will execute using default settings if its switches are omitted. Here is an example of how to use plugins in combination with plugin specific switches:

```
mplayer media.avi -aop list=resample,format:fout=44100:format=0x8
```

would set the output frequency of the resample plugin to 44100 Hz and the output format of the format plugin to AFMT_U8.

Currently audio plugins can not be used in MEncoder.

2.3.2.4.1. Up/Downsampling

MPlayer fully supports up/downsampling of the sound. This plugin can be used if you have a fixed frequency sound card or if you are stuck with an old sound card that is only capable of max 44.1 kHz. Limitations in your hardware are not auto detected, so you have to specify the sample frequency explicitly. This plugin has one switch: `fout` which is used for setting the desired output sample frequency. It defaults to 48 kHz, and is given in Hz.

Usage:

```
mplayer media.avi -aop list=resample:fout=freq
```

where *freq* is the frequency in Hz, like 44100.

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The output frequency should not be scaled up from the default value. Scaling up will cause the audio and video streams to be played in slow motion in addition to audio distortion.

2.3.2.4.2. Surround Sound decoding

MPlayer has an audio plugin that can decode matrix encoded surround sound. Dolby Surround is an example of a matrix encoded format. Many files with 2 channel audio actually contain matrixed surround sound. To use this feature you need a sound card supporting at least 4 channels.

Usage:

```
mplayer media.avi -aop list=surround
```

2.3.2.4.3. Sample format converter

If your sound card driver does not support signed 16-bit int data type, this plugin can be used to change the format to one which your sound card can understand. It has one switch, `format`, which can be set to one of the numbers found in `libao2/afmt.h`. This plugin is hardly ever needed and is intended for advanced users. Keep in mind that this plugin only changes the sample format and not the sample frequency or the number of channels.

Usage:

```
mplayer media.avi -aop list=format:format=outfmt
```

where `outfmt` is the required output format.

2.3.2.4.4. Delay

This plugin delays the sound and is intended as an example of how to develop new plugins. It can not be used for anything useful from a users perspective and is mentioned here for the sake of completeness only. Do not use this plugin unless you are a developer.

2.3.2.4.5. Software volume control

This plugin is a software replacement for the volume control, and can be used on machines with a broken mixer device. It can also be used if one wants to change the output volume of MPlayer without changing the PCM volume setting in the mixer. It has one switch `volume` that is used for setting the initial sound level. The initial sound level can be set to values between 0 and 255 and defaults to 101 which equals 0dB amplification. Use this plugin with caution since it can reduce the signal to noise ratio of the sound. In most cases it is best to set the level for the PCM sound to max, leave this plugin out and control the output level to your speakers with the master volume control of the mixer. If there is an external amplifier connected to the computer (this is almost always the case), the noise level can be minimized by adjusting the master level and the volume knob on the amplifier until the hissing noise in the background is gone.

Usage:

```
mplayer media.avi -aop list=volume:volume=0-255
```

This plugin also has compressor or "soft-clipping" capabilities. Compression can be used if the dynamic range of the sound is very high or if the dynamic range of the loudspeakers is very low. Be aware that this

feature creates distortion and should be considered a last resort.

Usage:

```
mplayer media.avi -aop list=volume:softclip
```

2.3.2.4.6. Extrastereo

This plugin (linearly) increases the difference between left and right channels (like the XMMS extrastereo plugin) which gives some sort of "live" effect to playback.

Usage:

```
mplayer media.avi -aop list=extrastereo
mplayer media.avi -aop list=extrastereo:mul=3.45
```

The default coefficient (mul) is a float number that defaults to 2.5. If you set it to 0.0, you will have mono sound (average of both channels). If you set it to 1.0, sound will be unchanged, if you set it to -1.0, left and right channels will be swapped.

2.3.2.4.7. Volume normalizer

This plugin maximizes the volume without distorting the sound.

Usage:

```
mplayer media.avi -aop list=volnorm
```

2.4. TV xEIA

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TV ÓÀÏÀÓÁ. óí. man ÓÔÒÁÏÉÁÕ, ÀÏÑ ÌÐÉÓÁÏÉÑ TV ÌÐÄËË É ÈÏÏÏÏË ÕÐÒÁ×ÌÁÏÉÑ.

2.4.1. ëÏÏÐÉÏÑÁÉÑ

1. ÷Ï-ÐÄÔ×ÙÈ, ÷ÁÍ ÌÏÏÏÏ ÐÄÔÁËÏÏÐÉÏÏ×ÁÔØ MPlayer, ./configure Á×ÏÏÏÁÔÉÐÁÓÉÉ ÌÁÏÁÔÏÏÉÔ ÚÁÇÏÏ×ÈÈ ÑÄÒÁ, ÌÏÏÏÑÝÉÁÓÑ È v4l, É ÍÁÏÉÐÉÁ /dev/video* ÕÓÔÒÏÏÉÔ×. áÓÏË ÏË ÓÏÝÁÓÔ×ÔÀÔ, ÁÔÄÁÔ ÓÏÁÔÁÏÁ ÐÏÄÄÔÏÏÉÁ TV (Óí. ×Ù×ÏÄ ./configure).
2. ðÄÄÄÉÔÁÓØ, ÐÏÏ ÷ÁÚ ÔÀÏÀÒ ÒÁÁÏÔÁÔ Ó ÄÒÇÉÏÉ TV ÐÒËÏÏÔÁÏÉÑÏÉ ÐÏÄ Linux, ÍÁÐÒËÏÀÒ XawTV.

2.4.2. óÏ×ÁÔÙ ÐÏ ÉÓÐÏÏØÚÏ×ÁÏÉÀ

ðÏÏÏÏË ÓÐÉÓÏÏË ÌÐÄËË ÄÏÓÔÏÐÁÏ ÍÁ ÓÔÒÁÏÉÁÈ ÒÏËÏ×ÏÁÓÔ×Á (man). ÷ÏÔ ×ÓÁÇÏ ÌÁÓËÏÏÏËÏÏ ÓÏ×ÁÔÏ×:

- éÓÐÏÏØÚÏÏÏÁ ÌÐÄËÀ channels. ðÒËÏÀÒ:

```
-tv channels=26-MTV1,23-TV2
```

γΑΒΝΟΪΑΪΕΑ: ΔΟΕ ΕΟΘΠΘΥΪ×ΑΪΕΕ ΟΑΕΙΕ ΙΔΑΕΕ, ΑΟΑΟΟ ΕΟΘΠΘΥΪ×ΑΟΘΟΝ ΟΠΘΕΪ
ΕΑΪΑΪ 26 Ε 23, Ε, ΕΘΪΑ ΟΪÇ, ΑΟΑΑΟ ΔΟΕΝΟΪΥΕ OSD ΟΑΕΟΟ ΔΟΕ ΔΑΟΑΕΪΑΡΑΪΕΕ
ΙΑΟΑΟ ΕΑΪΑΪΑΪΕ, ΙΟΪΑΟΑΟΑΥΕΕ ΙΑΪ×ΑΪΕΑ ΕΑΪΑΪΑ. ΔΟΪΑΪΪ × ΙΑΪ×ΑΪΕΝΕ ΕΑΪΑΪΪ×
ΑΪΠΘΪ ΑΪΪΘ ΪΑΪΑΪΑΪ ΟΕΪ×ΪΪΪ " _".

- -ΥΑΑΔΟΕΟΑ ΔΑΪΪΪΪ ΔΑΪΪΑΟΪ ΕΪΪΑΔΑΟΑΪΕΝ. ΔΑΪΪΑΟΪ ΕΪΪΑΔΑΟΑΪΕΝ ΔΪΠΘΡΑΪΪÇΪ
ΕΪΪΑΔΑΟΑΪΕΝ ΑΪΠΘΪ ΑΪΑΪΕΘΟΝ ΙΑ 16.
- αΟΪΕ -Ϊ ΪΑΕ×ΑΟΪ×ΑΑΟΑ ×ΕΑΑΪ Ο ×ΑΔΟΕΕΑΪΘΪΪ ΔΑΪΪΑΪΑΪΕΑΪ ×ΪΪ ΔΪΪΪ×ΕΪΪ
ΔΪΪΪÇΪ ΔΑΪΪΑΪΑΪΕΝ (Ο.Α. 288 ΑΪΝ PAL ΕΪΕ 240 ΑΪΝ NTSC), ΟΑΑΑΕΟΑΟΘ, ΡΟΪ -Ϊ
×ΕΪΑΡΕΪΕ ΑΑΕΪΟΑΟΪΑΕΟΕΪÇ[deinterlacing]. ΕΪΑΡΑ -Ϊ ΔΪΠΘΡΕΟΑ ΑΕΪΘΪ Ο ΟΕΪΘΪΪΕ
ΕΟΕΑΟΑΪΕΝΪΕ × ΟΑΑΪΑΕ Ο ΑΪΪΟΟΪΕ Α×ΕΟΑΪΕΝΪΕ, Ε ΕΪΪΘΟΪΘ ΑΕΘΪΘΪΕΑ, ΟΕΪΘΑ
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ΟΘΑΪΟΑΕΑΟΑ[bandwidth]. -Ϊ ΪΪΘΑΟΑ ×ΕΪΑΡΕΘΘ ΑΑΕΪΟΑΟΪΑΕΘΑΟ, ΕΟΘΠΘΪΪΟΝ -vf
pp=DEINT_TYPE. ΙΑΪΪΪ pp=1b ΟΑΑΪΟΑΑΟ ΕΪΘΪΪ, Ϊ ΪΪΘΪ ΘΟΑ ΟΘΑΒΑΕΘΕ×ΪΑ ΪΑΪΕΑ.
αΟΘÇΕΑ ΑΪÇΘΕΘΪ ΑΑΕΪΟΑΟΪΑΕΟΕΪÇΑ ΟΪ. ΙΑ man-ΟΘΟΑΪΕΑΑ Ε ΔΪΘΟΪΑΘΕΘΑ ΕΕ.
- ΪΑΔΑΘΘΟΑ ΔΟΘΟΪΑ ΔΟΪΘΟΔΑΪΟΘ×Ϊ. ΕΪÇΑΑ ×Ϊ ΪΑΕ×ΑΟΪ×ΑΑΟΑ ×ΕΑΑΪ, ΡΑΟΘΪ, ΪΪΪ
ΔΪ ΕΘΑΝΪ ΡΑΘΪ ΕΪΕ ΟΪΑΑΘΟΑΘ ΔΟΪΘΟΪ ΪΪ. ΪΪΘ ΪΘΝΘΘ ΟΒΑΑΑΑΘ ΡΑΟΘΘ
ΟΘΑΪΟΑΕΑΟΑ[bandwidth]. ΔΪΡΑΑ, ΪΪΘ ΙΑ ΟΑΪΕ ΡΕΘΪΪ ΪΪΪ, Α ΕΪΪΘΑΟΘΪΪΕ ΔΑΟΑΕΪΑ
ΪΘ ΡΕΘΪΪÇ Ϊ ΑΪΑΑ Ο×ΑΘΪΪΘ ×ΕΑΑΪ, Ϊ ΪΪΘ ΟΑΕΡΑΟ ΙΑ ×ΑΘΪ. ΔΟΑΘΑΑ ΡΑΪ -Ϊ ΙΑΡΪΕΘΑ
ΪΑΕ×ΑΟΪ×ΑΘΘ, ΔΪΑΘΘΘΪΕΘΑ ΑΘÇΟΪΑΪΘΪ ΙΔΑΕΕ crop, ΡΟΪΑΪ ΙΑΘΑΪΑΘΘ ×ΑΘΘ
ΪΟΘΪΘ ΔΪ ΕΘΑΝΪ. ΕΪΪ×Α, ΙΑ ΪΑΑΘΑΘΘΑ ΟΪΕΘΑΪΕΘΘ ΔΪΠΘΡΕ×ΪΕΑΘΝ ΔΑΪΪΑΟΪ
ΕΪΪΑΔΑΟΑΪΕΝ ΑΪΘΘΘΕΪΪΕ.
- ΪΘΘΪΑΘΕ×ΑΕΘΑ ΪΑÇΘΘΪΕΘ CPU. ΪΑ ΙΑ ΑΪΠΘΪΑ ΔΑΘΑΘΑΕΑΘΘ 90% ÇΘΑΪΕΑΘ ΑΪΠΘΪΑ
ΡΑΟΘΘ ×ΘΑΪΑΪΕ. αΟΪΕ Θ -ΑΟ ΑΪΠΘΪΕ ΔΑΪΪΑΘ ΑΘΑΕΑΘΑ ΪΑΕ×ΑΘΑ, MEncoder
ΔΑΘΑΘΕ×ΕΘ ΟΑΕΘΑ ΪΑÇΘΘΪΕΘ × ΘΑΡΑΪΕΑ ΙΑΘΕΪΘΕΕΕ ΟΑΕΘΪΑ, Ϊ ΙΑ ΑΪΑΑ ΟΪÇ.
ΪΘΡΪΑ ΙΘΕΪΑΡΕΘΘ 3D OpenGL ΕΘΑΪΕΘΑΪΕ ΪΕΘΑΪΑ Ε ΑΘΘÇΘΑ ΔΪΑΪΑΪΘΑ ÇΑΑΪΘΘΘ.
- ΙΑ ΙΑΪΝΕΘΑ ΟΕΘΘΑΪΪΪΑ ΡΑΘΪ. MEncoder ΕΟΘΠΘΪΪΑΘ ΟΕΘΘΑΪΪΪΑ ΡΑΘΪ ΑΪΝ A/V
ΟΕΪΘΪΪΕΪΑΑΕΕ. αΟΪΕ -Ϊ ΔΑΘΑ×ΑΑΕΘΑ ΟΕΘΘΑΪΪΪΑ ΡΑΘΪ (ΪΟΪΑΑΪΪ ΙΑΪΑΑ), MEncoder
ΪΑΘΘΘΑΑΘΘΝ, Ε -Ϊ ΙΑΡΪΕΘΑ ΟΑΘΝΘΘ ΕΑΑΘΪ. ΪΪΘ ΪΟΪΑΑΪΪ ×ΑΘΪΪΕ ×ΪΘΘΪ, ΑΟΪΕ -Ϊ
ΔΪΑΕΪΑΡΑΪΪ Ε ΟΑΘΕ Ε ΕΟΘΠΘΪΪΑΘΑ ΕΑΕΕΑ-ΪΕΑΘΘΘ ΔΟΪÇΘΑΪΪΪ ΟΕΪΘΪΪΕΪΑΑΕΕ
×ΘΑΪΑΪΕ, × ΑΘΕΑ NTP. -Ϊ ΑΪΠΘΪΪ ΙΘΕΪΑΡΕΘΘ NTP ×Ϊ ×ΘΑΪΝ ΪΑΕ×ΑΘΑ, ΑΟΪΕ -Ϊ
ΑΑΕΘΘ×ΕΘΑΪΘΪ ΕΪΘΕΘΑ ΟΑΑΪΑΘΘ ΕΪΘΪΪΘΑ ΪΑΘΕΘΘ.
- ΕΪΪΑΪΝΕΘΑ ΪΑΡΑΪΕΑ outfmt ΘΪΘΕΪ ΑΟΪΕ -Ϊ ΪΑΑΘΑ, ΡΟΪ -Ϊ ΑΑΪΑΑΘΑ,ΕΪΕ -ΑΪΪ
ΕΑΘΘΑ/ΑΘΑΕ×ΑΘ ΙΑ ΔΪΑΑΑΘΘΕ×ΑΑΘ ΪΑΡΑΪΕΑ ΔΪ ΘΪΡΑΪΕΑ (ΔΟΪΘΟΔΑΪΟΘ×Ϊ
Α×ΑΘΪ× YV12). - ΟΘΑΘΪΕ ×ΑΘΘΕΝΕ MPlayer/ MEncoder ΑΪΪ ΙΑΪΑΕΪΑΕΪΪ ×ΪΘΘΑ×ΪΝΘΘ
ΪΘΘΪΑ ΪΑΡΑΪΕΑ ΑΪΘΪΑΘΑ ×ΪΪΑΑ. ΪΘΑ ΔΟΪΑΪΑΪΑ ΑΪΠΘΑΪ ΑΪΪΘ ΔΑΪΪΑΪΑ × ΟΑΕΘΪΕΕ
×ΑΘΘΕΝΕ Ε ΙΔΑΕΝ outfmt ΑΪΠΘΪΑ ΙΑ ΟΘΑΑΘΑΘΘΝ, ΔΪΟΕΪΘΕΘ ΪΑΡΑΪΕΑ ΔΪ
ΘΪΡΑΪΕΑ ΔΪΑΕΪΑΕΘ × ΑΪΠΘΪΕΪΘΘ×Α ΟΪΘΡΑΑ×. ΙΑΔΘΕΪΑΘ ΑΟΪΕ -Ϊ ΑΘΑΑΘΑ
ΪΑΕ×ΑΟΪ×ΑΘΘ × DivX, ΕΟΘΠΘΪΪΟΝ libavcodec, Ε ΘΕΑΘΑΘΑ outfmt=RGB24 ΑΪΝ
ΟΪΘΡΪΑΪΕΝ ΕΑΡΑΘΘ×Α ΔΪΠΘΡΑΪΪÇΪ ΕΪΪΑΔΑΟΑΪΕΝ, ΟΪ -Ϊ Θ×ΕΑΕΘΑ, ΡΟΪ ×
ΑΑΕΘΘ×ΕΘΑΪΘΪΘΘΕ, ΕΪΪΑΔΑΟΑΪΕΑ ×ΘΑ ΟΑ×Ϊ ΑΘΑΑΘ ΔΑΘΑΕΪΑΕΘΪ×ΑΪΪ × YV12,
ΔΪΪΪΘΘΘ ×ΘΑ ΡΟΪ -Ϊ ΔΪΠΘΡΕΘΑ, ΪΪΘ ΙÇΟΪΪΑΝ ΪΑÇΘΘΪΕΑ CPU.
- ΡΟΪΑΪ ΕΟΘΠΘΪΪΑΘΘ ΔΟΪΘΟΔΑΪΟΘ×Ϊ Α×ΑΘΪ× I420 (outfmt=i420), -Ϊ ΑΪΠΘΪΪ
ΘΕΑΪΑΘΘ ΙΔΑΕΑ -vc rawi420 × Ο×ΝΪΕ Ο ΕΪΪΑΪΕΘΘΪΪ fourcc Ο ×ΕΑΑΪ ΕΪΑΑΕΪΪ Intel
Indeo.
- αΟΘΘ ΙΑΘΕΪΘΕΪ ΔΘΘΑΕ ΪΑΕ×ΑΘΑ ΑΘΑΕΪ. -Ϊ ΪΪΘΑΘΑ ΔΪΠΘΡΕΘΘ Ϊ×ΘΕ, ΪΕΑΪ
ΕΟΘΠΘΪΪΟΝ -ΑΪΪ Ϊ×ΘΕΪ×ΘΑ ΕΑΘΘΘ Ε ×ΪΑΪΪΕΕ ΕΑΑΑΪΘ, ΟΪΑΑΕΪΝΑΪΕΕ ×ΕΑΑΪ ΕΑΘΘΘ
Ε ΪΕΪΑΕΪΪΕ ×ΕΪΑ[line-in], ΪΕΑΪ ΕΟΘΠΘΪΪΟΝ ×ΘΘΘΪΑΪΪΕ ADC ΙΑ × ΡΕΔΑ bt878. - ΪΪΘΪ
ΟΪΘΡΑΑ, -Ϊ ΑΪΠΘΪΪ ΪΑÇΘΘΪΕΘΘ ΑΘΑΕ×ΑΘ btaudio. ΡΕΘΑΕΘΑ ΑΕΑΪ
linux/Documentation/sound/btaudio (× ΑΑΘΑ×Α ΝΑΘΑ, ΙΑ MPlayer'Α) Ο

ΙΑΕΙΘΙΟΥΙΕ ΕΙΟΟΟΟΕΑΕΝΙΕ ΔΙ ΕΟΔΠΘΥΙ×ΑΙΕΑ ΥΟΙÇΙ ΑΟΑΕ×ΑΟΑ.

- αΟΙΕ MEncoder ΙΑ ΠΟΑΟ ΙΟΕΟΥΟΘ ΑΟΑΕΙ ΟΟΟΘΙΕΟΟ×Ι, ΟΑΑΑΕΟΑΟΘ, ΡΟΙ ΠΙ ΑΑΕΟΟ×ΕΟΑΙΘΠ ΑΙΟΟΘΠ. -ΙΥΠΘΙΥ ΕΑΕΕΑ-ΙΕΑΘΑΘ ΟΟΘΑΠΘΟΕ ΟΙ Υ×ΘΕΙ×ΥΙΕ ΟΑΟ×ΑΟΑΙΕ, ΙΑΘΔΕΙΑΘ arts (KDE) Ε esd (GNOME). αΟΙΕ Θ -ΑΟ ΔΠΠΙΑΘΔΙΑΕΟΙΑΝ Υ×ΘΕΙ×ΑΝ ΕΑΘΟΑ (ΔΠΡΟΕ ×ΟΑ ΟΙ×ΟΑΙΑΠΥΑ ΕΑΘΟΥ ΥΟΙ ΔΙΑΑΑΟΘΕ×ΑΑΘ), Ε ÷Υ ΕΟΔΠΘΥΟΑΘΑ KDE, ΔΙΘΟΙΑΘΕΘΑ ΙΘΙΑΘΕΘΘ ÇΑΠΡΕΘ " full duplex" × ΙΑΙΑ ΙΑΟΘΟΙΑΕ Υ×ΘΕΙ×ΙÇΙ ΟΑΟ×ΑΟΑ.

2.4.3. ΘΟΕΙΑΘΟΥ

αΕΕΘΕ×ΙΥΕ ×Υ×ΙΑ, AAlib :)

```
mplayer -tv driver=dummy:width=640:height=480 -vo aatv://
```

÷×ΙΑ ΟΙ ΟΟΑΙΑΑΘΟΠÇΙ V4L:

```
mplayer -tv driver=v4l:width=640:height=480:outfmt=i420 -vc rawi420 -vo xv tv://
```

αΠΙΑ ΑΟΘΑΟΟ×ΑΠΥΕ ΔΘΕΙΑΘ. υΟΙ ΥΑΟΟΑ×ΙΝΑΘ MEncoder ΥΑΕ×ΑΘΥ×ΑΘΘ ΔΠΠΙΑ PAL ΕΥΙΑΘΑΘΑΙΕΑ, ΙΑΘΑΥΑΘΘ ΕΘΑΝ Ε ΑΑΕΙΘΑΘΙΑΕΘΕΘΘ ΕΑΘΘΕΙΕΘ, ΕΟΔΠΘΥΟΝ ΑΙÇΙΘΕΘΙ ΙΕΙΑΕΠÇΙ ΟΙΑΥΕ×ΑΙΕΝ. αΘΑΕΙ ΘΘΕΙΑΑΘΟΝ ΑΙ ΔΙΟΘΙΝΠÇΙ ΑΕΘΠΘΙΕΑ 64 Εα/Ο, ΕΟΔΠΘΥΟΝ LAME ΕΙΑΑΕ. υΘΕ ΘΘΘΑΠ×ΕΕ ΔΙΑΕΙΑΝΘ ΑΙΝ ΥΑΕ×ΑΘΑ ΑΕΙΘΠ×.

```
mencoder -tv driver=v4l:width=768:height=576 \
-ovc lavc -lavcopts vcodec=mpeg4:vbitrate=900 \
-oac mp3lame -lameopts cbr:br=64 \
-vf crop=720:544:24:16,pp=lb -o output.avi tv://
```

ύΑΑΘΘ, ΕΥΙΑΘΑΘΑΙΕΑ ΑΘΑΘ ΑΠΠΠΕΘΑΙΘΠ ΙΑΟΥΘΑΑΕΘΙ×ΑΠ ΑΙ 384x288 Ε ΟΘΑΘΙ Θ ΑΕΘΠΘΙΘΠ 350 Εα/Ο × ΘΑΘΕΙΑ ×ΥΟΙΕΠÇΙ ΕΑΡΑΘΘ×Α. ΙΘΑΕΝ vqmax ΑΑΘ ×ΠΑ Ε×ΑΙΘΑΕΥΑΘΘ[quantizer] Ε ΔΙΥ×ΠΠΝΑΘ ΕΠΘΘΑΘΘΘΘ ×ΕΑΑΙ ΑΑΕΘΘ×ΕΘΑΙΘΠ ΑΙΘΘΕΡΘ ΘΘΠΘ ΙΕΥΕΠÇΙ ΑΕΘΠΘΙΕΑ, ΘΘΑ×ΑΑ ΑΑΠΠΕ ΕΑΡΑΘΘ×Α. υΟΙ ΠΘΑΘ ΑΥΘΘ ΔΠΑΥΠ ΑΙΝ ΥΑΕ×ΑΘΑ ΑΙΕΠΥΕ TV ΘΑΘΕΕ, ÇΑΑ ΕΑΡΑΘΘ×Ι ΙΑ ΙΘΙΑΑΠΠΙ ×ΑΘΠ.

```
mencoder -tv driver=v4l:width=768:height=576 \
-ovc lavc -lavcopts vcodec=mpeg4:vbitrate=350:vhq:vqmax=31:keyint=300 \
-oac mp3lame -lameopts cbr:br=48 \
-vf crop=720:540:24:18,pp=tn/lb,scale=384:288 -sws 1 -o output.avi tv://
```

θαΕΘΑ ×ΙΥΠΘΠ ΘΕΑΥΑΘΘ ΙΑΙΘΥΕΑ ΘΑΥΙΑΘΟΥ ΕΥΙΑΘΑΘΑΙΕΝ × ΙΘΑΕΕ -tv Ε ΔΘΙΘΘΘΘΕΘΘ ΔΘΙÇΘΑΠΠΙΑ ΙΑΟΥΘΑΑΕΘΙ×ΑΙΕΑ, Π ΔΘΕ×ΑΑΕΠΥΕ ΔΙΑΕΙΑ ΕΟΔΠΘΥΟΑΘ ΙΑΕΘΕΙΑΙΘΠ ΑΙΘΘΘΠ ΑΠΠΡΑΘΘ×Ι ΕΛΕΙΘΙΑΑΕΕ Ε ΡΘΘΘ ΑΠΠΑ ΘΘΘΙΕΡΕ× Ε ΥΘΙΘ. ΡΕΔΥ bt8x8 ΕΥ-ΥΑ ΑΘΘΑΘΑΘΙΥΕ ΙÇΘΑΙΕΡΑΙΕΕ ΠÇΘΘ ΘΘΘΑΑΠΠΝΘΘ ΔΕΘΘΑΙΕ ΘΠΘΕΙ ΔΙ ÇΙΘΕΥΠΘΑΙΕ.

2.5. ΘΑΑΑΕΘΕΘΘΑΙΥΑ ΘΘΕΘΕΘ ΘΑΥΑΙΕΘ [Edit Decision Lists] (EDL)

ΘΕΘΘΑΙΑ ΘΑΑΑΕΘΕΘΘΑΙΥΕ ΘΘΕΘΕΘ× ΘΑΥΑΙΕΘ [edit decision list] (EDL) ΔΙΥ×ΠΠΝΑΘ ÷ΑΙ Α×ΘΙΙΑΘΕΡΑΘΕΘ ΔΘΙΘΘΘΕΑΘΘ ΕΙΕ ΥΑÇΙΘΥΑΘΘ ΡΑΘΘΕ ΔΘΕ ×ΙΘΘΘΙΕΥ×ΑΑΑΙΕΕ, ΙΘΠ×Υ×ΑΝΘΘ ΙΑ ΘΘΑΑΕΑΕΡΠΠΙ ΑΙΝ ΕΑΘΑΙÇΙ ΑΕΙΘΙΑ ΕΠΠΕÇΘΘΑΑΕΠΠΠ ΑΕΑΕΙΑ.

üÖÏ ðÏÁÛÏ ÆÏÑ ÕÀÈ, ÈÏÏ ÏÏÖÅ ÕÀÈÏÏÖÅ ðÏÏÏÏÏÏÏ ÆÈÏÏ × "ÕÀÏÁÈÏÏ" ÕÀÏÏÏ. ÷Û
ÏÏÖÅ ÕÀÈÏÏ ÆÈÏÏÏÏ ÌÀÀÛÀ ðÏÏÏ×ÏÁÏÏ ÌÁÏÏÏÏ, ÌÁ ÏÏÏÏÏÏ×ÏÏÈ ÌÀÈÏÏÏÏÏ, Jar-Jar Binks, É Õ.
ð. ÈÛ ÆÈÏÏÏ×, ÕÏÏÀÏÏÏÏÏ Õ ÷ÀÛÈÏÏÈ ÌÈÏÏÏÏÈ ðÏÀÀðÏÏÏÏÏÏÏÏ. ðÏÏÏÏ ÛÏÏÏÏ,
ÕÏÛÀÏÏ×ÏÀ ÆÏÏÏÏÈ ðÏÏÏÏÏÏÏ, ÌÁðÏÏÏÏ Æ×ÏÏÏÏÏÏÏÏÏÏÏÏÏ ðÏÏÏÏÏÏ ÕÀÈÏÏÏÏ ðÏÈ
ðÏÏÏÏÏÏ ÆÈÏÏÏ×.

æÏÏÏÏÏ EDL ÆÁÈÏÏ× ðÏÏÏ ÛÏÏÏÏÏÏÏÏÏ. èÏÏÏÏ ÕÈÏÏÏÏ EDL ÆÏÏÏÏÏÏÏ ÏÏÏÏÏÏÏÏÏÏÏÏÏ
ÏÏÏÏÏÏ ÕÀ×ÀÏÏÏÏÏÏÏÏ, ×ÀÏÏÏÏÏ ÆÏÏÏÏÏ ÈÏÏÏÏÏÏ×ÀÏÏÏÏ ÏÏÏ×ÀÏÏÏÏÈ ÌÁ XML ÆÏÏÏÏÏ
ÆÁÈÏÏ× (ðÏÈ ÛÏÏÏ ÕÏÏÏÏÏÏÏÏ ÕÏ×ÏÏÏÏÏÏÏÏÏ Õ ðÏÀÀÛÀÏÏÏÏÏÏ ÆÏÏÏÏÏÏ EDL).

÷ ÕÀÈÏÏÏÏ ÈÏÏÏÏÏÏÏÏ, ÈÏÏÏÏÏÏ×Ï EDL ÕÀðÈÏÏÏÈ ÏÏÏÏÏÏÏÏ 1000. ðÏÏÏ ÷ÀÏ ðÏÏÏÏÏÏÏÏÏ
ÀÏÏÏÏÏ, ÈÛÏÏÏÏÏ #define MAX_EDL_ENTRIES × ÆÁÈÏÏ edl.h.

2.5.1. èÏÏÏÏÏÏ×ÀÏÏÏ EDL ÆÁÈÏÏ×

÷ÈÏÏÏÏÏ ÏÏÀÈÀ -edl <filename>, ÈÏÏÏÏ ÷Û ÕÀðÏÏÏÏÏÏÏ MPlayer, Õ ÈÏÏÏÏÏ EDL ÆÁÈÏÏ, ÈÏÏÏÏÏÏ ÷Û ÈÏÏÏÏÏ ÈÏÏÏÏÏÏ×ÀÏÏÏ Õ ×ÈÀÏÏ.

2.5.2. ðÏÏÏÏÏÏ EDL ÆÁÈÏÏ×

ðÀÈÏÏÏÏÏ ÆÏÏÏÏÏ ÆÁÈÏÏ× EDL:

```
[ÏÏÏÏÏÏÏÏ ÕÀÈÏÏÏÏ] [ÈÏÏÏÏÏÏÏ ÕÀÈÏÏÏÏ] [ÀÀÈÏÏ×ÈÀ]
```

çÀÀ ÕÀÈÏÏÏÏÏ – ÛÏÏ ðÈÏÏÏ Õ ðÏÀ×ÀÀÛÀÈ ÕÏÏÏÏÏ (×ÀÛÀÏÏ×ÀÏÏÏ ðÈÏÏÏÏ), Á ÀÀÈÏÏ×ÈÀ – ÛÏÏ ÈÏÈ 0 ÆÏÑ ðÏÏÏÏÏÏÈ ÈÏÈ 1 ÆÏÑ ÕÀÏÏÏÏÏÏÏ Õ×ÏÏÈ. ðÏÏÏÏ:

5.3	7.1	0
15	16.7	1
420	422	0

üÖÏ ×ÛÏÏ×À ðÏÏÏÏÏÏ ×ÈÀÏÏ Õ 5.3 ÕÀÈÏÏÏÏÏ ÆÏ 7.1 ÕÀÈÏÏÏÏÏ, ÕÀÏÏÏ ÕÀÏÏÏÏÏÏ Õ×ÏÏÈ ÌÁ 15 ÕÀÈÏÏÏÏ, ×ÈÏÏÏÏÏ ÌÁÏÏÏÏÏ × 16.7 ÕÀÈÏÏÏÏ È ðÏÏÏÏÏÏÏÏÏ ×ÈÀÏÏ Õ 420 ðÏ 422 ÕÀÈÏÏÏÏÏ. üÏÈ ÀÀÈÏÏÏ×ÈÑ ÆÏÏÏÏ ðÏÏÏÏÏÏÏÏÏÏ, ÈÏÏÏÏ ÕÀÈÏÏÏ ðÏÏÏÏÏÏÏ×ÀÏÏÏ ÆÏÏÏÏÏÏÏ ÕÈÀÛÀÏÏÏÏÈ × ÆÁÈÏÏ ÕÏÏÏÏÏÏÈ.

ðÏÏÏÏ ÌÁÏÏÏÏÏ ÕÏÏÏÏÏÏ EDL ÆÁÈÏ, ÈÏÏÏÏÏÏÏÏÏ ÏÏÀÈÀ -edlout <filename>. ðÏÈ ðÏÏÏÏÏÏÏ×ÀÏÏÏÈ, ÈÏÏÏÏ ÷Û ÈÏÏÏÏÏ ÏÏÏÏÏÏÏÏ ðÏÀÀÛÀÏÏÏÏÏ Æ×À ÕÀÈÏÏÏÏÏ ÆÏÑ ðÏÏÏÏÏÏÈ, ÌÁÏÏÏÏÏ i. ðÏÏ×ÀÏÏÏ×ÏÀÛÀÑ ÕÀðÈÏÏ ÆÏÑ ÛÏÏÏÏ ×ÏÀÏÏÏÈ ÆÏÏÏÏ ÆÏÏÏÏÏÏÏ×ÏÁÏÁ × ÆÁÈÏ. ÕÀÏÏÏ ÷Û ÏÏÏÏÏÏ ×ÀÏÏÏÏÏÏÈ È ðÏÀÏÏÏÏÏÏÏÏ ÕÏÏÏÏÏÏÏÏ×ÀÏÏÏÏ EDL ÆÁÈÏ.

çÏÀ×Á 3. èÏÏÏÏÏÏ×ÀÏÏÏ

ðÏÀÀÏÏÏÏÏ

- 3.1. èÏÏÏÏÏÏÏ ÕÏÏÏÏÈ
- 3.2. ðÏÏÏ×ÏÁÏÈÀ
 - 3.2.1. èÏÏÏÏÏÏÏÏÏ ÕÏÏÏ×ÏÁÏÈÑ
 - 3.2.1.1. ÏÁÛ×ÀÏÈÑ ÈÏÏÏÏÈ
 - 3.2.1.2. èÏÏÏÏÏÏ

- 3.2.2. δΔΘΑ×ΙΑΙΕΑ ΡΑΘΑÚ LIRC
- 3.2.3. δΪΑΡΕΪΪΪÙÈ ("ÒÁÁÓÈÈÈ") ÒÁÖÈΪ
- 3.3. σΆΟΑ×ÙΑ ΔΪΘΪÈÈ É ÈÁΪΑΪÙ
- 3.4. δΆΆΪΪΪÙΑ ΔΪΘΪÈÈ
 - 3.4.1. εΪΪΘΕΪΝΑΕΝ ÓΑΟ×ΑΟΑ
 - 3.4.2. εΪΘΪΪΘΪΪ×ΑΪΕΑ ÓΆΆΪΪΪÙÈ ΔΪΘΪÈÈ×

3.1. εΪΪΑΪΑΪΑΪ ÒÓÒÈÈÁ

MPlayer ΕΪΘΪΪΘΪΪÓÁÔ ΟΪΟΪΟÁ×ΪΪΑ ΑΑΘΑ×Ϊ ΔΘΪÈÇÒÙ×ΑΪÈΝ. ΪΪ ΟΪΟΪÈÓ ΕÚ ÇΪΑΑΪΘΪÙÈ ΪΔΆÈÈ, ÈÁÖÝÈÈ ΔΑΘ×ÙÈÈ, ΪΑΔΘÈΪÁÒ

```
mplayer -vfm 5
```

, È ΪΔΆÈÈ, ÈÁÖÝÈÈ ΔΪΘΪΑ ÈΪΑΪÈ ΑΕΑÈΪΑ, ÈΪΘΪΘÙΑ ΔΘÈΪΑΪΝΑÓΘΝ ÒΪΘÈÈ È ΑΑΪΪΪÓ ΑΕΑÈΪΘ/URL/È Ò.Δ., ΪΑΔΘÈΪÁÒ:

```
mplayer -vfm 5 movie1.avi movie2.avi -vfm 4
```

÷Ù ΪΪΘΑÔÁ ÇÒΘΔÈÈ×ΑΘΘ ΑΕΑÈΪÙ/URL'Ù ×ΪΑÓÔÁ, ΕΪΘΪΪΘΪΪÓΝ { È }. ùΘΪ ΔΪΑΪΪ, ΪΑΔΘÈΪÁÒ, Ó ΪΔΆÈÈÈ -loop:

```
mplayer { 1.avi -loop 2 2.avi } -loop 3
```

ùÓÁ ÈΪΪΑΪΑ ΔΘΪÈÇÒΑÁÔ ΑΕΑÈΪÙ × ÓΑÈΪΪ ΔΪΘΝΆÈÁ: 1, 1, 2, 1, 1, 2, 1, 1, 2.

÷ΪΘΔΪÈÙ×ΑΆΑΪÈÁ ΑΕΑÈΪΑ:

```
mplayer [ΪΔΆÈÈÈ] [ΔΘΘΘ/]ÈΪΝ_ΑΕΑÈΪΑ
```

÷ΪΘΔΪÈÙ×ΑΆΑΪÈÁ ΪΪΘΑÓÔ×Α ΑΕΑΪΪ×:

```
mplayer [ΪΆΪÈÁ ΪΔΆÈÈÈ] [ΔΘΘΘ/]ÈΪΝ_ΑΕΑÈΪΑ1 [ΪΔΆÈÈÈ ÄΪΝ ÈΪΝ_ΑΕΑÈΪΑ1] ÈΪΝ_ΑΕΑÈΪΑ2 [ΪΔΆÈÈÈ ÄΪΝ ÈΪΝ_ΑΕΑÈΪΑ2]
```

÷ΪΘΔΪÈÙ×ΑΆΑΪÈÁ VCD:

```
mplayer [ΪΔΆÈÈÈ] vcd://ΪΪΪÁÔ_ÄΪΘΪΘÈÈÈ [-cdrom-device /dev/cdrom]
```

÷ΪΘΔΪÈÙ×ΑΆΑΪÈÁ DVD:

```
mplayer [ΪΔΆÈÈÈ] dvd://ÈΪΝ_ÒΪÈÈÈÁ [-dvd-device /dev/dvd]
```

÷ΪΘΔΪÈÙ×ΑΆΑΪÈÁ ΕÚ WWW:

```
mplayer [ΪΔΆÈÈÈ] http://site.com/file.asf
```

(ÓÁÈ ÓΑ ΪΪΘΪ ÈΪΘΪΪΘΪΪ×ΑΘΘ È ÓΔÈÓÈÈ ΔΘΪÈÇÒÙ×ΑΪÈΝ (ΔΪΑÈÈÈÓÔ[playlist]))

÷ΪΘΔΪÈÙ×ΑΆΑΪÈÁ ΔΪ RTSP:

```
mplayer [ΪΔΆÈÈÈ] rtsp://server.example.com/streamName
```


• `pt_step` (int) val [(int) force=0]

• `pt_up_step` (int) val [(int) force=0]

• `alt_src_step` (int) val

• `sub_delay` (float) val [(int) abs=0]

• `osd` [(int) level=-1]

• `volume` (int) dir

• `contrast` (int) val [(int) abs=0]

• `brightness` (int) val [(int) abs=0]

• `hue` (int) val [(int) abs=0]

• `saturation` (int) val [(int) abs=0]

• `frame_drop` [(int) type=-1]

• `sub_visibility`

• `sub_pos` (int) val

• `vobsub_lang`

• `vo_fullscreen`

• `vo_ontop`

• `tv_step_channel` (int) dir


```
begin
  button = CD_STOP
  prog = mplayer
  config = seek 0 1\npause
end
```

αόιέ ÷άί ίά ίοά×έοόν όοάίάάοοήά ίάοοί ÷άύάçí ëííæέçõòáãéííçí æάέíά lirc (~/.lircrc), έóðñóóóêòá ìðáέà -lircconf filename, ðóíáù òëáúάòø àòõçíê æάέì.

3.2.3. ðíáðέίεñùê ("òááóέέé") òáöéí

íáíεðéá ðíáðέίεñçí òáöéíά ðíú×ññάò ÷άί όíúάá×άòø ðòíóóùά ðòéííòáíεñ è MPlayer'ò. éíçάά òáöéí ×έìáðéí (ìðáέáê -slave), MPlayer ðéòááò όí όοάίάάοοήçí ×έíάά éííáíáù, òáúάáññáíùά óéí×ññí éííάά óòòíêé (\n).

3.3. óáòá×ùά ðíòíêé é éáíáù

MPlayer ñòáò ðòíéçòù×άòø æάέìù ðí óáòé, έóðñóóóñ HTTP, FTP, MMS éíê RTSP/RTP ðòíóíêí.

ðòíéçòù×άίέά ×έìáðááóóñ áíáá×íáíéáí URL'ά × éííáíáíòά óòòíêé. ðáέòá, MPlayer òðéòù×άάò ðάòάíáñòά óòááù http_proxy é έóðñóóóñ ðòíéóé[proxy], áóíé ùòí ×íúññóí. ðáέòá ñòñ úάóóá×έòø έóðñóóóí×άòø ðòíéóé:

```
mplayer http_proxy://proxy.micorsops.com:3128/http://micorsops.com:80/stream.asf
```

MPlayer ñòáò óðéòù×άòø ááñùά όí όοάίάάοοήçí ×έíάά (ά íá éú ðíéíáñ×áññùê éáíáñ×). ùòí ñòáò, íáðòéíáò, έóðñóóóí×άòøñ ðòé ðòíéçòù×άίέé æάέí× ðí FTP:

```
wget ftp://micorsops.com/something.avi -O - | mplayer -
```

ύάíáðáíéá

íù òáéñíáíáòáí ×έìáðáòø -cache ðòé ðòíéçòù×άίέé éú óáòé:

```
wget ftp://micorsops.com/something.avi -O - | mplayer -cache 8192 -
```

3.4. ðááíεñùά ðíòíêé

ðááíεñùά ðíòíêé ðíú×ññάò ðíòðéòø áíóóòð è áññóóéíóò×ò ðíáááòòé×άáíùê MPlayer'ñ óéðáí ðíòíêí× ó òááíεñíêé ίáúéíù. ñóí×ññά ðòááíáúíáðáíéá ùòíêé ×íúññóíóé ùòí ðòññíêé áíóóòð è CD éíê DVD ðòé×íáò àòõçíçí éííðøàòáòά ðí óáòé (ðòááðñíáçááóóñ, ðóí ðòíðóóéñíêé óðíóíáññóóé óáòé áòááò áíóóáòíðñ). ó àòõçíêé óòíóññù, ίáéíóíòùά óéðù ðíòíêí× (× ίάóóíñýéé ñíáíò ùòí TV é MF) ίá ñíçóò έóðñóóóí×άòøñ òááíεñí, ðíóéññéò ñíêé ×ùðñíáíù ίά òòí×íá ááíóéòáòά. ùòí ðáðáíòññ áññ MF, á ×íò TV ×óε òá×ññ ðíòòááí×áí áù òòáóñíêé ðòíðóóéñíêé óðíóíáññóóé óáòé.

3.4.1. éííðéíñáéñ óáò×áòά

ðíóíá éííðéíñáéé MPlayer'ά, ðάòáéáéòá × éáóáíçç TOOLS/netstream é ×ùðñíééòá make,

ρΟΪΑΨ ΟΪΑΟΑΟΘ ΟΑΟ×ΑΟ. υΑΟΑΪ ÷Ψ ΨΪΟΑΟΑ ΟΕΪΘΕΟΪ×ΑΟΘ ΑΕΑΕΪ netstream × ΪΟΘΨΑ ΪΑΟΟΪ ÷ΑΨΑΕ ΟΕΟΟΑΪΨ (ΪΑΨΡΨΪ ΨΟΪ /usr/local/bin ΪΑ Linux).

3.4.2. εΟΘΨΘΨΪ×ΑΪΕΑ ΘΑΑΪεΨΪΨΕ ΘΪΘΪΕΪ×

οΪΑΡΑΪΑ ÷Ψ ΑΨΘΪΨ ΨΑΘΟΟΟΕΟΘ ΟΑΟ×ΑΟ ΪΑ ΪΑΨΕΪΑ, Ε ΕΪΘΪΘΪΕ ÷Ψ ΕΪΘΕΟΑ ΘΨΘΡΕΘΘ ΟΑΑΪεΨΪΨΕ ΑΪΟΟΘΘ. ÷ ΪΑΟΟΪΝΨΕΕ ΨΪΑΪΟ ΟΑΟ×ΑΟ ΡΟΑΨ×ΨΡΑΕΨΪ ΘΟΪΟΘ Ε ΪΑ ΕΟΘΨΘΨΟΨΑΘ ΪΕΕΑΕΕΕ ΑΟϞΟΪΑΪΟΪ× ΕΪΑΪΑΪΪΕ ΟΟΘΪΕΕ, ΘΪΨΘΨΘ ΘΟΪΟΘΪ ΨΑΘΟΟΕΑΕΘΑ netstream. δΑΘΑΘΘ, ΪΑΘΘΕΪΑΘ, ÷Ψ ΨΪΟΑΟΑ ΘΟΪΕϞΟΑΟΘ ×ΘΪΘΘΑ ΑΪΘΪΘΕΘ VCD'ΨΪΕΕΑ ΪΑ ΟΑΟ×ΑΟΑ:

```
mplayer -cache 5000 mpst://servername/vcd://2
```

÷Ψ ΨΪΟΑΟΑ ΘΨΘΡΕΘΘ ΑΪΟΟΘΘ Ε ΑΕΑΕΪΑΪ ΪΑ ΟΑΟ×ΑΟΑ:

```
mplayer -cache 5000 mpst://servername//usr/local/movies/lol.avi
```

ΪΑΘΑΟΕΟΑ ×ΪΕΪΑΪΕΑ, ΡΟΪ ΘΟΘΕ ΪΑ ΪΑΡΕΪΑΑΨΕΑΟΝ Ο / ΑΘΑΘΘ ΪΟΨΘΕΟΑΪΘΪΨΪΕ Ε ΕΑΟΑΪϞΘ, × ΕΪΘΪΘΪ ΨΑΘΘΨΑΪ ΟΑΟ×ΑΟ. εΟΘΨΘΨΪ×ΑΪΕΑ -cache ΪΑ ΘΘΑΑΘΑΘΟΝ, ΨΪ ΨΟΪ ΑΘΑΑΘ ΨΡΑΪΘ ΘΨΑΨΪ.

ΪΑΘΑΟΕΟΑ ×ΪΕΪΑΪΕΑ, ΡΟΪ × ΪΑΟΟΪΝΨΕΕ ΨΪΑΪΟ ΟΑΟ×ΑΟ ×ΨΑΨΑ ΪΑ Ν×ΪΝΑΘΟΝ ΑΑΨΪΘΑΟΪΨ. ΘΪΨΘΨΘ, ΪΑ ΘΨΑΨΑΕΘΑ Ϊ ΨΪϞΪΡΕΟΪΑΪΨΪΕ ΨΕΘΨΪΕΘΑΕ[exploit], ΕΪΘΪΘΨΑ ΑϞΪ ΕΟΘΨΘΨΟΨΑΘ. ΪΘΡΨΑ ΘΘΕΨΪΕΘΑ ΪΑΘΕΪΘΕΪ (ΕΪΘΪΨΕΕ) ΘΑΘΡΑΕ, ΡΟΪΑΨ ΟΑΑΪΑΘΘ ΑϞΪ ΪΘΡΨΑ, ΕΪΕ ΪΑΡΪΕΘΑ ΘΕΟΑΘΘ Ο×ΪΕ ΟΑΟ×ΑΟ.

ϞΪΑ×Α 4. Frequently Asked Questions

4.1. Development

- Q: How do I create a proper patch for MPlayer?
- Q: How can I support MPlayer development?
- Q: How can I become an MPlayer developer?
- Q: Why don't you use autoconf/automake?

4.2. Compilation

- Q: Are there binary (RPM/deb) packages of MPlayer?
- Q: Compilation stops with an error message similar to this one: cfft.c: In function `passf2': cfft.c:556: unable to find a register to spill in class `FLOAT_REGS' cfft.c:556: this is the insn: (insn 235 233 246 (set (subreg:SF (reg/v:DI 29 rmm0 [110]) 0) (minus:SF (mem:SF (plus:SI (mult:SI (reg:SI 1 edx [112]) (const int 8 [0x8])) (reg/v:f:SI 3 ebx [62])) [4 S4 A32]) (reg:SF 8 st(0) [132]))) 533 {*fop_sf 1 nosse} (insn_list 232 (nil)) (expr_list:REG_DEAD (reg:SF 8 st(0) [132]) (nil)))
cfft.c:556: confused by earlier errors, bailing out
- Q: Compilation stops with an error message similar to this one: In file included from mplayer.c:34: mw.h: In function `mplMainDraw': mw.h:209: Internal compiler error in print rtl and abort, at flow.c:6458 Please submit a full bug report, with preprocessed source if appropriate.
- Q: Configure ends with this text, and MPlayer won't compile! Your gcc does not support even i386 for '-march' and '-mcpu'
- Q: What's the problem with gcc 2.96?
- Q: Great, I have gcc 3.0.1 from Red Hat/Mandrake, then I'm fine!
- Q: I tried to compile MPlayer, but I got this output: In file included from /usr/include/g++-v3/bits/std_cwchar.h:42, from /usr/include/g++-v3/bits/fpos.h:40, from /usr/include/g++-v3/bits/char_traits.h:40, from /usr/include/g++-v3/bits/std_string.h:41, from

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/usr/include/g++-v3/string:31, from libwin32.h:36, from DS AudioDecoder.h:4, from DS AudioDec.cpp:5: /usr/include/wchar.h: In function Long long int wcstoq(const wchar_t*, wchar_t**, int): /usr/include/wchar.h:514: cannot convert `const wchar_t* restrict' to `const

Q: .. gcc 2.96 ... (Yes, some people are STILL flaming about gcc 2.96!)

Q: [SDL output doesn't work or compile. The problem is ...](#)

Q: [I am still having trouble compiling with SDL support. gcc says something about undefined reference to SDL_EnableKeyRepeat. What now?](#)

Q: [It doesn't compile, and it misses uint64_t, inttypes.h and similar things ...](#)

Q: [I have Linux running on a Pentium III but ./configure doesn't detect SSE ...](#)

Q: [I have a Matrox G200/G400/G450/G550, how do I compile/use the mga_vid driver?](#)

Q: [Hmm, strange. When loading the mga_vid.o kernel module, I found this in the logs: Warning: loading mga_vid.o will taint the kernel: no license](#)

Q: [During 'make', MPlayer complains about X11 libraries. I don't understand, I DO have X installed!?](#)

Q: [I can't compile SVGAlib. I'm using kernel 2.3/2.4 ...](#)

Q: [I compiled MPlayer with libdvdcss/libdivxdecord support, but when I try to start it, it says: error while loading shared libraries: lib*.so.0: cannot load shared object file: No such file or directory I checked up on the file and it IS there in /usr/local/lib ...](#)

Q: [When compiling MEncoder, it segfaults at linking!](#)

Q: [MPlayer dies with segmentation fault upon pthread check!](#)

Q: [I'd like to compile MPlayer on Minix!](#)

4.3. General questions

Q: [Are there any mailing lists on MPlayer?](#)

Q: [I've found a nasty bug when I tried to play my favorite video! Who should I inform?](#)

Q: [I have problems playing files with the ... codec. Can I use them?](#)

Q: [When I start playing, I get this message but everything seems fine: Linux RTC init: ioctl \(rtc_pie_on\): Permission denied](#)

Q: [There is a timer in the upper left corner. How can I get rid of it?](#)

Q: [The -xy or -fs option doesn't work with the x11 driver \(-vo x11\) ...](#)

Q: [What is the meaning of the numbers on the status line?](#)

Q: [What if I don't want them to appear?](#)

Q: [Why is video_out cpu usage zero \(0%\) for some files?](#)

Q: [There are error messages about file not found /usr/local/lib/codecs/ ...](#)

Q: [Umm, what is "IdegCounter"?](#)

Q: [And what is "Faszom\(C\)ounter"?](#)

Q: [LIRC doesn't work, because ...](#)

Q: [Subtitles are very nice, the most beautiful I've ever seen, but they slow down playing! I know it's unlikely ...](#)

Q: [The onscreen display \(OSD\) is flickering!](#)

Q: [What exactly is this libavcodec thing?](#)

Q: [But configure tells me Checking for libavcodec ... no](#)

Q: [Icewm's taskbar keeps covering the movie in fullscreen mode!](#)

Q: [I can't access the GUI menu. I press right click, but I can't access any menu items!](#)

Q: [How can I run MPlayer in the background?](#)

4.4. Playback problems

Q: [I cannot pinpoint the cause of some strange playback problem.](#)

Q: [... works with xine/avifile/... but doesn't with MPlayer.](#)

Q: [Audio goes out of sync playing an AVI file.](#)

Q: [MPlayer exits with some error when using l3codeca.acm.](#)

Q: [My computer plays MS DivX AVIs with resolutions ~ 640x300 and stereo mp3 sound too slow. When I use -nosound option, everything is OK \(but quiet\).](#)

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Q: MPlayer dies with MPlayer interrupted by signal 4 in module: decode_video

Q: I have problems with [your window manager] and fullscreen xv/xmga/sdl/x11 modes ...

Q: I got this playing MPEG files: Can't find codec for video format 0x10000001!

Q: When starting MPlayer under KDE I just get a black screen and nothing happens. After about one minute the video starts playing.

Q: I have an AVI that produces a gray screen when played with -vc odivx and a green one with -vc divx4.

Q: When I play this movie I get video-audio desync and/or MPlayer crashes with the following message: DEMUXER: Too many (945 in 8390980 bytes) video packets in the buffer!

Q: I have an MJPEG file which works with other players but displays only a black image in MPlayer

Q: When I try to grab from my tuner, it works, but colors are strange. It's OK with other applications.

Q: I have A/V sync problems. Some of my AVIs play fine, but some play with double speed!

Q: All the WMV (or other..) files I play create a green/gray window and there is only sound! MPlayer prints: Detected video codec: [null] drv:0 (NULL codec (no decoding))

Q: I get very strange percentage values (way too big) while playing files on my notebook.

Q: The audio/video gets totally out of sync when I run MPlayer as root on my notebook. It works normal when i run it as a user.

Q: While playing a movie it suddenly gets jerky and I get the following message: Badly interleaved AVI file detected - switching to -ni mode...

Q: How can I play MPEG Layer 2 (mp2) audio files?

4.5. Video/audio driver problems (vo/ao)

Q: I have no sound when playing a video and get error messages similar to this one: AO: [oss] 44100Hz 2ch Signed 16-bit (Little-Endian) audio setup: Can't open audio device /dev/dsp: Device or resource busy couldn't open/init audio device -> NOSOUND Audio: no sound!!! Start playing...

Q: What about the DGA driver? I can't find it!

Q: OK, -vo help shows DGA driver, but it complains about permissions. Help me!

Q: When using Xvideo, my Voodoo 3/Banshee says: X Error of failed request: BadAccess (attempt to access private resource denied) Major opcode of failed request: 147 (MIT-SHM) Minor opcode of failed request: 1 (X ShmAttach) Serial number of failed request: 26 Current serial number in output stream: 27

Q: OpenGL (-vo gl) output doesn't work (hang/black window/X11 errors/...).

Q: I have an nVidia TNT/TNT2 card, and I have a band with strange colors, right under the movie! Whose fault is this?

Q: I have an nVidia XYZ card, and when I click on the GUI's display window to toggle displaying the GUI panel, a black square appears where I clicked. I have the newest driver.

Q: Oh the world is cruel ...! SDL has only x11 target, but not xv!

4.6. DVD playback

Q: What about DVD navigation?

Q: While playing a DVD, I encountered this error: mplayer: ifo_read.c:1143: ifoRead_C ADT internal: Assertion nfo_length/sizeof(cell_adr_t) >= c_adt->nr of vobs' failed.

Q: Can I compile libdvdread and libdvdcss on my sweet SPARC under Solaris?

Q: What about subtitles? Can MPlayer display them?

Q: How can I set the region code of my DVD-drive? I don't have Windows!

Q: Do I need to be (setuid) root/setuid fibmap_mplayer to be able to play a DVD?

Q: Where can I get libdvdread and libdvdcss packages?

Q: Is it possible to play/encode only selected chapters?

Q: My DVD playback is sluggish!

4.7. Feature requests

Q: If MPlayer is paused and I try to seek or press any key at all, MPlayer ceases to be paused. I would like to be able to seek in the paused movie.

Q: I'd like to seek +/- 1 frames instead of 10 seconds.

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Q: How can I make MPlayer remember the options I use for this particular file?

4.8. Encoding

Q: How can I encode?

Q: How can I create VCDs?

Q: How can I join two video files?

Q: My tuner works, I can hear the sound and watch the video with MPlayer, but MEncoder doesn't encode audio!

Q: I can't encode DVD subtitles into the AVI!

Q: MEncoder segfaults on startup!

Q: How can I encode only selected chapters from a DVD?

Q: I'm trying to work with 2GB+ files on a VFAT file system. Does it work?

Q: Why is the recommended bitrate printed by MEncoder negative?

Q: I can't encode ASF files to AVI/DivX because it uses 1000 fps?

Q: How can I put subtitles in the output file?

4.1. Development

Q: How do I create a proper patch for MPlayer?

A: We made a short document describing all the necessary details. Please follow the instructions.

Q: How can I support MPlayer development?

A: We are more than happy to accept your hardware and software donations. They help us in continuously improving

Q: How can I become an MPlayer developer?

A: We always welcome coders and documenters. Read the technical documentation to get a first grasp. Then you should join the mplayer-dev-eng mailing list and start coding.

Q: Why don't you use autoconf/automake?

A: We have a modular, handwritten build system. It does a reasonably good job, so why change? Besides, we dislike people.

4.2. Compilation

Q: Are there binary (RPM/deb) packages of MPlayer?

A: See the Debian and RPM section for details.

Q: Compilation stops with an error message similar to this one:

```
cfft.c: In function `passf2':
cfft.c:556: unable to find a register to spill in class `FLOAT_REGS'
cfft.c:556: this is the insn:
(insn 235 233 246 (set (subreg:SF (reg/v:DI 29 rmm0 [110]) 0)
      (minus:SF (mem:SF (plus:SI (mult:SI (reg:SI 1 edx [112])
      (const_int 8 [0x8]))
      (reg/v/f:SI 3 ebx [62])) [4 S4 A32])
      (reg:SF 8 st(0) [132]))) 533 {*fop_sf_1_nosse} (insn_list
232 (nil)) (expr_list:REG_DEAD (reg:SF 8 st(0) [132])
      (nil)))
cfft.c:556: confused by earlier errors, bailing out
```

A: This is a known problem of gcc 3.2, upgrade to 3.3 to solve the problem. How to install gcc is described in the gcc section. You can use an external FAAD library as described in the AAC section.

Q: Compilation stops with an error message similar to this one:

```
In file included from mplayer.c:34:
```

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```
mw.h: In function `mplMainDraw':  
mw.h:209: Internal compiler error in print_rtl_and_abort, at flow.c:6458  
Please submit a full bug report,  
with preprocessed source if appropriate.
```

A: This is a known problem of gcc 3.0.4, upgrade to 3.1 to solve the problem. How to install gcc is described in the [gcc](#)

Q: Configure ends with this text, and MPlayer won't compile!

```
Your gcc does not support even i386 for '-march' and '-mcpu'
```

A: Your gcc isn't installed correctly, check the `config.log` file for details.

Q: What's the problem with gcc 2.96?

A: We strongly discourage the use of gcc 2.96! Read [this](#) document for details about why Red Hat released gcc 2.96 about. If you still really really want to use it, be sure to get the latest release and give the `--disable-gcc-check` Remember that you are on your own from this point. Do **not** report bugs, do **not** ask for help on the mailing lists. W in case you run into problems.

Q: Great, I have gcc 3.0.1 from Red Hat/Mandrake, then I'm fine!

A: No, since there have been/are issues with these compilers as well. To check the status of current compilers' MPlayer section.

Q: I tried to compile MPlayer, but I got this output:

```
In file included from /usr/include/g++-v3/bits/std_cwchar.h:42,  
                 from /usr/include/g++-v3/bits/fpos.h:40,  
                 from /usr/include/g++-v3/bits/char_traits.h:40,  
                 from /usr/include/g++-v3/bits/std_string.h:41,  
                 from /usr/include/g++-v3/string:31,  
                 from libwin32.h:36,  
                 from DS_AudioDecoder.h:4,  
                 from DS_AudioDec.cpp:5:  
/usr/include/wchar.h: In function Long long int wctoq(const wchar_t*,  
             wchar_t**, int)':  
/usr/include/wchar.h:514: cannot convert `const wchar_t* __restrict' to  
`const
```

A: Upgrade your glibc to the latest release. On Mandrake, use 2.2.4-8mdk.

Q: .. gcc 2.96 ... (Yes, some people are STILL flaming about gcc 2.96!)

A: Quoted from a [mail](#) A'rpi sent to the [mplayer-users](#) list (the word 'ideg' is described below):

And we have idegs. And our idegcounter overflowed again and again.

Unfortunately MPlayer is out of our control. It's used by lamers, Linux users who can't even use Windows, compile a kernel. They installed (with default options) Mandrake or Red Hat or SuSE, and without RTFM! saying 'it doesn't work! help me! please! i'm new to Linux! help! oh! help me!'. We can't stop them, but at least to RTFM and to read the messages of `./configure` and MPlayer.

And you clever guys come and flame us with gcc 2.96 and binary packages. Instead of helping users or making solve problems.

Half of our spare/free time is spent by answering silly mails here and making newer tricks and checks to compile mails.

And there is a balance. On the one side are you, clever guys, saying we are very bad because we don't like the other side there are the 'new to Linux' guys who are showing us gcc 2.96 is buggy.

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Conclusion: We can't be good. Half the people will always say we are bad.

Maybe we should close the project, make it closed source, commercial, and provide install support for it. the current work, so development could go faster, and we could earn lots of money with it and buy a big house want it? It seems.

Q: SDL output doesn't work or compile. The problem is ...

A: It was tested to work with SDL 1.2.x and may run on SDL 1.1.7+. It does **not** work with any previous version. So if you are on a previous version, you are on your own.

Q: I am still having trouble compiling with SDL support. gcc says something about

```
undefined reference to SDL_EnableKeyRepeat
```

. What now?

A: Where did you install the SDL library? If you installed in /usr/local (the default) then edit the top level config file and add -L/usr/local/lib after X_LIBS=. Now type **make**. You're done!

Q: It doesn't compile, and it misses uint64_t, inttypes.h and similar things ...

A: Copy [this inttypes.h](#) to /usr/local/include/ or an equivalent place and try again ...

Q: I have Linux running on a Pentium III but ./configure doesn't detect SSE ...

A: Only kernel versions 2.4.x support SSE (or try 2.2.19 or newer, but be prepared for problems).

Q: I have a Matrox G200/G400/G450/G550, how do I compile/use the mga_vid driver?

A: Read the [mga_vid](#) section.

Q: Hmm, strange. When loading the mga_vid.o kernel module, I found this in the logs:

```
Warning: loading mga_vid.o will taint the kernel: no license
```

A: The latest kernel modutils require a flag indicating the license (mainly to avoid kernel hackers debugging closed source kernel, modutils and MPlayer).

Q: During 'make', MPlayer complains about X11 libraries. I don't understand, I DO have X installed!?

A: ... but you don't have the X development package installed. Or not correctly. It's called XFree86-devel* under Redhat and XFree86-devel* under Debian. Also check if the /usr/X11 and /usr/include/X11 symlinks exist (this can be a problem on Redhat) and create them with these commands:

```
# ln -sf /usr/X11R6 /usr/X11
# ln -sf /usr/X11R6/include/X11 /usr/include/X11
```

Your distribution may differ from the [Filesystem Hierarchy Standard](#).

Q: I can't compile SVGAlib. I'm using kernel 2.3/2.4 ...

A: You have to edit SVGAlib's Makefile.cfg and comment BACKGROUND = y out.

Q: I compiled MPlayer with libdvdcss/libdivxdecore support, but when I try to start it, it says:

```
error while loading shared libraries: lib*.so.0: cannot load shared object file: No such file or directory
```

I checked up on the file and it IS there in /usr/local/lib ...

A: Add /usr/local/lib to /etc/ld.so.conf and run **ldconfig**.

Q: When compiling MEncoder, it segfaults at linking!

A: This is a linker problem. Upgrading binutils should help (2.11.92.* or newer should be good). Since it is not our fault, we can't help you further.

Q: MPlayer dies with segmentation fault upon pthread check!

A: **chmod 644 /usr/lib/libc.so**

Q: I'd like to compile MPlayer on Minix!

A: Me too. :)

4.3. General questions

Q: Are there any mailing lists on MPlayer?

A: Yes. See the [mailing lists](#) section.

Q: I've found a nasty bug when I tried to play my favorite video! Who should I inform?

A: Please read the [bug reporting guidelines](#) and follow the instructions.

Q: I have problems playing files with the ... codec. Can I use them?

A: Check the [codec status](#), if it doesn't contain your codec, read the [codec documentation](#), especially the [codec import](#)

Q: When I start playing, I get this message but everything seems fine:

```
Linux RTC init: ioctl (rtc_pie_on): Permission denied
```

A: You need root privileges or a specially set up kernel to use the new timing code. For details see the [RTC](#) section of

Q: There is a timer in the upper left corner. How can I get rid of it?

A: Press **o** and try the `-osdlevel` option.

Q: The `-xy` or `-fs` option doesn't work with the x11 driver (`-vo x11`) ...

A: It does, but you have to explicitly specify software scaling (very slow) with the `-zoom` option. You better use XF86 specify the `-vm` and the `-fs` option, and you're done. Make sure you have the right modelines in your XF86Conf [DGA driver](#) and [SDL's DGA driver](#) work for you. It's much faster. If SDL's DGA works, use that, it'll be even faster

Q: What is the meaning of the numbers on the status line?

A: Example:

```
A: 2.1 V: 2.2 A-V: -0.167 ct: 0.042 57/57 41% 0% 2.6% 0 4 49%
```

- A: audio position in seconds
- V: video position in seconds
- A-V: audio-video difference in seconds (delay)
- ct: total A-V sync correction done
- frames played (counting from last seek)
- frames decoded (counting from last seek)
- video codec cpu usage in percent (for slices and DR this includes video_out)
- video_out cpu usage
- audio codec cpu usage in percent
- frames needed to drop to maintain A-V sync
- current level of image postprocessing (when using `-autoq`)
- current cache size used (around 50% is normal)

Most of them are for debug purposes and will be removed at some point.

Q: What if I don't want them to appear?

A: Use the `-quiet` option and read the man page.

Q: Why is video_out cpu usage zero (0%) for some files?

A: It's not zero, but it's called from the codec and thus cannot be measured separately. You should try to play the file u . . . and check the difference to see the video_out speed.

A: You are using Direct Rendering, where the codec renders to the video memory itself. In this case, the decoding per percentage, too.

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Q: There are error messages about file not found `/usr/local/lib/codecs/ ...`

A: Download the Win32 codecs from our [codecs page](#) (avifile's codec package has a different DLL set) and install it.

Q: Umm, what is "IdegCounter"?

A: A combination of a Hungarian and an English word. "Ideg" in Hungarian means the same as "nerve" in English, and "counter" like "ydaegh". It was first used to measure the nervousness of A'rpi, after some (umm) "mysterious" disappearance.

Q: And what is "Faszom(C)ounter"?

A: "Fasz" is a Hungarian word you don't want to know, the others are connected to the perverted minds of the MPlayer developers.

Q: LIRC doesn't work, because ...

A: Are you sure you are using **mplayer** instead of **mplayer_lirc**? Note that it was **mplayer_lirc** for a long time, including the 0.9.0 release, but it recently changed back to **mplayer**.

Q: Subtitles are very nice, the most beautiful I've ever seen, but they slow down playing! I know it's unlikely ...

A: After running `./configure`, edit `config.h` and replace `#undef FAST_OSD` with `#define FAST_OSD`.

Q: The onscreen display (OSD) is flickering!

A: You use a vo driver with single buffering (x11,xv). With xv, use the `-double` option. Also try `-vf expand`.

Q: What exactly is this libavcodec thing?

A: See the [libavcodec](#) section.

Q: But configure tells me

```
Checking for libavcodec ... no
```

A: You need to get libavcodec from FFmpeg's CVS. Read the instructions in the [libavcodec](#) section.

Q: Icewm's taskbar keeps covering the movie in fullscreen mode!

A: This shouldn't happen anymore, if it still does use the `-fstype layer` option and report it to the [mplayer-users](#) mailing list.

Q: I can't access the GUI menu. I press right click, but I can't access any menu items!

A: Are you using FVWM? Try the following:

1. Start -> Settings -> Configuration -> Base Configuration
2. Set Use Applications position hints to Yes

Q: How can I run MPlayer in the background?

A: Use:

```
mplayer options filename < /dev/null &
```

4.4. Playback problems

Q: I cannot pinpoint the cause of some strange playback problem.

A: Do you have a stray `codecs.conf` file in `~/mplayer/`, `/etc/`, `/usr/local/etc/` or a similar location? Stray `codecs.conf` files can cause obscure problems. MPlayer will use its builtin one instead.

Q: ... works with xine/avifile/... but doesn't with MPlayer.

A: MPlayer is not xine/avifile/.... Although these players have some code in common, the codecs (DLL) set, synchronization, and other things are different and should not be compared. If you have a file MPlayer fails to play correctly but works in another player, please report it to the [mailing list](#) and upload the file to our FTP server.

Q: Audio goes out of sync playing an AVI file.

A: Try the `-bps` or `-nobps` option. If it does not improve, read [this](#) and upload the file to FTP.

Q: MPlayer exits with some error when using `l3codeca.acm`.

A: Check `ldd /usr/local/bin/mplayer` output. If it contains

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```
libc.so.6 => /lib/libc.so.6 (0x4???????)
```

where "?" is any number then it's OK, the error is not here. If it is:

```
libc.so.6 => /lib/libc.so.6 (0x00???????)
```

then there is a problem with your kernel/libc. Maybe you are using some security patches (for example Solar Design forces loading libraries to very low addresses. Because `l3codeca.acm` is a non-relocatable DLL, it must be loaded at a low address. You should change this. You should use a non-patched kernel, or use MPlayer's `-afm 1` option to disable using `l3codeca`.

Q: My computer plays MS DivX AVIs with resolutions ~ 640x300 and stereo mp3 sound too slow. When I use `-nosound` (but quiet).

A: Your machine is too slow or your soundcard driver is broken. Consult the documentation to see if you can improve.

Q: MPlayer dies with

```
MPlayer interrupted by signal 4 in module: decode_video
```

A: Try running MPlayer on the machine you compiled on. Or recompile with runtime CPU detection (`./configure --enable-cpu-detection`). Don't use MPlayer on a CPU different from the one it was compiled on, without using the feature mentioned just now.

Q: I have problems with [your window manager] and fullscreen xv/xmga/sdl/x11 modes ...

A: Read the [bug reporting guidelines](#) and send us a proper bug report.

Q: I got this playing MPEG files: Can't find codec for video format 0x10000001!

A: You have an old version of `codecs.conf` in `~/mplayer/`, `/etc/`, `/usr/local/etc/` or similar. Remove it. You also have the `vc=` option or something similar in your config file(s).

Q: When starting MPlayer under KDE I just get a black screen and nothing happens. After about one minute the video starts.

A: The KDE arts sound daemon is blocking the sound device. Either wait until the video starts or disable the arts-daemon. If you want to use arts sound, specify audio output via our native arts audio driver (`-ao arts`). If it fails or isn't compiled, you can make sure your SDL can handle arts sound. Yet another option is to start MPlayer with `artsdsp`.

Q: I have an AVI that produces a gray screen when played with `-vc odivx` and a green one with `-vc divx4`.

A: It's not a DivX file, but an MS MPEG4v3. If you have an old version of `codecs.conf` in `~/mplayer/`, `/etc/` or similar, remove it.

Q: When I play this movie I get video-audio desync and/or MPlayer crashes with the following message:

```
DEMUXER: Too many (945 in 8390980 bytes) video packets in the buffer!
```

A: This can have multiple reasons.

- Your CPU **and/or** video card **and/or** bus is too slow. MPlayer displays a message if this is the case (and the CPU is not fast).
- If it is an AVI, maybe it has bad interleaving. Try the `-ni` option.
- Your sound driver is buggy, or you use ALSA 0.5 with `-ao oss`. See the [sound card section](#).
- The AVI has a bad header, try the `-nobps` option, and/or `-mc 0`.

Q: I have an MJPEG file which works with other players but displays only a black image in MPlayer

A: Use another codec to play the file, try `-vc ffmjpeg`.

Q: When I try to grab from my tuner, it works, but colors are strange. It's OK with other applications.

A: Your card probably misreports its colorspace capacity. Try with YUY2 instead of default YV12 (see the [TV](#) section).

Q: I have A/V sync problems. Some of my AVIs play fine, but some play with double speed!

A: You have a buggy sound card/driver. Most likely it's fixed at 44100Hz, and you try to play a file which has 22050Hz. Try the `oss` plugin.

Q: All the WMV (or other..) files I play create a green/gray window and there is only sound! MPlayer prints:

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```
Detected video codec: [null] drv:0 (NULL codec (no decoding))
```

A: If you have an old version of `codecs.conf` in `~/.mplayer/`, `/etc/`, `/usr/local/etc/` or similar, remove it.

Q: I get very strange percentage values (way too big) while playing files on my notebook.

A: It's an effect of the power management / power saving system of your notebook (BIOS, not kernel). Plug the external power connector in **before** you power on your notebook. You can also try whether `cpufreq` (a SpeedStep interface for Linux) helps you.

Q: The audio/video gets totally out of sync when I run MPlayer as root on my notebook. It works normal when i run it as user.

A: This is again a power management effect (see above). Plug the external power connector in **before** you power on your notebook. Try the `-noaudio` option.

Q: While playing a movie it suddenly gets jerky and I get the following message:

```
Badly interleaved AVI file detected - switching to -ni mode...
```

A: Badly interleaved files and `-cache` don't work well together. Try `-nocache`.

Q: How can I play MPEG Layer 2 (mp2) audio files?

A: You have to use `-rawaudio on:format=0x50`.

4.5. Video/audio driver problems (vo/ao)

Q: I have no sound when playing a video and get error messages similar to this one:

```
AO: [oss] 44100Hz 2ch Signed 16-bit (Little-Endian)
audio_setup: Can't open audio device /dev/dsp: Device or resource busy
couldn't open/init audio device -> NOSOUND
Audio: no sound!!!
Start playing...
```

A: Are you running KDE or GNOME with the ARTS or ESD sound daemon? Try disabling the sound daemon or use the `-ao oss` option to make MPlayer use ARTS or ESD.

Q: What about the DGA driver? I can't find it!

A: `./configure` autodetects your DGA driver. If `-vo help` doesn't show DGA, then there's a problem with your driver. Try `--enable-dga` and read the `DGA` section. Alternatively, try SDL's DGA driver with the `-vo sdl:dga` option.

Q: OK, `-vo help` shows DGA driver, but it complains about permissions. Help me!

A: It works only if running as root! It's a DGA limitation. You should become root (`su -`), and try again. Another solution is to run MPlayer as root, but it's not recommended!

```
chown root /usr/local/bin/mplayer
chmod 755 /usr/local/bin/mplayer
chmod +s /usr/local/bin/mplayer
```

⚠️⚠️⚠️⚠️⚠️

This is a **big** security risk! **Never** do this on a server or on a computer that you do not control completely because of the privileges through SUID root MPlayer. **You have been warned.**

Q: When using Xvideo, my Voodoo 3/Banshee says:

```
X Error of failed request: BadAccess (attempt to access private resource denied)
Major opcode of failed request: 147 (MIT-SHM)
Minor opcode of failed request: 1 (X_ShmAttach)
Serial number of failed request: 26
Current serial number in output stream:27
```

A:

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The `tdfx` driver in XFree86 4.0.2/4.0.3 had this bug. This was solved by [bugfix #621 of the XFree86 4.1.0 CVS](#) 1 or later. Alternatively, either download (at least) DRI version 0.6 from the [DRI homepage](#), or use CVS DRI.

Q: OpenGL (`-vo gl`) output doesn't work (hang/black window/X11 errors/...).

A: Your OpenGL driver doesn't support dynamic texture changes (`glTexSubImage`). It's known not to work with nVidia work with Utah-GLX/DRI and Matrox G400 cards. Also with DRI and Radeon cards. It won't work with DRI and 3DFX cards because of the 256x256 texture size limit.

Q: I have an nVidia TNT/TNT2 card, and I have a band with strange colors, right under the movie! Whose fault is this?

A: This is a bug of nVidia's binary X driver. These bugs appear ONLY with the TNT/TNT2 cards, and we can't do anything about the problem, upgrade to the latest nVidia binary driver version. If still bad, complain to nVidia!

Q: I have an nVidia XYZ card, and when I click on the GUI's display window to toggle displaying the GUI panel, a black screen is clicked. I have the newest driver.

A: Yes, nVidia corrected a previous bug (above), and introduced a new one. Let's congratulate them. UPDATE: A newer driver has been fixed.

Q: Oh the world is cruel ...! SDL has only `x11` target, but not `xv`!

A: Try that `x11` target again. Now try `-vo x11 -fs -zoom`. See the difference? No?! OK, here comes the enlightenment: `xv` when available, you don't have to worry about it ... Note: With SDL you can force/disable `Xv` using `-forcexv`

4.6. DVD playback

Q: What about DVD navigation?

A: Support for `dvdnv` in MPlayer is currently broken, normal playback does work, though. If you want to have fancy navigation, use another player like Xine or Ogle. If you care about DVD navigation, send a [patch](#).

Q: While playing a DVD, I encountered this error:

```
mplayer: ifo_read.c:1143: ifoRead_C_ADT_internal: Assertion nfo_length / sizeof(cell_addr_t) >=
```

A: This is a known `libdvdread` 0.9.1/0.9.2 bug. Use **libmpdvdkit2**, which is present in MPlayer source, and used by default.

Q: Can I compile `libdvdread` and `libdvdcss` on my sweet SPARC under Solaris?

A: Who knows ... It's said to work, so please test it and send feedback. Refer to the documentation of `libdvdread` and `libdvdcss` the authors of `libdvdread`. Use **libmpdvdkit2**, which is present in MPlayer source, and used by default.

Q: What about subtitles? Can MPlayer display them?

A: Yes. See the [DVD chapter](#).

Q: How can I set the region code of my DVD-drive? I don't have Windows!

A: Use the [regionset tool](#).

Q: Do I need to be (setuid) root/setuid `fibmap_mplayer` to be able to play a DVD?

A: No. However you must have the proper rights on the DVD device entry (in `/dev/`).

Q: Where can I get `libdvdread` and `libdvdcss` packages?

A: You don't need to. Use **libmpdvdkit2**, which is present in the MPlayer source, and used by default. You can get the source from the [Ogle site](#).

Q: Is it possible to play/encode only selected chapters?

A: Yes, try the `-chapter` option.

Q: My DVD playback is sluggish!

A: Use the `-cache` option (described in the man page) and try enabling DMA for the DVD drive with the **hdparm** tool.

4.7. Feature requests

Q: If MPlayer is paused and I try to seek or press any key at all, MPlayer ceases to be paused. I would like to be able to

A: This is very tricky to implement without losing A/V synchronization. All attempts have failed so far, but patches are

Q: I'd like to seek +/- 1 frames instead of 10 seconds.

A: This won't be done. It was, but then it messed up A/V sync. Feel free to implement it, and send a patch. Don't ask for

Q: How can I make MPlayer remember the options I use for this particular file?

A: Create a file named `movie.avi.conf` with the file-specific options in it and put it in `~/mplayer` or in the same

4.8. Encoding

Q: How can I encode?

A: Read the [MEncoder](#) section.

Q: How can I create VCDs?

A: Try the `mencvcd` script from the `TOOLS` subdirectory. With it you can encode DVDs or other movies to VCD or SVCD, or even

Q: How can I join two video files?

A: This has been discussed to no end on `mplayer-users`. Go search the [archives](#) for a complete answer. This is a complex task and may vary a lot depending on the kind of files you want to merge. MPEGs can be concatenated into a single file with tools like `avidemux` and `avimerge` (part of the [transcode](#) tool set), available that might do the job. You can also try `MEncoder` if you're sharing the same dimensions and codec. Try

```
cat file1 file2 > file3
mencoder -ovc copy -oac copy -o out.avi -forceidx file3.avi
```

Q: My tuner works, I can hear the sound and watch the video with MPlayer, but MEncoder doesn't encode audio!

A: TV audio encoding for Linux is currently unimplemented, we're working on it. At the moment it works only on BSD.

Q: I can't encode DVD subtitles into the AVI!

A: You have to specify the `-sid` option correctly!

Q: MEncoder segfaults on startup!

A: Upgrade DivX4Linux.

Q: How can I encode only selected chapters from a DVD?

A: Use the `-chapter` option correctly, like: `-chapter 5-7`

Q: I'm trying to work with 2GB+ files on a VFAT file system. Does it work?

A: No, VFAT doesn't support 2GB+ files.

Q: Why is the recommended bitrate printed by MEncoder negative?

A: Because the bitrate you encoded the audio with is too large to fit the movie on any CD. Check if you have `libmp3lame`.

Q: I can't encode ASF files to AVI/DivX because it uses 1000 fps?

A: Because ASF uses variable frame rate but AVI uses a fixed one, you have to set it by hand using `-ofps`.

Q: How can I put subtitles in the output file?

A: Just pass the `-sub <filename>` (or `-sid`, `-vobsub`, respectively) option to MEncoder.

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5.1. ÐÒÉxÏÄÛ CD/DVD

6 ΑΕΟΕΙ×ΙΑΑΙΕ RPC-1, ΟΑÇΕΙΙΑΙΘΙΑΝ ΥΑΥΕΟΑ ΙΟΟΥΑΟΟ×ΙΝΑΟΟΝ ΔΟΙÇΟΑΙΙΙ. αΕΟΕΙ×ΙΑÙ RPC-2 ΥΑΥΕΥΑΙÙ ΑΔΔΑΟΑΟΙÙΙΕ ΟΟΑΑΟΟ×ΑΙΕ, ΟΑÙΟΑÙΑΑΥΕΙΕ ΙΑΙΝΟΘ ΟΑÇΕΙΙ ×ΟΑÇΙ 5 ΟΑÙ. δΑΕΙΙΑΙΑΟΑΟΟΝ ΙΑΙΙ×ΕΟΘ ΔΟΙÙΕ×ΕΘ[firmware] ΑΙ RPC-1 ΑΟΙΕ Ο ΟΑΑΝ RPC-2 ΔΟΕ×ΙΑ. ιΑΙΙ×ΙΑΙΕΝ ΔΟΙÙΕ×ΙΕ ΙΙÇΟΘ ΑÙΟΘ ΙΑΕΑΑΙÙ ΙΑ ΟΟΔΑΙΕΑΑ ΔΟΙÙΕ×ΙΕ. αΟΙΕ ΑΙΝ ÷ΑÙΑÇΙ ΑΕΟΕΙ×ΙΑΑ ΙΑΟ ΙΑΙΙ×ΙΑΙΕΝ, ΕΟΔΙΙΘΥΟΕΘΑ ΑΙΝ ΕΥΙΑΙΑΙΕΝ ΟΑÇΕΙΙΑ ΔΟΕ×ΙΑΑ ΔΟΙÇΟΑΙΙΟ regionset (ΑΙΝ Linux). ÷ΙΕΙΑΙΕΑ: εΥΙΑΙΕΘΘ ΟΑÇΕΙΙ ΙΙΘΙΙ ×ΟΑÇΙ 5 ΟΑÙ.

5.3. ΧΙΟΘΟΙΕÚ×ΑΑΑΙΕΑ VCD

δΙΙÙΕ ΟΔΕΟΙΕ ΧΙΥΠΙΟΙÙΕ ΙΔΑΕΕ ΙΙΘΙΙ ΔΟΙΡΕΟΑΟΘ × man. ΔΕΙΟΑΕΟΕΟ ΑΙΝ ΙΑÙΠΙÇΙ ÷ΕΑΑΙ-CD (VCD):

```
mplayer vcd://<Αΐθϊθΐθΐΐ> [-cdrom-device <θθθθθθθθθθθθ>]
```

δΘΕΙΑΘ:

```
mplayer vcd://2 -cdrom-device /dev/hdc
```

θΟΟΘΙΕΟΟ×Ι VCD ΔΙ ΘΙΠΡΑΙΕΑ /dev/cdrom. αΟΙΕ ÷ΑÙΕ ΙΑΟΟΘΙΕΕΕ ΙΘΙΕΡΑΑΟΟΝ, ΟΙΥΑΑΕΘΑ ΟΕΙ×ΠΕΡΑΟΕΘΑ ΟΟΥΙΕΘ ΑΙΑΑ×ΘΟΑ ΔΟΑ×ΕΙΘΙΙΑ ΙΑÚ×ΑΙΕΑ × ΕΙΙΑΙΑΙΕ ΟΟΘΙΕΑ ΔΙΘΙΑ ΙΔΑΕΕ -cdrom-device.

ύΑΙΑΡΑΙΕΑ

δΙ ΕΘΑΕΙΑΕ ΙΑΟΑ PlextorÙ Ε ΙΑΕΙΘΙΟΥΑ Toshiba SCSI CD-ROM ΔΟΕ×ΙΑÙ ΔΙΕΑÚÙ×ΑΑΘ ΟΟΑΟΙΘΑ ΔΟΙΕÚ×ΙΑΕΘΑΙΘΙΙΟΘ ΔΟΕ ΡΟΑΙΕΕ VCD'Ι. υΘΙ ΙΑΒΝΟΙΝΑΟΟΝ ΘΑΙ, ΡΘΙ CDROMREADRAW ioctl ΙΑ ÙΘΕΕ ΔΟΕ×ΙΑΑΕ ΙΟΟΥΑΟΟ×ΙΕ ΙΑ ΑΑΙΕΕΙ. αΟΙΕ ÷Ù ΕΙΑΑΘΑ ΙΑΕΙΘΙΟΥΑ ΔΙΥΙΑΙΕΝ × ΟΑΕΑΘ ΔΟΙÇΟΑΙΙΕΘΙ×ΑΙΕΝ SCSI, ΔΙΘΑΙΘΕΘΑ ΔΙΙÇΕΘΑ ΙΑΙ × ΙΑΔΕΟΑΙΕΕ ΔΙΑΑΑΘΘΕΕ SCSI generic ΑΙΝ VCD.

÷ ΙΑΟΘΙΝΥΕΕ ΙΙΙΑΙΘ ÷Ù ΙΙΘΑΘΑ ΕÚ×ΙΑΡΘ ΑΑΙΠÙΑ Ο VCD'Ι, ΕΘΔΙΙΘΥΟΝ readvcd, Ε ΧΙΟΘΟΙΕÚ×ΑΟΘΕ ΔΙΙΘΡΕ×ÙΕΕΘΝ ΑΕΑΕΙ MPlayer 'ΙΙ.

ΟΟΘΘΘΘΘΑ VCD.s αΕΘΕΕ VCD ΟΙΘΟΙΝΘ ΕÚ ΙΑΙΠΕ ΕΙΕ ΙΑΘΕΠΘΕΕΕ ΑΙΘΙΘΑΕ:

- δΑΘ×ΑΝ ΑΙΘΙΘΕΑ ΟΙΑΑΘΘΕΘ ΙΑΘΕΠΘΕΙ ΙΑÇΑΑΑΕΘ ΟΑΕΘΙΘΑΙΕ ΔΙ 2048 ΑΑΕΘΙ×, Ο ΑΕΑΕΙ×ΙΕ ΟΕΘΘΑΠΕ iso9660, ΙΑÙΠΙ ΟΙΑΑΘΘΑΥΑΕ ΔΟΙΕÇΟÙ×ΑΘΑΙΘ VCD ΑΙΝ Windows Ε, ΧΙΥΠΙΘΙ, ΔΟΙΡΘΑ ΕΙΕΙΘΙΑΑΕΑ, ×ΘΙΑΑ ΕΑΘΘΕΠΕ ΕΙΕ ΘΑΕΘΘΑ.
- ÷ΘΙΘΑΝ Ε ΙΘΘΑΙΘΙÙΑ ΑΙΘΙΘΕΕ ΟΙΑΑΘΘΑΘ MPEG-ΔΙΘΙΕ ΟΑΕΘΙΘΑΙΕ ΔΙ 2324 ΑΑΕΘΑ, ΔΙ ΙΑΠΙΘ ΔΑΕΑΘΘ MPEG PS ΙΑ ΟΑΕΘΙΘ ×ΙΑΘΘΙ ΑΕΑΕΙ×ΙΕ ΟΕΘΘΑΙÙ. εΑΕ Ε ΑΙΘΙΘΕΕ ΑΘΑΕΙCD, ÙΘΕ ΑΙΘΙΘΕΕ ΙΑ ΙΠΘΕΘΘΑΘΘΝ (÷Ù ΕΙÇΑΑ-ΙΕΑΘΘΘ ΙΠΘΕΘΙ×ΑΙΕ ΑΘΑΕΙ ΑΕΘΕ ΑΙΝ ΘΙÇΙ, ΡΘΙΑÙ ΑÇΙ ΧΙΟΘΟΙΕÚ×ΑΟΘΕ?) δΑΕ ΕΑΕ ΑΠΘΥΕΙΘΟ×Ι ΑΕΙΘΠΙ× ΕΙΑΠΠ ΙΑ ÙΘΙΕ ΑΙΘΙΘΕΑ, ΔΙΘΘΙΑΘΕΘΑ ΟΙΑΡΑΙΑ vcd: //2.
- θΥΑΘΘ×ΘΑΘ VCD ΑΕΘΕΕ ΑΑÙ ΔΑΘ×ΙΕ ΑΙΘΙΘΕΕ (ΑΑΕΙΘΘ×ΑΠΠΑΝ ΑΙΘΙΘΕΑ ΑΑÙ ΑΕΑΕΙ×ΙΕ ΟΕΘΘΑΙÙ). ΠΕ ΔΟΙΘΙΑΘΘΕ×ΑΑΘΘΝ, Π ΙΑ ΙΠΘΕΘΘΑΘΘΝ.

θΘΙ ΑΕΑΕΙÙ .DAT.s αΑΕΙ ΔΘΕΙΑΘΘΙ × 600 ΙΑÇΑΑΑΕΘ ΙΑ ΔΑΘ×ΙΕ ΑΙΘΙΘΕΑ ΙΑ ΙΑΘΘΙΝΥΕΕ! υΘΙ ΘΑΕ ΙΑÚ×ΑΑΙÙΕ ISO-ΔΑΘΑΕΙΑ, ΟΙΥΑΑΠΠÙΕ, ΡΘΙΑÙ ΔΙÙ×ΠΙΕΘΘ Windows ΙΑΘΑΑΑΘÙ×ΑΘΘ ÙΘΕ ΑΙΘΙΘΕΕ (Windows ×ΠΙΑΥΑ ΥΑΔΘΑΥΑΑΘ ΔΟΕΠΘΑΙΕΝΙ ΕΘΔΙΙΘΥΙ×ΑΘΘ ΔΟΝΠΠΕ ΑΙΘΘΘΘ Ε ΘΟΘΘΙΕΘΘ×ΑΙ). δΙΑ Linux ÷Ù ΙΑ ΙΠΘΑΘΑ ΕΙΘΕΘΙ×ΑΘΘ ÙΘΕ ΑΕΑΕΙÙ (ΠΕ ×ÙÇΙΝΑΝΘ, ΕΑΕ ΙΘΘΙΘ).

ðĪ Windows ŪŌĭ ×ĪŪĭŌĭĭ, ðĪŌĕĭŌĕŌ ŌÁĭ iso9660 ŪĭŌĭĕŌŌĀŌ ðŌŊĭĭĕ ĀĭŌŌŌð ĕ ĀĭŌĭŌĕĀĭ
PĀŌĀŪ ŪŌĭŌ ĀĕĀĕĭ. ÞŌĭĀŪ ðŌĭĕçŌŪ×ĀŌŌ .DAT ĀĕĀĕĭ ÷Āĭ ĭŌŌĀĭ ĀŌĀĕ×ĀŌ, ĕŪ Linux ×ĀŌŌĕĕĕ
PowerDVD. ũŌĭ ĭĀĕĀĕĀĕŌĭ×ĀĭŪĕ ĀŌĀĕ×ĀŌ iso9660 ĀĕĀĕĭ×ĭĕ ŌĕŌŌĀĭŪ
(vcdifs/isofs-2.4.x.o), ĕĭŌĭŌŪĕ ŌðĭŌĭĀĀĭ ŪĭŌĭĕŌŌ×ĀŌŌ ðŌŊĭĭĕ ĀĭŌŌŌð ĕ ĀĭŌĭŌĕĀĭ
PĀŌĀŪ ŪŌĭŌ ĀĕĀĕĭ. ĀŌĭĕ ÷Ū ŪĀĭĭŌĕŌŌĀŌĀ ĀĕŌĕĕ, ĕŌðĭŌŪŌŊ ĕĕ ĀŌĀĕ×ĀŌ, ÷Ū ĭĭŌĀŌĀ
ĕĭðĕŌĭ×ĀŌŌ ĕ ĀĀŌĀ ðŌĭĕçŌŪ×ĀŌŌ .DAT ĀĕĀĕĭŪ MPlayer'ĭĭ. ĭĭ ŪŌĭ ĭĀ ĀŌĀĀŌ ŌĀĀĭŌĀŌŌ Ōĭ
ŌŌĀĭĀĀŌŌĭŪĭ ĀŌĀĕ×ĀŌĭĭ iso9660 ĕŪ ŊĀŌĀ Linux! ĕŌðĭŌŪŌĕŌĀ ×ĭĀŌŌĭ ŪŌĭçĭ vcd://.
ĀĭŌŌĀŌĭĀŌĕ×Āĭĕ ĀĭŊ ĕĭðĕŌĭ×ĀĭĕŊ VCD ĭĭŌĀŌ ðĭŌĭŌŌĕŌŌ ĭĭ×Ūĕ ĀŌĀĕ×ĀŌ_cdfs (ĭĀ ×ĕĭĀĕŌ ×
ĭĀĕĀĕĀĭŌĭĀ ŊĀŌĭ) ĕĭŌĭŌŪĕ ðĭĕĀŪŪ×ĀĀŌ ĀĭŌĭŌĕĕ[ŌĀŌŌĕĕĕ] ĭĀ ĀĕŌĕĀ ĕĀĕ ĀĕĀĕĭŪ
ĭĀŌĀŪĭ× ĕ_cdrdao, ðŌĕĭŌŌĀĭĕĀ ĀĭŊ ðĭĀĕŌĭ×ĭçĭ ÞŌĀĭĕŊ/ĕĭðĕŌĭ×ĀĭĕŊ CD.

çĭĀ×Ā 6. ðĭŌŌĕĭç

ðĭĀĀŌŌĀĭĕĀ

- 6.1. Linux
 - 6.1.1. ðĀĀĕĭ×ĕĀ ðĭĀ Debian
 - 6.1.2. RPM ðĀĕĀŌŪ
 - 6.1.3. ARM
- 6.2. *BSD
 - 6.2.1. FreeBSD
 - 6.2.2. OpenBSD
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- 6.3. Sun Solaris
- 6.4. Silicon Graphics Irix
- 6.5. QNX
- 6.6. Windows
 - 6.6.1. Cygwin
 - 6.6.2. MinGW
- 6.7. Mac OS
- 6.8. HP UX
- 6.9. Amiga/MorphOS (GeekGadgets)

6.1. Linux

ĭŌĭĭ×ĭĀŊ ðĭĀŌĕĭŌĭĀ ŌĀŪŌĀĀĭŌĕĕ ŪŌĭ Linux ĭĀ x86, ĕĭŌŊ MPlayer ŌĀĀĭŌĀĀŌ ðĭĀ ĭĭçĕĭĕ
ĀŌŌçĕĭĕ ðĭŌŌĀĭĕ Linux. ĀĕĭĀŌĭŪĀ ðĀĕĀŌŪ MPlayer'Ā ĀĭŌŌŌðĭŪ ĕŪ ĭĀŌĕĭŌĕĕĕ ĕŌŌĭÞĕĕĭ×.
ŌĀĭ ĭĀ ĭĀĭĀĀ, ĭĕ ĭĀĕĭ ĕŪ ŪŌĕĕ ðĀĕĀŌĭ× ĭĀ ðĭĀĀĀŌŌĕ×ĀĀŌŌŊ. ðĭĭĀŷĀĕŌĀ ĭ ðŌĭĀĭĀĭĕ
ĕĕ Ā×ŌĭŌĀĭ, Ā ĭĀ ĭĀĭ.

6.1.1. ðĀĀĕĭ×ĕĀ ðĭĀ Debian

ÞŌĭĀŪ ŌĭŪĀĀŌŌŌ Debian ðĀĕĀŌ, ×ŪðĭĭĕŌĀ ŌĭĀĀŌĀŷĕĀ ĕĭĭĀĭĀŪ × ĕĀŌĀĭçĀ Ō ĕŌĕĕĀĭŪĭ
ĕĭĀĭĭ MPlayer'Ā:

```
fakeroot debian/rules binary
```

ŷĀŌĀĭ, ŌŌĀ× root'ĭĭ ÷Ū, ĕĀĕ ĭĀŪÞĭĭ, ÷Ū ĭĭŌĀŌĀ ŌŌŌĀĭĭ×ĕŌŌ .deb ðĀĕĀŌ:

```
dpkg -i ../mplayer_×ĀŌŌĕŊ. deb
```

εΑΕΙΙΑ–ΟΙ ×ΟΑΙΝ Christian Marillat ΟΙΑΕΟΑΙ ΙΑΙΕΕΑΕΑΙΟΙΥΑ Debian ΔΑΕΑΟÙ Ó MPlayer'ΙΙ, MEncoder'ΙΙ Ε ÛÒΕΕΟΑΙΕ, ΟΑΕ ΡΟΙ ×Û ΠΙΟΑΟΑ ΕΕ ΟΕΑΡΑΟØ (apt-get'ΙΟΟØ) ΕΕ Ó ΑÇÌ_ΟΑΕΟΑ.

6.1.2. RPM ΔΑΕΑΟÙ

Dominik Mierzejewski ΟΙΑΕΟΑΑΟ Ε ΔΙΑΑΑΟΟΕ×ΑΑΟ ΙΕΕΑΕΑΙΟΙΥΑ Red Hat RPM ΔΑΕΑΟÙ MPlayer'Α. ιΙΕ ΑΙΟΟΟΔΙÛ Ó ΑÇÌ_ΟΑΕΟΑ.

Mandrake RPM ΔΑΕΑΟÙ ΑΙΟΟΟΔΙÛ Ó P.L.F., SuSE ×ΕΙΛΡΑΙΑ ΕΟΕΑΙΑΡΑΠΙΟΑ ×ΑΟΟΕΑ MPlayer'Α × ΑΕΟΟΟΕΑΟΟΕ×. εÛ ΔΙΟΙΑΑΙΕΕ ΟΑΙΕÛ× ΙΙΕ ΟΑΟΑΙΕ ÛΟΕ ΔΑΕΑΟÙ. ÷Û ΠΙΟΑΟΑ ×ÛΝΟØ ΟΑΑΙΟΑΑΥΕΑ RPM'ΙΕΕΕ Ó links2linux.de.

6.1.3. ARM

MPlayer ΟΑΑΙΟΑΑΟ ΙΑ Linux PDAs Ó ARM ΔΟΙΑΑΟΟΙΟΙ, ΙΑΔΟΕΙΑΟ Sharp Zaurus, Compaq Ipaq. δΟΙΟΟΑΕÛΕΕ ΟΔΙΟΙΑ ΔΠΠΕΠΕΟØ MPlayer ÛΟΙ ΟΕΑΡΑΟØ ΑÇÌ Ó ΔΑΕΑΟΙÛΕ ΔΑΟΟΑΕΥ[feeds] OpenZaurus. αΟΙΕ ÷Û ΕΙΟΕΟΑ ΟΕΙΙΔΕΙΕΟΙ×ΑΟØ ΑÇÌ ΟΑΠΙΟΟΙΝΟΑΙØΙ, ΙΑΟΑΟΕΟΑ ×ΙΕΙΑΙΕΑ ΙΑ ΕΑΟΑΙΙÇΕ MPlayer Ε libavcodec × ΕΙΟΙΑ ΟΑΙΟΕΕ[buildroot] ΑΕΟΟΟΕΑΟΟΕ×Α OpenZaurus. αΑΙ ×ΟΑÇΑΑ ΙΑΕΑΟΟΟΝ ÓΑΟΕΕ Makefile Ε ΔΑΟΠΕ, ΕΟΔΠΠΟΥΟΑΙÛΑ ΑΙΝ ΟΑΙΟΕΕ CVS MPlayer'Α ×ΙΑΟΟΑ Ó libavcodec. αΟΙΕ ÷ΑΙ ΙΟΟΑΙ GUI, ΕΟΔΠΠΟΥΟΕΟΑ xmms–embedded.

6.2. *BSD

MPlayer ΟΑΑΙΟΑΑΟ ΔΙΑ FreeBSD, OpenBSD, NetBSD, BSD/OS Ε Darwin. οΨΥΑΟΟ×ΟΑΟ ΔΠΠΟΕΟΙ×ΑΠÛΑ[ports]/ΔΑΕΑΟÙ ΟΙΟΑΙ×[pkgsrsrcs]/fink/ Ε Ο. Δ. ×ΑΟΟΕΕ MPlayer'Α, ΕΙΟΙΟÛΑ ΙΑ×ΑΟΠΑ ΔΟΙΥΑ ΕΟΔΠΠΟΥΙ×ΑΟØ, ΡΑΙ ΔΟΙΟΟΙ ΕΟΕΙΑÛΕ ΕΙΑ.

ρΟΙΑÛ ΟΙΑΟΑΟØ MPlayer, ÷ΑΙ ΔΠΠΑΑΙΑΕΟΟΝ GNU make (gmake ΟΙΑΠΠΕ BSD make ΙΑ ΑΟΑΑΟ ΟΑΑΙΟΑΟØ) Ε Ó×ΑΟΑΝ ×ΑΟΟΕΝ binutils.

αΟΙΕ MPlayer ΟΟÇΑΑΟΟΝ, ΡΟΙ Π ΙΑ ΠΙΟΑΟ ΙΑΕΟΕ /dev/cdrom ΕΙΕ /dev/dvd, ΟΙÛΑΑΕΟΑ ΟΠΠΟ×ΑΟΟΟ×ΟΑΥΟΑ ΟΟÛΕΟ:

```
ln -s /dev/+ΑÛΑ_cdrom_οοοοιεοο×f /dev/cdrom
```

ρΟΙΑÛ ΕΟΔΠΠΟΥΙ×ΑΟØ Win32 DLL'Ε Ó MPlayer'ΙΙ, ÷ΑΙ ΙΑΙΑΕΙΑΕΠ ΔΑΟΑΕΠΠΕΙΕΟΙ×ΑΟØ ΝΑΟΙ Ó "option USER_LDT" (ΑΟΙΕ ΟΠΠΕΙ Ο ÷ΑΟ ΙΑ FreeBSD–CURRENT, ÇΑΑ ÛΟΙ ×ΕΙΛΡΑΠΙ ΔΙ ΟΠΠΡΑΙΕΑ).

6.2.1. FreeBSD

αΟΙΕ ÷ΑÛ CPU ΔΙΑΑΑΟΟΕ×ΑΑΟ SSE, ΔΑΟΑΕΠΠΕΙΕΟΟΕΟΑ ΝΑΟΙ Ó "options CPU_ENABLE_SSE" (ΙΑΙΑΕΙΑΕΠ FreeBSD–STABLE ΕΙΕ ΔΑΟΠΕ Ε ΝΑΟΟ).

6.2.2. OpenBSD

÷ Ó×ΝÛΕ Ó ΙÇΟΑΙΕΡΑΙΕΝΙΕ × ΟΑÛΙΕΡÛΕ ×ΑΟΟΕΝΕ gas'Α (ΔΑΟΑΠΠΟΥ[relocation] Ε MMX), ÷Û ΑΠΠΟÛ ΑΟΑΑΟΑ ΕΠΠΕΙΕΟΙ×ΑΟØ × Α×Α ÛΑÇΑ: ΟΙΑΡΑΙΑ ΟΑΑΕΟΑΟØ, ΡΟΙ ΙΑ ΟΙΑΠΠΕ as ΔΑΟ×ÛΕ × ÷ΑÛΑΙ \$PATH Ε ×ÛΔΠΠΕΟΑ **gmake -k**, ÛΑΟΑΙ ΟΑΑΑΕΟΑΟØ, ΡΟΙ ΑΟΑΑΟ

ΕΟΔΠΘΥΙ×ΑΟΘΟΝ ΟΙΑΙΑΝ ×ΑΟΟΕΝ Ε ΥΑΘΟΟΟΕΟΑ **gmake**.

6.2.3. Darwin

σί. ΟΑΕΑΕΑ Mac OS.

6.3. Sun Solaris

MPlayer ΑΠΘΑΙ ΟΑΑΙΟΑΟΘ ΔΙΑ Solaris 2.6 Ε ΑΠΙΑ Π×ΥΙΕ ×ΑΟΟΕΝΙΕ.

ΙΑ **UltraSPARC**ΑΕ, MPlayer ΕΟΔΠΘΥΟΑΟ ΕΕ ΟΑΟΥΕΟΑΙΕΑ **VIS** (ΥΕ×Ε×ΑΙΑΙΟ MMX), Π (×ΙΑΟΟΙΝΥΕΕ ΠΙΑΙΟ) ΟΠΘΕΙ × *libmpeg2*, *libvo* Ε *libavcodec*, Π ΙΑ × *mp3lib*. ÷Û ΟΠΘΑΟΑ ΔΟΙΟΙΑΟΔΕ×ΑΟΘ VOB'Û ΙΑ 400MHz CPU. ÷ΑΙ ΔΙΟΘΑΑΘΑΟΟΝ ΟΟΟΑΠ×ΙΑΙΑΝ mLib.

ΠΟΙΑÛ ΟΙΑΟΑΟΘ ΔΟΙΘΟΑΙΘ, ÷ΑΙ ΔΙΟΘΑΑΘΑΟΟΝ GNU make (gmake, /opt/sfw/gmake), ΟΙΑΠΕ Solaris'ÛÛΕ make ΙΑ ΑΘΑΑΘ ΟΑΑΙΟΑΟΘ. ΔΕΔΕΡΙΑΝ ΙΥΕΑΕΑ ΕΙΘΙΟΘΑ ÷Û ΑΘΑΑΘΑ ΔΠΘΡΑΘΘ ΔΘΕ ΕΟΔΠΘΥΙ×ΑΙΕΕ Solaris'ÛÛÛ make, ×ΙΑΟΟΙ GNU'ÛÛÛÛ:

```
% /usr/ccs/bin/make
make: Fatal error in reader: Makefile, line 25: Unexpected end of line seen
```

ΙΑ Solaris SPARC, ÷ΑΙ ΔΙΟΘΑΑΘΑΟΟΝ GNU C/C++ Compiler; ΔΘΕ ÛΘΠ ΙΑ ΕΙΑΑΘ ΥΙΑΡΑΙΕΝ, ΑÛΙ ΙΕ GNU C/C++ ΕΠΘΕΙΝΘΙΟ ΟΕΠΛΕÇΘΘΕΘΙ×ΑΙ Ο ΕΙΕ ΑΑÛ GNU ΑΟΟΑΙΑΙΑΘΑ.

ΙΑ Solaris x86, ÷ΑΙ ΔΙΟΘΑΑΘΑΟΟΝ GNU ΑΟΟΑΙΑΙΑΘ Ε GNU C/C++ ΕΠΘΕΙΝΘΙΟ, ΟΕΠΛΕÇΘΘΕΘΙ×ΑΠΥΕ, ΠΟΙΑÛ ΕΟΔΠΘΥΙ×ΑΟΘ GNU ΑΟΟΑΙΑΙΑΘ! ΙΑ x86 ΔΙΑΘΑΕΙΘΙΑΕ ΕΙΑ MPlayer'Α ΕΟΔΠΘΥΟΑΟ ΠΙÇΙ MMX, SSE Ε 3DNOW! ΕΙΘΘΘΘΕΑΕΕ, ΕΙΘΙΘÛΑ Sun'ÛΘΕΕΕ ΑΟΟΑΙΑΙΑΘ /usr/ccs/bin/as ΙΑ ΠΘΑΘ ΟΕΠΘΕΙΘΘΙ×ΑΘΘ.

ΘΕΘΕΘΘ configure ΔÛΘΑΑΘΟΝ ΙΑΙΑΘΘΘΘΘ, ΕΑΕΙΕ ΑΟΟΑΙΑΙΑΘ ΕΟΔΠΘΥΟΑΘΟΝ ÷ΑÛΑΕ ΕΠΙΑΙΑΙΕ "gcc" (× ΟΠΘ ΟΙΘΡΑΑ, ΑΘΙΕ Α×ΘΠΘΘΑΑΙΑΙΕΑ ΙΑ ΟΟΑΑΙΘΑΑΘ, ΕΟΔΠΘΥΘΕΘΑ ΘΑΕΑ --as=/ΘΑΙ/ÇΑΑ/Θ/÷ΑΘ/ΘΘΘΑΙÛ×ÛΑÛ/gnu-as, ΠΟΙΑÛ ΟΠΘΑΥΕΘΘ ΘΕΘΕΘΘΘ configure, ÇΑΑ ΠΠΘ ΙΑΙΑΘΘΘΘΘΘ GNU "as" ΙΑ ÷ΑÛΑΕ ΘΕΘΘΑΙΑ).

ΘΠΘΑΥΑΙΕΝ ΙΑ ΙΥΕΑΕΑΕ configure ΙΑ Solaris x86 ΘΕΘΘΑΙΑΕ ΔΘΕ ΕΟΔΠΘΥΙ×ΑΙΕΕ GCC ΑΑÛ GNU ΑΟΟΑΙΑΙΑΘΑ:

```
% configure
...
Checking assembler (/usr/ccs/bin/as) ... , failed
Please upgrade(downgrade) binutils to 2.10.1...
```

(ΘΑÛΑΙΕΑ: ΘΟΟΑΠ×ΕΘΑ Ε ΕΟΔΠΘΥΟΘΘΘ gcc, ΟΕΠΛΕÇΘΘΘΘΘΙ×ΑΠΥΕ Ο --with-as=gas)

ΔΕΔΕΡΙΑΝ ΙΥΕΑΕΑ ΔΘΕ ΟΑΙΘΕΑ GNU C ΕΠΘΕΙΝΘΙΟΠ, ΕΙΘΙΘÛΕ ΙΑ ΕΟΔΠΘΥΟΑΘ GNU as:

```
% gmake
...
gcc -c -Iloader -Ilibvo -O4 -march=i686 -mcpu=i686 -pipe -ffast-math
      -fomit-frame-pointer -I/usr/local/include -o mplayer.o mplayer.c
Assembler: mplayer.c
"(stdin)", line 3567 : Illegal mnemonic
```


6.5. QNX

δΑΑΙΘΑΑΟ. ÷ΑΙ ΙΘΘΐ ΟΕΑΡΑΟΘ Ε ΘΟΘΑΐ×ΕΘ SDL ΑΐΝ QNX. υΑΟΑΐ ΥΑΘΟΘΟΕΘΑ MPlayer Ο ΙΘΑΕΝΐΕ -vo sdl:photon Ε -ao sdl:nto, Ε ×ΟΑ ΑΘΑΑΘ ΟΑΑΙΘΑΟΘ ΑΥΟΘΐ.

÷Υ×ΙΑ -vo x11 ΑΘΑΑΘ ΑΥε ΙΑΑΙΑΐΑΑ, ΡΑΐ ΔΐΑ Linux, ΔΐΟΕΐΘΕΘ ΔΐΑ QNX X'U ΥΐΘΐΕΘΘΑΘΟΝ, ΡΘΐ ipair ΙΑΑΙΑΐ. εΘΔΐΘΥΘΕΘΑ SDL.

6.6. Windows

äÁ, MPlayer ΘΑΑΙΘΑΑΘ ΔΐΑ Windows ΔΐΑ Cygwin Ε MinGW. δΐΕΑ ΑΥε ΙΑΘ GUI, ΐ ×ΑΘΟΕΝ ΕΐΙΑΐΐΕ ΟΘΘΐΕ ΔΐΡΘΕ ΑΘΐΕΑΐΐΑΐΘΐΑ. ρΥ ×ΟΑÇΑΑ ΑΘΑΑΐ ΑΐΑÇΐΑΑΘΐΥ ΥΑ ΔΑΘΡΕ. ÷Υ ΐΘΑΘΑ ΔΐΘΡΕΘΘ ΔΐΐΥΘ Ε ΔΐΘΐΑΑΐΑΑ ΕΐΕΐΘΐΑΕΑ ΙΑ ΘΑΘΟΐΕΑ mplayer-cygwin.

ιΘΡΥΕΑ ΘΑΥΘΐΘΑΘΥ ΔΐΘΡΑΑΘΟΝ ΘΘΕ ΕΘΔΐΘΥΐ×ΑΐΕΕ ΘΐΑΐÇΐ DirectX ×ΕΑΑΐ ×Υ×ΙΑΑ (-vo directx) Ε ΘΐΑΐÇΐ Windows waveout ΑΘΑΕΐ ΑΘΑΕ×ΑΘΑ (-ao win32), ΔΐΟΕΐΘΕΘ OpenGL ΙΑ ΘΑΑΙΘΑΑΘ, Α ΙΑ ΙΑΕΐΘΐΘΕ ΘΕΘΟΑΐΑΕ SDL ΕΘΕΑΘΑΑΘ Υ×ΘΕ Ε ×ΕΑΑΐ ΕΐΕ ΐΐΙΑΘ ΘΕΘΟΑΐΘ. äΘΐΕ ΕΥΐΑΘΑΘΑΐΕΑ ΕΘΕΑΘΑΐ, ΔΐΘΘΐΑΘΕΘΑ ΙΘΕΐΑΡΕΘΘ ΑΔΘΑΘΑΘΐΑ ΘΘΕΐΘΑΐΕΑ, ΘΕΑΥΑ× -vo directx:noaccel. ΘΕΑΡΑΕΘΑ ΑΕΐΥ ΥΑÇΐΐ×Εΐ× DirectX 7, ΡΘΐΑΥ ΘΕΐΘΕΐΘΐ×ΑΘΘ ×ΕΑΑΐ ΑΘΑΕ×ΑΘ DirectX.

÷Υ ΐΘΑΘΑ ΕΘΔΐΘΥΐ×ΑΘΘ Win32 ΕΐΑΑΕΕ Ε Real Win32 ΕΐΑΑΕΕ (ΙΑ Real Linux ΕΐΑΑΕΕ), ΑΘΐΕ ΕΐΘΕΘΑ. δΐΙΑΘΘΕΘΑ ΕΕ ΘΘΑΑ-ΐΕΑΘΑΘ × ΘΘΘΕ ΕΐΕ ΘΕΑΘΕΘΑ configure ΙΘΑΕΑ --with-codecsdir=c:/path/to/your/codecs (ΕΐΕ --with-codecsdir=/path/to/your/codecs, ΐ ΘΐΘΕΐ ΔΐΑ Cygwin). ò ΙΑΘ ΑΥΐΕ ΘΐΑΥΑΐΕΝ ΐ Θΐΐ, ΡΘΐ Real DLL'Ε ΑΐΘΐΥ ΑΥΘΘ ΑΐΘΘΘΐΥ ΔΐΘΥΐ×ΑΘΑΐΑ, ΥΑΘΟΘΕΑΑΥΑΐΘ MPlayer, ΑΐΝ ΥΑΘΕΘΕ, ΐ ΘΐΘΕΐ ΙΑ ΙΑΕΐΘΐΘΕ ΘΕΘΟΑΐΑΕ. äΘΐΕ Θ ÷ΑΘ ΘΘΐΑΐΑΐΥ Θ ΐΕΐ, ΔΐΘΘΐΑΘΕΘΑ ΘΑΑΐΑΘΘ ΕΕ ΥΑΘΕΘΥ×ΑΑΐΥΐΕ. QuickTime DLL'Ε ΘΑΕΘΑ ΘΑΑΐΘΑΑΘ, ΐ ÷Υ ΑΐΘΐΥ ΔΐΐΑΘΘΕΘ ΕΕ × ΘΕΘΟΑΐΥΕ Windows ΕΑΘΑΐÇ (C:\Windows\system\ ΕΐΕ ΡΘΐ-Θΐ× ΥΘΐ ΑΘΕΑ).

εΐΘΐΘ Cygwin/MinGW ΘΐΑÇΕΑ ΙΑΑΙΑΐΑΝ. δΑΘΑΐΑΘΘΑ×ΙΑΐΕΑ ×Υ×ΙΑΑ ΕΐΕ ΕΘΔΐΘΥΐ×ΑΐΕΑ ΙΘΑΕΕ -quiet ΘΐΘΡΥΑΑΘ ΘΘΐΕΥ×ΙΑΕΘΑΐΘΐΘΘΘ ΙΑ ΙΑΕΐΘΐΘΕ ΘΕΘΟΑΐΑΕ. δΘΝΐΙΑ ×ΐΘΘΘΐΕΥ×ΑΑΑΐΕΑ[Direct rendering] (-dr) ΘΑΕΘΑ ΐΘΑΘ ΔΐΐΡΘ. ÷Υ ΐΘΑΘΑ ΕΥΑΑΘΑΘΘ ΙΑΘΑΑΐΕΝ OSD, ×ΕΐΑΡΕ× ΙΘΑΕΑΕ -double Α×ΐΕΐΘΑ ΑΘΑΘΕΥΑΑΕΑ. äΘΐΕ ×ΐΘΘΘΐΕΥ×ΑΑΑΐΕΑ ΘΘΑΘΥ×ΕΘΘΐ, ΔΐΘΘΐΑΘΕΘΑ -autosync 100. äΘΐΕ ΕΑΕΕΑ-Θΐ ΕΥ ΥΘΕΕ ΙΘΑΕΕ ÷Αΐ ΔΐΐÇΘΘ, ΘΘΐΕΘ ΔΐΙΑΘΘΕΘΘ ΕΕ × ΕΐΐΕÇΘΘΑΑΕΐΐΥΕ ΑΕΐ.

εΐÇΑΑ ΘΑΥΑ υΐΐΑΘ [Sascha Sommer] ×ΥΘΘΘΕΑΑΘ ΐΑΕΕΑΕΑΐΘΐΥΑ ΑΕΐΑΘΕΕ ΔΐΑ Windows, äΘΐΕ δΥΘΘΕΥ[Joey Parrish] ΘΐΑΕΘΑΑΘ ΙΑΐΑΕΑΕΑΐΘΐΥΑ Windows ΔΑΕΑΘΥ Θ ΘΘΘΑΐ×ΐΡΐΕΐΐ. εΥΥΕΘΑ ΘΘΐΕΕ × ΘΑΕΑΕΕ Windows ΙΑΥΑΕ ΘΘΘΑΐΕΑΥ ΘΘΐΑΕΘΐ×.

6.6.1. Cygwin

Cygwin ×ΑΘΘΕΕ Αΐ 1.5.0 ΙΑ ×ΕΐΑΡΑΐ inttypes.h. δΐΙΑΘΘΕΘΑ ΥΘΐΘ inttypes.h × /usr/include/, ΡΘΐΑΥ MPlayer ΐÇ ΘΕΐΘΕΐΘΐ×ΑΘΘΘΝ.

æΑΕΐΥ ΥΑÇΐΐ×Εΐ× DirectX ΙΑΑΐ ΘΑΘΔΑΕΐ×ΑΘΘ × /usr/include/ ΕΐΕ /usr/local/include/.

MPlayer – The Movie Player for LINUX

÷Ù ÏÏÖÅÖÅ ÍÁËÖË ËÍÓÖÖÖËËËË É ÆÁËÏÙ ÆÏÑ ÚÁÐÖÖËÁ SDL ðÏÄ Cygwin ÍÁ ÓÁËÖÅ libsdl.

÷Ù ÏÏÖÅÖÅ ÐÒËËÇÒÙ×ÁÔØ VCD, ÐÒËËÇÒÙ×ÁÑ .DAT ÈËË .MPGÆÁËÏÙ, ËÏÏÏÙÙÅ Windows ðÏËÁÚÙ×ÁÔ ÍÁ VCD'ÛËËËËË. ÷Ï ËÁË ÛÏÏ ÒÁÁÏÖÅÀÔ (ðÏÁÓÖÅ×ØÖÅ ÆÖË×Ö ÷ÁÛÇÏ CD-ROM'Á):

```
mplayer d:/mpegav/avseq01.dat
```

```
mplayer /cygdrive/d/MPEG2/AVSEQ01.MPG
```

DVD'ÛËËËËË ÒÏÖÅ ÒÁÁÏÖÅÀÔ, ÒËÁÖËÖÅ ÆÖË×Ö ÷ÁÛÇÏ DVD-ROM'Á ÏÐÁËËËË -dvd-device:

```
mplayer dvd://<title> -dvd-device '\\.\d:'
```

6.6.2. MinGW

ðÒÅÖÅÅ, ÖÓÖÁÏ×ËÁ ×ÅÖÖËË MinGW, ÓðÏÏÍÁÏÏË ÒËÏÏðËËËË×ÁÔØ MPlayer, ÅÙÌÁ ÒÏÇËÁ ÒÏÏÏÏË, Ï ÓÁËËÁÓ ×ÓÁ ÒÁÁÏÖÅÀÔ Ó ÓÁÏÇÏ ÍÁËÁÏ. ðÏÏÏÏÏ ÖÓÖÁÏ×ËÖÅ MinGW 3.1.0 ÈËË ÅÏÅÅ Ï×ÛË É ÒËÁÖËÖÅ MSYS ðÏÓÖÖÖÖÁÏ×ËËË, ðÏÏ MinGW ÖÓÖÁÏ×ÏÁÏ.

åÓËË ÷Ù ÉÓðÏÏØÛÖÅÖÅ ÅÏÅÅ ÒÁÏÅÅ, ðÁÏ 3.1.0 ×ÅÖÖËË MinGW, ÷ÁÏ ÏÖÏÏ ÛÁÏÁËËËËË /mingw/include/sys/types.h ÛÖËË ÆÁËËÏÏ: types.h.

ðÁÓÖÁËËËËË ÆÁËËÏÙ ÛÁÇÏÏ×ËÏ× DirectX × /mingw/include/.

VCD'ÛËËËËË É DVD'ÛËËËËË ÒÁÁÏÖÅÀÔ ðÏËËËËË × Cygwin (ðÏÁÓÖÅ×ØÖÅ ÆÖË×Ö ÷ÁÛÇÏ CD-ROM'Á/DVD-ROM'Á):

```
mplayer d:/mpegav/avseq01.dat
```

```
mplayer /d/MPEG2/AVSEQ01.MPG
```

```
mplayer dvd://<title> -dvd-device /d/
```

6.7. Mac OS

ðÏÏËÏ Mac OS X 10.2 É ×ÛÛÅ "ÍÁÐÖÑÍÖÅ" ðÏÄÖÖÅÖË×ÁÀÖÑ ÒÏÖÅÁËËË MPlayer'Á. åÓËË ÈÏÖËÖÅ, ÁÏÁ×ØÖÅ ðÏÄÖÖÖËË ÆÏÅÅ ÓÖÁÖÛË ×ÅÖÖËË Mac OS É ÐÒËËËËË ðÁÖË!

æÏÑ ËÏÏðËËËËËË MPlayer'Á ÐÒÅÄðËËËËËË ËÛÏÁËËËËËË ÆËÖÏÏË Apple GCC 3.x, ÏÏÏÁÏÏÏ ÐÒËË ÉÓðÏÏØÛÏ×ÁËËË libavcodec, ðÏËËËËËËË Apple'×ÖËËË GCC 2.95.x ÍÁ ÏËÁÏËËËËËË ðÏÄÖÖÖË×ÁÀÖ C99 ÓËÏÖÁËË.

÷Ù ÏÏÖÅÖÅ ðÏÏËËËËË Aqua GUI ÆÏÑ MPlayer ×ÍÁÓÖÅ Ó ÏÖËËËËËËË×ÁÏÏËËË Mac OS X ÆËÏÖËËËËË MPlayer'Á ÍÁ ÓÁËËË MPlayerOSX ÐÒÏËËËË.

6.8. HP UX

Martin Gansser ðÏÄÖÖÖË×ÁÀÖ HOWTO ðÏ ÓÁÏËËË MPlayer ðÏÄ HP-UX. ðÁÏ ÅÁÖÅ ÅÓÖØ FAQ!

εΆΕ ÀÙ ÕÏ ÎÉ ÂÛÏ, ÍÁÙÉ "ÓÙÒÙÀ" ΕΌΕÏΑÏÉΕΕ MPlayer'Α ΕÏÏΘΕÏΕÒÕÀÒÓÑ ÍÁ HP-UX
ΑΑÚÏÛÉÁÏÏ.

6.9. Amiga/MorphOS (GeekGadgets)

Nicholas Det at Genesi ÓÄÄÍÄÏ ÄÏÏØÛÏÊ É ÚÍÁÏÉÓÄÏØÛÏÊ MPlayer 'Α ΔÏÄ MorphOS. ε ÓÏÖÁÏÄÏÉÀ, ÏÏ
ÏÓÏ×ÁÏ ÍÁ ÓÄÒÉÉ 0.90.

ðÏÏÏÉÓÄ ÈÈ Ó [MorphZone](#):

- [MPlayer 0.91 ÄÉÍÄÒÏÉÈ](#)
- [MPlayer 0.91 ΕΌÈÏÄÛÏÊ ÈÏÄ](#)
- [MEncoder 0.91 ÄÉÍÄÒÏÉÈ](#)

çÌÁ×Á 7. Encoding with MEncoder

óÏÄÄÒÖÁÏÉÄ

- 7.1. [Encoding 2 or 3-pass MPEG-4 \("DivX"\)](#)
- 7.2. [Encoding to MPEG format](#)
- 7.3. [Rescaling movies](#)
- 7.4. [Stream copying](#)
- 7.5. [Fixing AVIs with broken index or interleaving](#)
 - 7.5.1. [Appending multiple AVI files](#)
- 7.6. [Encoding with the libavcodec codec family](#)
- 7.7. [Encoding from multiple input image files \(JPEGs, PNGs or TGAs\)](#)
- 7.8. [Extracting DVD subtitles to Vobsub file](#)
- 7.9. [Preserving aspect ratio](#)
- 7.10. [Custom inter/intra matrices](#)

For the complete list of available MEncoder options and examples, please see the man page. For a series of hands-on examples and detailed guides on using several encoding parameters, read the [encoding-tips](#) that were collected from several mailing list threads on mplayer-users. Search the [archives](#) for a wealth of discussions about all aspects of and problems related to encoding with MEncoder.

7.1. Encoding 2 or 3-pass MPEG-4 ("DivX")

2-pass encoding. The name comes from the fact that this method encodes the file *twice*. The first encoding (dubbed pass) creates some temporary files (* .log) with a size of few megabytes, do not delete them yet (you can delete the AVI). In the second pass, the 2-pass output file is created, using the bitrate data from the temporary files. The resulting file will have much better image quality. If this is the first time you heard about this, you should consult some guides available on the Net.

This example shows how to encode a DVD to a 2-pass MPEG-4 ("DivX") AVI. Just two commands are needed:

```
rm frameno.avi
```

remove this file, which can come from a previous 3-pass encoding (it interferes with current one)

MPlayer – The Movie Player for LINUX

```
mencoder dvd://2 -ovc lavc -lavcopts vcodec=mpeg4:vpass=1 -oac copy -o movie.avi
mencoder dvd://2 -ovc lavc -lavcopts vcodec=mpeg4:vpass=2 -oac copy -o movie.avi
```

3-pass encoding. This is an extension of 2-pass encoding, where the audio encoding takes place in a separate pass. This method enables estimation of recommended video bitrate in order to fit on a CD. Also, the audio is encoded only once, unlike in 2-pass mode. The schematics:

1. Remove conflicting temporary file:

```
rm frameno.avi
```

2. *First pass:*

```
mencoder file/DVD -ovc frameno -oac mp3lame -lameopts vbr=3 -o frameno.avi
```

An audio-only avi file will be created, containing **only** the requested audio stream. Don't forget `-lameopts`, if you need to set it. If you were encoding a long movie, MEncoder prints the recommended bitrate values for 650Mb, 700Mb, and 800Mb destination sizes, after this pass finishes.

3. *Second pass:*

```
mencoder file/DVD -oac copy -ovc lavc -lavcopts vcodec=mpeg4:vpass=1:vbitrate=bitrate
```

This is the first pass of video encoding. Optionally specify the video bitrate MEncoder printed at the end of the previous pass.

4. *Third pass:*

```
mencoder file/DVD -oac copy -pass 2 \
    -ovc divx4 -divx4opts br=bitrate
```

This is the second pass of video encoding. Specify the same bitrate as in the previous pass unless you really know what you are doing. In this pass, audio from `frameno.avi` will be inserted into the destination file...and it's all ready!

7.1. Example of 3-pass encoding

```
rm frameno.avi
```

remove this file, which can come from a previous 3-pass encoding (it interferes with current one)

```
mencoder dvd://2 -ovc frameno -o frameno.avi -oac mp3lame -lameopts vbr=3
mencoder dvd://2 -ovc lavc -lavcopts vcodec=mpeg4:vpass=1 -oac copy -o movie.avi
mencoder dvd://2 -ovc lavc -lavcopts vcodec=mpeg4:vpass=2 -oac copy -o movie.avi
```

7.2. Encoding to MPEG format

MEncoder can create MPEG (MPEG-PS) format output files. It's probably useful only with [libavcodec's mpeg1video](#) codec, because players – except MPlayer – expect MPEG1 video, and MPEG1 layer 2 (MP2) audio streams in MPEG files.

This feature is not very useful right now, aside that it probably has many bugs, but the more importantly because MEncoder currently cannot encode MPEG1 layer 2 (MP2) audio, which all other players expect in MPEG files.

To change MEncoder's output file format, use the `-of mpeg` option.

Example:

```
mencoder -of mpeg -ovc lavc -lavcopts vcodec=mpeg1video -oac copy other options media.avi -o outp
```

7.3. Rescaling movies

Often the need to resize movie images' size emerges. Its reasons can be many: decreasing file size, network bandwidth, etc. Most people even do rescaling when converting DVDs or SVCDs to DivX AVI. This is **bad**. Instead of even you doing so, read the [Preserving aspect ratio](#) section.

The scaling process is handled by the `scale` video filter: `-vf scale=width:height`. Its quality can be set with the `-sws` option. If it's not specified, MEncoder will use 0: fast bilinear.

Usage:

```
mencoder input.mpg -ovc lavc -lavcopts vcodec=mpeg4 -vf scale=640:480 -o output.avi
```

7.4. Stream copying

MEncoder can handle input streams in two ways: **encode** or **copy** them. This section is about **copying**.

- **Video stream** (option `-ovc copy`): nice stuff can be done :) Like, putting (not converting!) FLI or VIVO or MPEG1 video into an AVI file! Of course only MPlayer can play such files :) And it probably has no real life value at all. Rationally: video stream copying can be useful for example when only the audio stream has to be encoded (like, uncompressed PCM to MP3).
- **Audio stream** (option `-oac copy`): straightforward. It is possible to take an external audio file (MP3, WAV) and mux it into the output stream. Use the `-audiofile filename` option for this.

7.5. Fixing AVIs with broken index or interleaving

Easiest thing. We simply copy the video and audio streams, and MEncoder generates the index. Of course this cannot fix possible bugs in the video and/or audio streams. It also fixes files with broken interleaving, thus the `-ni` option won't be needed for them anymore.

Command:

```
mencoder -idx input.avi -ovc copy -oac copy -o output.avi
```

7.5.1. Appending multiple AVI files

As a side-effect, the broken AVI fixer function enables MEncoder to append 2 (or more) AVI files:

Command:

```
cat 1.avi 2.avi | mencoder -noidx -ovc copy -oac copy -o output.avi -
```

ύΆΐΆβΆΐΈΆ

This expects 1.avi and 2.avi to use the same codecs, resolution, stream rate etc, and at least 1.avi must not be broken. You may need to fix your input AVI files first, as described [above](#).

7.6. Encoding with the libavcodec codec family

[libavcodec](#) provides simple encoding to a lot of interesting video and audio formats (currently its audio codecs are unsupported). You can encode to the following codecs (more or less up to date):

Codec name	Description
mjpeg	Motion JPEG
ljpeg	Lossless JPEG
h263	H263
h263p	H263 Plus
mpeg4	ISO standard MPEG-4 (DivX 5, XVID compatible)
msmpeg4	pre-standard MPEG-4 variant by MS, v3 (aka DivX3)
msmpeg4v2	pre-standard MPEG-4 by MS, v2 (used in old asf files)
wmv1	Windows Media Video, version 1 (aka WMV7)
wmv2	Windows Media Video, version 2 (aka WMV8)
rv10	an old RealVideo codec
mpeg1video	MPEG1 video
mpeg2video	MPEG2 video
huffyuv	lossless compression
asv1	ASUS Video v1
asv2	ASUS Video v2
ffv1	FFmpeg's lossless video codec

The first column contains the codec names that should be passed after the vcodec config, like: `-lavcopts vcodec=msmpeg4`

An example, with MJPEG compression:

```
mencoder dvd://2 -o title2.avi -ovc lavc -lavcopts vcodec=mjpeg -oac copy
```

7.7. Encoding from multiple input image files (JPEGs, PNGs or TGAs)

MEncoder is capable of creating movies from one or more JPEG, PNG or TGA files. With simple framecopy it can create MJPEG (Motion JPEG), MPNG (Motion PNG) or MTGA (Motion TGA) files.

Explanation of the process:

MPlayer – The Movie Player for LINUX

1. MEncoder *decodes* the input image(s) with `libjpeg` (when decoding PNGs, it will use `libpng`).
2. MEncoder then feeds the decoded image to the chosen video compressor (DivX4, Xvid, `ffmpeg` `msmpeg4`, etc.).

Examples.§ The explanation of the `-mf` option can be found below in the man page.

Creating a DivX4 file from all the JPEG files in the current dir:

```
mencoder -mf on:w=800:h=600:fps=25 -ovc divx4 -o output.avi \*.jpg
```

Creating a DivX4 file from some JPEG files in the current dir:

```
mencoder -mf on:w=800:h=600:fps=25 -ovc divx4 -o output.avi frame001.jpg,frame002.jpg
```

Creating a Motion JPEG (MJPEG) file from all the JPEG files in the current dir:

```
mencoder -mf on:w=800:h=600:fps=25 -ovc copy -o output.avi \*.jpg
```

Creating an uncompressed file from all the PNG files in the current dir:

```
mencoder -mf on:w=800:h=600:fps=25:type=png -ovc raw -o output.avi \*.png
```

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Width must be integer multiple of 4, it's a limitation of the RAW RGB AVI format.

Creating a Motion PNG (MPNG) file from all the PNG files in the current dir:

```
mencoder -mf on:w=800:h=600:fps=25:type=png -ovc copy -o output.avi \*.png
```

Creating a Motion TGA (MTGA) file from all the TGA files in the current dir:

```
mencoder -mf on:w=800:h=600:fps=25:type=tga -ovc copy -o output.avi \*.tga
```

7.8. Extracting DVD subtitles to Vobsub file

MEncoder is capable of extracting subtitles from a DVD into Vobsub formatted files. They consist of a pair of files ending in `.idx` and `.sub` and are usually packaged in a single `.rar` archive. MPlayer can play these with the `-vobsub` and `-vobsubid` options.

You specify the basename (i.e without the `.idx` or `.sub` extension) of the output files with `-vobsubout` and the index for this subtitle in the resulting files with `-vobsuboutindex`.

If the input is not from a DVD you should use `-ifo` to indicate the `.ifo` file needed to construct the resulting `.idx` file.

If the input is not from a DVD and you do not have the `.ifo` file you will need to use the `-vobsubid` option to let it know what language id to put in the `.idx` file.

Each run will append the running subtitle if the `.idx` and `.sub` files already exist. So you should remove any before starting.

7.2. Copying two subtitles from a DVD while doing 3-pass encoding

```
rm subtitles.idx subtitles.sub
mencoder dvd://1 -vobsubout subtitles -vobsuboutindex 0 -sid 2 -o frameno.avi -ovc frameno
mencoder dvd://1 -oac copy -ovc divx4 -pass 1
mencoder dvd://1 -oac copy -ovc divx4 -pass 2 -vobsubout subtitles -vobsuboutindex 1 -sid 5
```

7.3. Copying a french subtitle from an MPEG file

```
rm subtitles.idx subtitles.sub
mencoder movie.mpg -ifo movie.ifo -vobsubout subtitles -vobsuboutindex 0 -vobsuboutid fr -sid 1
```

7.9. Preserving aspect ratio

DVDs and SVCDs (i.e. MPEG1/2) files contain an aspect ratio value, which describes how the player should scale the video stream, so humans won't have egg heads (ex.: 480x480 + 4:3 = 640x480). However when encoding to AVI (DivX) files, you have to be aware that AVI headers don't store this value. Rescaling the movie is disgusting and time consuming, there has to be a better way!

There is

MPEG4 has a unique feature: the video stream can contain its needed aspect ratio. Yes, just like MPEG1/2 (DVD, SVCD) and H263 files. Regretfully, there are **no** video players outside which support this attribute of MPEG4, except MPlayer.

This feature can be used only with libavcodec's mpeg4 codec. Keep in mind: although MPlayer will correctly play the created file, other players will use the wrong aspect ratio.

You seriously should crop the black bands over and below the movie image. See the man page for the usage of the `cropdetect` and `crop` filters.

Usage

```
mencoder sample-svcd.mpg -ovc lavc -lavcopts vcodec=mpeg4:autoaspect -vf crop=714:548:0:14 -oac o
```

7.10. Custom inter/intra matrices

With this feature of libavcodec you are able to set custom inter (I-frames/key frames) and intra (P-frames/predicted frames) matrices. It is supported by many of the codecs: `mpeg1video` and `mpeg2video` are reported as working.

A typical usage of this feature is to set the matrices preferred by the KVCD specifications.

The KVCD "Notch" Quantization Matrix:

Intra:

```
8  9 12 22 26 27 29 34
9 10 14 26 27 29 34 37
12 14 18 27 29 34 37 38
22 26 27 31 36 37 38 40
26 27 29 36 39 38 40 48
```


B.4.6. ε̇Ο̇Α̇Υ̇Ε̇[crash]

B.4.6.1. ε̇Α̇Ε̇ Ο̇Ι̇Ε̇Ο̇Α̇Ι̇Ε̇Ο̇ Ε̇Ι̇Λ̇Ε̇Ι̇Ο̇Ι̇Α̇Α̇Ε̇Α̇ Ι̇×Ι̇Ο̇Δ̇Ο̇Ι̇Ε̇Υ̇×ΙΑ̇Ε̇Ι̇Ι̇ Ε̇Ο̇Α̇Υ̇Α̇

B.4.6.2. ε̇Α̇Ε̇ Ε̇Υ̇×Ι̇Α̇Ρ̇Θ̇ Δ̇Ι̇Α̇Υ̇Ι̇Ο̇Α̇ Ε̇Ι̇Λ̇Ε̇Ι̇Ο̇Ι̇Α̇Α̇Ε̇Α̇ Ε̇Υ̇ Α̇Α̇Ι̇Δ̇Α̇ [core dump]

B.5. η̇ Υ̇Ι̇Α̇Α̇, Ρ̇Ο̇Ι̇ Ḃ̇ Α̇Α̇Ι̇Α̇Α̇...

ε̇Ι̇Ο̇Ι̇Υ̇Ε̇Α̇ Ο̇Π̇ΙΑ̇Υ̇Α̇Ι̇Ε̇Ν̇ Ι̇Α̇ Ι̇Υ̇Ε̇Α̇Ε̇Α̇Ε̇ ×Ḃ̇Ι̇Ο̇Ν̇Ο̇ Υ̇Ι̇Α̇Ρ̇Ε̇Ο̇Α̇Ι̇Θ̇Ι̇Υ̇Ε̇ ×Ε̇Ι̇Α̇Α̇ × Ο̇Α̇Υ̇Ο̇Α̇Α̇Ι̇Ο̇Ε̇Ο̇ Ι̇Α̇Α̇Ι̇Ç̇Ι̇
Δ̇Ο̇Ι̇Ç̇Ο̇Α̇Ι̇Ι̇Ç̇Ι̇ Δ̇Ο̇Ι̇Α̇Ο̇Ε̇Ο̇Α̇, Ḃ̇, Ε̇Α̇Ε̇ Ε̇ Ι̇Α̇Δ̇Ε̇Ο̇Α̇Ι̇Ε̇Α̇ Ε̇Ι̇Ο̇Ι̇Υ̇Α̇Ε̇ Δ̇Ο̇Ι̇Ç̇Ο̇Α̇Ι̇Υ̇, Ε̇Ι̇Ο̇Ι̇Υ̇Α̇Α̇ Ο̇Π̇ΙΑ̇Υ̇Α̇Ι̇Ε̇Α̇ Ι̇Α̇
Ι̇Υ̇Ε̇Α̇Ε̇Α̇ ×Ε̇Ι̇Α̇Ρ̇Α̇Α̇Ο̇ × Ο̇Α̇Α̇Ν̇ Ι̇Α̇Ε̇Ο̇Α̇ Α̇Π̇Α̇ Ο̇Α̇Α̇Ι̇Ο̇Υ̇. δ̇Ι̇Ο̇Α̇Ι̇Ο̇Ε̇Ο̇Ο̇Α̇, Ι̇Ο̇Ι̇Υ̇Ι̇Α̇Ε̇Ο̇Α̇, Ρ̇Ο̇Ι̇ Α̇Π̇Θ̇Υ̇Ε̇Ι̇Ο̇×Ḃ̇
Ο̇Α̇Υ̇Ο̇Α̇Α̇Ι̇Ο̇Ρ̇Ε̇Ε̇Ι̇× Υ̇Α̇Ι̇Ν̇Ο̇Υ̇Α̇ Ι̇Α̇Α̇Ε̇, Δ̇Ι̇Π̇Θ̇Ρ̇Α̇Α̇Υ̇Ε̇Α̇ Ι̇Ç̇Ο̇Ι̇Ι̇Ι̇Α̇ Ε̇Π̇Ε̇Ρ̇Α̇Ο̇Ο̇×Ḃ̇ Δ̇Ε̇Ο̇Α̇Ι̇. δ̇Ι̇Υ̇Ο̇Ι̇Ι̇Ο̇, Ε̇Ι̇Ο̇Ν̇
÷Α̇Υ̇Ε̇ Ι̇Ο̇Υ̇Υ̇×Ḃ̇ Ι̇Α̇ΙΑ̇Ε̇ΙΑ̇Ε̇Ι̇Υ̇ Α̇Ι̇Ν̇ Ο̇Ι̇Θ̇Ρ̇Υ̇Α̇Ι̇Ε̇Ν̇ MPlayer'Α̇, Ε̇Ι̇Ο̇Ν̇ Ḃ̇Ε̇ Ι̇Ρ̇Α̇Ι̇Θ̇ Δ̇Ο̇Ε̇×Α̇Ο̇Ο̇Ο̇×Θ̇Α̇Ο̇Ο̇Ν̇,
Δ̇Ι̇Ο̇Α̇Ι̇Ο̇Ε̇Ο̇Α̇ Δ̇Ι̇Ε̇Ι̇Ε̇Ο̇Α̇, Ρ̇Ο̇Ι̇ ÷Ḃ̇ Α̇Π̇Θ̇Ι̇Υ̇ Δ̇Ο̇Α̇Α̇Ι̇Ο̇Ο̇Α̇×Ε̇Ο̇Θ̇ ÷Θ̇Α̇ Ο̇Ο̇Α̇Α̇Ο̇Α̇Ι̇Ο̇Α̇ Ι̇Α̇Ι̇Ε̇ Ε̇Ι̇Λ̇Ε̇Ι̇Ο̇Ι̇Α̇Α̇Ε̇Α̇,
Δ̇Ι̇Υ̇Ο̇Ι̇Ι̇Ο̇ Ο̇Ι̇Ρ̇Ḃ̇ Ο̇Ι̇Α̇Α̇Ο̇Ε̇Ο̇Α̇ Ε̇Ι̇Ο̇Ο̇Δ̇Ο̇Ε̇Α̇Ε̇Ν̇Ι̇ × Ḃ̇Ο̇Ḃ̇ Α̇Ι̇Ε̇Ο̇Ι̇Α̇Ι̇Ο̇Α̇.

B.1. ε̇Α̇Ε̇ Ε̇Ο̇Δ̇Ο̇Α̇×Ε̇Ο̇Θ̇ Ι̇Υ̇Ε̇Α̇Ε̇Ο̇

α̇Ο̇Ι̇Ε̇ ÷Ḃ̇ Ι̇Υ̇Ο̇Υ̇Α̇Α̇Ο̇Α̇ × Ο̇Α̇Α̇Α̇ Α̇Ι̇Ο̇Ο̇Α̇Ο̇Ι̇Ρ̇Ḃ̇ Ο̇Ε̇Ι̇ Ε̇ Ο̇Ι̇Α̇Ι̇Ε̇Ν̇ Α̇Ι̇Ν̇ Ο̇Α̇Π̇Ι̇Ο̇Ο̇Ι̇Ν̇Ο̇Α̇Ι̇Θ̇Ḃ̇Ι̇Ç̇Ι̇ Ο̇Α̇Υ̇Α̇Ι̇Ε̇Ν̇
Δ̇Ο̇Ι̇Α̇Ι̇Α̇Ι̇Υ̇, Δ̇Ι̇Ο̇Α̇Ι̇Ο̇Ε̇Ο̇Ο̇Α̇, Ο̇Α̇Α̇ΙΑ̇Ε̇Ο̇Α̇ Ḃ̇Ο̇Ι̇. ε̇Ι̇Ε̇ Ḃ̇Ο̇Α̇Ο̇ Α̇Υ̇Ο̇Θ̇ ÷Ḃ̇ Ο̇Ο̇Α̇ Ḃ̇Ο̇Ι̇ Ο̇Α̇Α̇ΙΑ̇Ι̇Ε̇?
δ̇Ι̇Ο̇Α̇Ι̇Ο̇Ε̇Ο̇Ο̇Α̇, Δ̇Ο̇Ι̇Ρ̇Ε̇Ο̇Α̇Ε̇Ο̇Α̇ Ḃ̇Ο̇Ι̇Ο̇ Ε̇Ι̇Ο̇Ι̇Ο̇Ε̇Ε̇ Α̇Ι̇Ε̇Ο̇Ι̇Α̇Ι̇Ο̇, Ρ̇Ο̇Ι̇Α̇Υ̇ Ο̇Υ̇Ι̇Α̇Ο̇Θ̇, Ε̇Α̇Ε̇ Ο̇Α̇Α̇ΙΑ̇Ο̇Θ̇ Ο̇Α̇Ε̇,
Ρ̇Ο̇Ι̇Α̇Υ̇ ÷Α̇Υ̇ Ε̇Ι̇Α̇ ×Ε̇Ι̇Α̇Ρ̇Ε̇Ι̇Ε̇ × MPlayer. Ι̇Α̇Α̇Ε̇ Ε̇Υ̇ Ο̇Α̇Ο̇Ο̇Υ̇Ι̇Ε̇Ε̇ mplayer-dev-eng Δ̇Ι̇Ι̇Ç̇Ο̇Θ̇ ÷Α̇Ο̇, Α̇Ο̇Ι̇Ε̇ Ḃ̇
÷Α̇Ο̇ Α̇Ο̇Ο̇Θ̇ ×Ḃ̇Δ̇Ο̇Ι̇Ο̇Υ̇.

B.2. ε̇Α̇Ε̇ Ο̇Ḃ̇ΙΑ̇Υ̇Ε̇Ο̇Θ̇ Ι̇Α̇ Ι̇Υ̇Ε̇Α̇Ε̇Α̇

δ̇Ο̇Α̇Ο̇Α̇Α̇ ×Ο̇Α̇Ç̇Ι̇, Δ̇Ι̇Ο̇Α̇Ι̇Ο̇Ε̇Ο̇Ο̇Α̇, Δ̇Ι̇Δ̇Ο̇Ι̇Α̇Ο̇Ε̇Ο̇Α̇ Ε̇Ο̇Δ̇Ḃ̇Θ̇Υ̇Ι̇×Α̇Ο̇Θ̇ Ḃ̇×Α̇Ε̇Υ̇Ο̇Α̇ CVS ×Α̇Ο̇Ο̇Ε̇Α̇
MPlayer'Α̇, Δ̇Ι̇Ο̇Ε̇Ḃ̇Θ̇Ε̇Ο̇ ÷Α̇Υ̇Α̇ Ι̇Υ̇Ε̇Α̇Ε̇Α̇ Ο̇Ο̇Α̇ Ḃ̇Ο̇Α̇Ο̇ Α̇Υ̇Ο̇Θ̇ Ε̇Ο̇Δ̇Ο̇Α̇×Ι̇Α̇ΙΑ̇. δ̇Α̇Υ̇Ο̇Α̇Α̇Ι̇Ο̇Ε̇Α̇
Δ̇Ο̇Ι̇Α̇×Ε̇Ç̇Α̇Α̇Ο̇Ν̇ Ι̇Ρ̇Α̇Ι̇Θ̇ Α̇Υ̇Ο̇Ο̇Ο̇Ι̇, Α̇Π̇Θ̇Υ̇Ε̇Ι̇Ο̇×Ḃ̇ Δ̇Ο̇Ι̇Α̇ΙΑ̇Ι̇ × Ι̇Λ̇Ε̇Α̇Ε̇Α̇Ι̇Θ̇Ι̇Υ̇Ε̇ Ο̇Α̇Ι̇Ε̇Υ̇Α̇Ε̇
Ο̇Π̇ΙΑ̇Υ̇Α̇Α̇Ο̇Ο̇Ν̇ × Ο̇Α̇Ρ̇Α̇Ι̇Ε̇Α̇ Α̇ΙΑ̇Ε̇, Ε̇ Α̇Α̇Ο̇Α̇ Ρ̇Α̇Ο̇Ι̇×, Δ̇Ι̇Ο̇ΙΑ̇ Ο̇Α̇Ι̇Ε̇Υ̇Α̇, Δ̇Ι̇Υ̇Ο̇Ι̇Ι̇Ο̇, Δ̇Ι̇Ο̇Α̇Ι̇Ο̇Ε̇Ο̇Ο̇Α̇, Α̇Ι̇Ν̇
Ο̇Π̇ΙΑ̇Υ̇Α̇Ι̇Ε̇Ε̇ Ι̇Α̇ Ι̇Υ̇Ε̇Α̇Ε̇Α̇Ε̇ Ε̇Ο̇Δ̇Ḃ̇Θ̇Υ̇Ο̇Ε̇Ο̇Α̇ **Ο̇Ḃ̇Θ̇Ε̇Ι̇ CVS**. Ḃ̇Ο̇Ι̇ ×Ε̇Ι̇Α̇Ρ̇Α̇Α̇Ο̇ Ε̇ Α̇Ε̇ΙΑ̇Ο̇Ι̇Υ̇Α̇ Δ̇Α̇Ε̇Α̇Ο̇Υ̇
MPlayer'Α̇. ÷Ḃ̇ Ι̇Α̇Ε̇Α̇£̇Ο̇Α̇ Ε̇Ι̇Ο̇Ο̇Δ̇Ο̇Ε̇Α̇Ε̇Ε̇ Δ̇Ι̇ CVS ×Ι̇Ε̇Υ̇Ο̇ Ḃ̇Ο̇Ι̇Ε̇ Ο̇Ο̇Ο̇Α̇Ι̇Ε̇Α̇Υ̇ Ε̇Ι̇Ε̇ × README. α̇Ο̇Ι̇Ε̇ Ḃ̇Ο̇Ι̇
ΙΑ̇ Δ̇Ι̇Ι̇Ç̇Ḃ̇, Δ̇Ι̇Ο̇Α̇Ι̇Ο̇Ε̇Ο̇Ο̇Α̇, Ι̇Α̇Ο̇Α̇Ο̇Ε̇Ο̇Α̇Ο̇Θ̇ Ε̇ Ο̇Δ̇Ε̇Ο̇Ε̇Ο̇ Ε̇Υ̇×Α̇Ο̇Ο̇Ι̇Υ̇Ε̇ Ι̇Υ̇Ε̇Α̇Ι̇Ε̇ Ε̇ Ι̇Ο̇Ο̇Α̇Ι̇Θ̇Ḃ̇Ε̇
Α̇Ι̇Ε̇Ο̇Ι̇Α̇Ι̇Ο̇Α̇Α̇Ε̇Ε̇. α̇Ο̇Ι̇Ε̇ ÷Α̇Υ̇Α̇ Δ̇Ο̇Ι̇Α̇ΙΑ̇ΙΑ̇ Ι̇Α̇ Ε̇Υ̇×Α̇Ο̇Ο̇ΙΑ̇ Ε̇Ι̇Ε̇ Ι̇Α̇ Ο̇Α̇Υ̇Α̇Α̇Ο̇Ο̇Ν̇ Ο̇ Δ̇Ι̇Ι̇Ç̇Υ̇Θ̇Α̇ Ι̇Α̇Υ̇Ε̇Ε̇
Ε̇Ι̇Ο̇Ο̇Δ̇Ο̇Ε̇Α̇Ε̇Ε̇, Δ̇Ι̇Ο̇Α̇Ι̇Ο̇Ε̇Ο̇Ο̇Α̇, Ο̇Π̇ΙΑ̇Υ̇Ε̇Ο̇Α̇ Ι̇Α̇ Ι̇Υ̇Ε̇Α̇Ε̇Α̇.

δ̇Ι̇Ο̇Α̇Ι̇Ο̇Ε̇Ο̇Ο̇Α̇, Ι̇Α̇ Δ̇Ο̇Ε̇Ο̇Υ̇ΙΑ̇Ε̇Ο̇Α̇ Ο̇Π̇ΙΑ̇Υ̇Α̇Ι̇Ε̇Ν̇ Ι̇Α̇ Ι̇Υ̇Ε̇Α̇Ε̇Α̇Ε̇ Ι̇Ε̇Ρ̇Ḃ̇ Ε̇Α̇Ε̇Ι̇Ι̇Ο̇-Ι̇Ε̇Α̇Ο̇Α̇Θ̇
Ο̇Α̇Υ̇Ο̇Α̇Α̇Ι̇Ο̇Ρ̇Ε̇Ε̇Ο̇. Ḃ̇Ο̇Ι̇ Ε̇Ḃ̇ΙΑ̇ΙΑ̇ΙΑ̇Ν̇ Ο̇Α̇Α̇Ι̇Ο̇Α̇, Ε̇, Δ̇Ι̇Υ̇Ο̇Ι̇Ι̇Ο̇, ÷Α̇Υ̇Ε̇Ι̇ Ο̇Π̇ΙΑ̇Υ̇Α̇Ι̇Ε̇Α̇Ι̇ Ḃ̇Ι̇Ç̇Ο̇Ο̇
Υ̇Α̇Ε̇Ι̇Ο̇Α̇Δ̇Α̇Ο̇Ι̇×Α̇Ο̇Θ̇Ο̇Ν̇ Ι̇Α̇Ο̇Ε̇Ḃ̇Θ̇Ε̇Ι̇ Ρ̇Α̇Ḃ̇×Α̇Ε̇. α̇Ι̇×Ḃ̇Ḃ̇Ḃ̇ Ρ̇Α̇Ο̇Ο̇Ι̇ Α̇Υ̇×Α̇Α̇Ο̇, Ρ̇Ο̇Ι̇ Δ̇Ḃ̇Θ̇Υ̇Ι̇×Α̇Ο̇Α̇Ι̇Ε̇ Ο̇Ο̇Α̇
Ο̇Ο̇Α̇Ι̇Ε̇Ε̇×Α̇Ι̇Ε̇Ο̇Θ̇ Ο̇ ÷Α̇Υ̇Α̇Ε̇ Δ̇Ο̇Ι̇Α̇ΙΑ̇Ḃ̇ Ε̇ Υ̇Ι̇Α̇Α̇Ο̇, Ε̇Α̇Ε̇ Ι̇Α̇Ι̇Ε̇Ο̇Ε̇ Δ̇Ο̇Ι̇Α̇ΙΑ̇Ι̇Ο̇, Α̇Α̇Ο̇Α̇ Α̇Ο̇Ι̇Ε̇ Ḃ̇Ο̇Ι̇
Ι̇Υ̇Ε̇Α̇Ε̇Α̇ × Ε̇Ι̇Α̇Α̇ MPlayer'Α̇.

δ̇Ι̇Ο̇Α̇Ι̇Ο̇Ε̇Ο̇Ο̇Α̇, Ḃ̇Ε̇Υ̇Ε̇Ο̇Α̇ ÷Α̇Υ̇Ο̇ Δ̇Ο̇Ι̇Α̇ΙΑ̇Ι̇Ο̇ Ι̇Α̇Ο̇Ο̇Ḃ̇Θ̇Ε̇Ι̇ Δ̇ΙΑ̇Δ̇ΙΑ̇Ḃ̇, Ι̇Α̇Ο̇Ε̇Ḃ̇Θ̇Ε̇Ι̇ ×Ḃ̇Υ̇Ḃ̇Ḃ̇. δ̇Ο̇Ι̇×Α̇Α̇Ε̇Ο̇Α̇
ΙΑ̇ΙΑ̇Ι̇Θ̇Ε̇ΙΑ̇ Ο̇Α̇Ο̇Ο̇ΙΑ̇Α̇Ι̇×Α̇Ι̇Ε̇Α̇, Ρ̇Ο̇Ι̇Α̇Υ̇ ×Ḃ̇Ν̇Ο̇Ι̇Ε̇Ο̇Θ̇ Ο̇Ο̇Ḃ̇×Ε̇Ν̇, Δ̇Ο̇Ε̇ Ε̇Ι̇Ο̇Ι̇Ο̇Υ̇Ε̇ ×Ḃ̇Υ̇Ḃ̇Ε̇Α̇Α̇Ο̇ Δ̇Ο̇Ι̇Α̇ΙΑ̇ΙΑ̇.
δ̇Ο̇Ḃ̇×Ḃ̇Ν̇Α̇Ο̇Ο̇Ν̇ Ι̇Ε̇ Ι̇Υ̇Ε̇Α̇Ε̇Α̇ Ο̇Ḃ̇Θ̇Ε̇Ι̇ × Ε̇Α̇Ε̇Ε̇Ε̇-Ο̇Ι̇ Ε̇Ḃ̇Ḃ̇Ε̇Ο̇Α̇Ο̇Ι̇Υ̇Ε̇ Ο̇Ε̇Ο̇Ο̇Α̇Α̇Ε̇Ν̇Ε̇? Ḃ̇ΙΑ̇ Ο̇Δ̇Α̇Α̇Ε̇Ρ̇Ε̇Β̇ΙΑ̇
Ο̇Ḃ̇Θ̇Ε̇Ι̇ Α̇Ι̇Ν̇ Ε̇Α̇Ε̇Ε̇Ε̇-Ο̇Ι̇ Ρ̇Α̇Ε̇Ḃ̇Ḃ̇× Ε̇Ι̇Ε̇ Ο̇Ε̇Δ̇Ι̇× Ρ̇Α̇Ε̇Ḃ̇Ḃ̇×? δ̇Ο̇Ι̇Ε̇Ο̇Ε̇ΙΑ̇Ε̇Ο̇ Ι̇Ε̇ Ḃ̇Ο̇Ι̇ Ο̇ Ε̇Α̇Ε̇Ε̇Ι̇-Ο̇Ι̇ Ι̇Α̇Ι̇Ε̇Ι̇
Ε̇ΙΑ̇Α̇Ε̇Ḃ̇, Ε̇Ι̇Ε̇ Ḃ̇Ο̇Ι̇ Ι̇Α̇ Υ̇Α̇×Ε̇Ο̇Ε̇Ο̇ Ι̇Ο̇ Ε̇ΙΑ̇Α̇Ε̇Α̇? Ḃ̇Ḃ̇Ο̇Α̇ Ι̇Ε̇ ÷Ḃ̇ ×Ḃ̇Θ̇Ο̇Ι̇Ε̇Υ̇×Α̇Ο̇Ο̇Ε̇ Ḃ̇Ο̇Ι̇ Ο̇Ι̇ ×Ο̇Α̇Ι̇Ε̇
Α̇Ο̇Α̇Ε̇×Α̇Ο̇Α̇Ι̇Ε̇×Ḃ̇×Ḃ̇Α̇Α̇? Ḃ̇Α̇Ι̇ Α̇Π̇Θ̇Υ̇Α̇ ÷Ḃ̇ Δ̇Ο̇Α̇Α̇Ι̇Ο̇Ο̇Α̇×Ε̇Ο̇Α̇ Ε̇Ι̇Λ̇Ε̇Ι̇Ο̇Ι̇Α̇Α̇Ε̇Ε̇, Ο̇Α̇Ι̇×Ḃ̇Υ̇Α̇
×Α̇Ο̇Ι̇Ν̇Ο̇Ḃ̇Ḃ̇Ο̇Θ̇ Ο̇Ι̇Ç̇Ι̇, Ρ̇Ο̇Ι̇ Ι̇Υ̇ Ο̇Ḃ̇Ḃ̇Α̇Ι̇ Ε̇Ο̇Δ̇Ο̇Α̇×Ε̇Ο̇Θ̇ Ι̇Υ̇Ε̇Α̇Ε̇Ο̇. δ̇Ι̇Ο̇Α̇Ι̇Ο̇Ε̇Ο̇Ο̇Α̇, Ι̇Α̇ Υ̇Α̇Α̇Ο̇Α̇Θ̇Ο̇Α̇
×Ε̇Ι̇Α̇Ρ̇Ε̇Θ̇×Α̇Ο̇Ι̇Ο̇Α̇ Ε̇Ι̇Λ̇Ε̇Ι̇Ο̇Ι̇Α̇Α̇Ε̇Α̇, Ε̇Ι̇Ο̇Ι̇Ο̇Θ̇Α̇ Ι̇Υ̇ Δ̇Ο̇Ι̇Ο̇Ε̇Ι̇ Ḃ̇Ε̇Ο̇Α̇, Ε̇Ι̇Α̇Ρ̇Α̇ Ι̇Υ̇ Ι̇Α̇ Ο̇Ḃ̇Ḃ̇Ο̇Α̇Ι̇ Α̇Π̇Θ̇Ι̇Υ̇Ι̇
ΙΑ̇Ο̇Α̇Υ̇Ḃ̇ Α̇Ε̇Α̇Ç̇Ḃ̇Ḃ̇Ο̇Ε̇Ο̇Ι̇×Α̇Ο̇Θ̇ ÷Α̇Υ̇Ο̇ Δ̇Ο̇Ι̇Α̇ΙΑ̇Ι̇Ο̇.

÷ÁΙΕΕΠΔΠΑ, ΙΟΙΕΠΠ ΙΑΔΕΟΑΠΠΙΑ ΟΘΕΙ×ΙΑΟΟ×Ι ΔΙ ΥΑΑΑ×ΑΙΕΑ ×ΙΔΟΙΟΙ× ΙΑ ΙΑΥΑΑΙΟΟΘΔΙΥΕ
ÆΙΟΟΙΑΕ ÛΟΙ How To Ask Questions The Smart Way[εΑΕ υΑΑΑ×ΑΟΘ ÷ΙΔΟΙΟΥ. δΟΑ×ΕΙΘΙΥΕ
δΟΟΘ], ΙΑΔΕΟΑΠΠΙΑ Eric S. Raymond. άΟΟΘ Ε ΑΟΘÇΙΑ How to Report Bugs Effectively[εΑΕ
ÛÆÆΕΘΕ×ΠΙ ρΠΠΑΥΕΘΘ ΙΑ ΙΥΕΑΕΑ], ΙΑΔΕΟΑΠΠΙΑ Simon Tatham. άΟΙΕ ÷Û ΑΘΑΑΘΑ ΟΙΑΑΙ×ΑΟΘ
ÛΟΕΙ ΘΕΑΥΑΙΕΝΙ, ÷Û ΟΠΠΟΑΘΑ ΔΠΠΡΕΘΘ ΔΠΠΥΘ. Π, ΔΙΟΑΙΘΕΟΘΑ, ΘΡΘΕΘΑ, ΡΟΙ ΙÛ
ΑΙΑΟΙ×ΠΘΠΠ ΙΟΟΙΑΘΕ×ΑΑΙ ΘΑΟΟΥΙΕΕ × Ο×ΙΑΙΑΠΠΙΑ ×ΘΑΙΝ. ΙÛ ΙΡΑΙΘ ΥΑΙΝΘΟΥ Ε ΙΑ ΠΘΑΙ
ÇΑΘΑΙΘΕΘΙ×ΑΘΘ, ΡΟΙ ÷Û ΔΠΠΡΕΘΘ ΘΑÛΑΙΕΑ ΑΙΝ ÷ΑÛΑΕ ΔΘΙΑΙΑÛ (ΕΙΕ ΕΙΘΝ ΑÛ ΙΘ×ΑΘ).

B.3. εΘΑΑ ΟΠΠΑΥΑΘΘ ΙΑ ΙΥΕΑΕΑΕ

δΙΑΔΕΥΕΘΑΘΘ ΙΑ ΘΑΟΟÛΙΕΘ mplayer-users: <http://mplayerhq.hu/mailman/listinfo/mplayer-users> Ε
ΙΘΙΥΙΕΘΑ ÷ΑÛΑ ΟΠΠΑΥΑΙΕΑ ΙΑ: <mailto:mplayer-users@mplayerhq.hu>

ΠÛÛΕ ÛΟΙΕ ΘΑΟΟÛΙΕΕ ΑΙÇΙΕΕΘΕΕ. δΙΟΑΙΘΕΟΘΑ, ΟΙΑΑΘΕΘΑ ΟΘΑΙΑΑΘΘΘ Netiquette
Guidelines[δΘΕΙ×ΙΑΟΟ×Ι ΔΙ ρΑΘΑ×ΠΘ ÛΘΕΕΑΘΘ] Ε ΙΑ ΔΘΕΟÛΙΑΕΘΑ HTML ΔΠΡΘΘ ΙΕ ΙΑ
ΕΑΕΘΑ ΕÛ ΙΑÛΕΕ ΘΑΟΟÛΙΕ. ÷ΑΘ ΔΘΙΘΘΙ ΔΘΙΕÇΠΘΕΘΘΑΘ ΕΙΕ ΥΑΑΑΙΝΘ. άΟΙΕ ÷Û ΕΙΘΕΘΑ
ΘÛΙΑΘΘ, ΡΟΙ ΘΑΕΙΑ HTML ΔΠΡΘΑ Ε ΔΠΡΑΙΘ ÛΟΙ ÛΠ, ΔΘΠΡΘΕΘΑ ÛΟΙΘ ΑΙΘΘΙΑΙΘ. Π ΙΑΒΝΘΙΕΘ
÷ΑΙ ×ΘΑ ΑΑΘΑΙΕ Ε ΟΙΑΑΘΘΕΘ ΕΙΘΘΘΘΕΑΕΕ ΔΙ ΙΘΕΙΑΡΑΙΕΑ HTML. ΘΑΕΘΑ ΙΑΘΑΘΕΘΑ
×ΙΕΙΑΙΕΑ, ΡΟΙ ΙÛ ΙΑ ΑΘΑΑΙ ΕΙΑΕ×ΕΑΘΑΙΘΠΠ CC (ΙΘΟÛΙΑΘΘ ΕΙΘΕΕ) ΙΑΑΝΙ, Α ΔÛÛΘΠΘ
ΔΙΑΔΕΟΑΘΘΘΝ ΕΙΘΙÛΑΝ ΕΑΑΝ, ΑΟΙΕ ÷Û ΕΙΘΕΘΑ ΔΠΠΡΕΘΘ ΙΘ×ΑΘ.

B.4. ΡΘΠ ΟΠΠΑΥΑΘΘ

÷ΑΙ ΙΑΙΑΕΙΑΕΠΠ ×ΕΙΑΡΕΘΘ ΠÇ, ΕΠΠÆΕÇΘΘΑΑΕΑ ΕΙΕ ΔΘΕΙΑΘÛ ÆΑΕΠΠ× × ΟΠΠΑΥΑΙΕΑ ΙΑ ΙΥΕΑΕΑ.
άΟΙΕ ΡΘΠ-ΘΙ ΕÛ ÛΘΙÇΙ ΑΠΠΘÛΙΑ, ΘΙ ΙΘΡÛΑ ΥΑÇΘΘÛΕΘΘ ÛΟΙ ΙΑ ΙΑÛ FTP ΘΑΘ×ΑΘ × ΘΘΑΘΠΠ
×ΕΑΑ (ΔΘΑΑΔΠΡΘΕΘΑΠΠΠ gzip ΕΙΕ bzip2) Ε ×ΕΙΑΡΕΘΘ × ΟΠΠΑΥΑΙΕΑ ΙΑ ΙΥΕΑΕΑ ΘΠΠΘΕΙ ΔΘΘΘ Ε
ΕΙΝ ÆΑΕΙΑ. ΙΑ ΙΑÛΕΕ ΘΑΟΟÛΙΕΑΕ ΘΘΙΕΘ ΙÇΘΑΙΕΡΑΙΕΑ ΘΑÛΙΑΘΑ ΟΠΠΑΥΑΙΕΝ × 80εΑ. άΟΙΕ Θ
÷ΑΘ ΡΘΠ-ΘΙ ΑΠΠΘÛΑΑ, ΘΙ ΟΙΘΙΕΘΑ ΕΙΕ ΥΑÇΘΘÛΕΘΑ ÛΘΠ.

B.4.1. ΘΕΘΘΑΠΠΑΝ ΕΙÆΙΘΙΑΑΕΝ

- ÷ΑÛ ΑΕΘΘΘΕΑΘΘΘΕ× Linux ΕΙΕ ΙΔΑΘΑΑΕΠΠΑΝ ΘΕΘΘΑΙΑ Ε ×ΑΘΘΕΝ, ΙΑΔΘΕΙΑΘ:
 - ◆ Red Hat 7.1
 - ◆ Slackware 7.0 + ΔΑΕΑΘÛ ΘΑÛΘΑΑΙΘΕΕ ΕÛ 7.1 ...
- ×ΑΘΘΕΑ ΝΑΘΑ:

```
uname -a
```

- ×ΑΘΘΕΑ libc:

```
ls -l /lib/libc[.]*
```

- ×ΑΘΘΕΕ gcc Ε ld:

```
gcc -v  
ld -v
```

- ×ΑΘΘΕΝ binutils:

```
as --version
```

- άΟΙΕ Θ ÷ΑΘ ΔΘΙΑΙΑÛ Θ ΔΠΠÛÛΕΘΑΠΠÛΙ ΘΑΘΕΠΠ:

- ◆ δΕΔ ΙΕΙΙΙΙΙΙΙΙ ΙΑΙΑΑΟΑΑ Ε ΧΑΟΟΕΝ
- αΟΙΕ Ο ÷ΑΟ ΔΟΙΑΙΑΙΑ Ο XVIDIX:

- ◆ ÇÌÕÂÉÍÁ Ã×ÅÔÁ XÏ×:

```
xdpyinfo | grep "depth of root"
```

- αΟΙΕ ÇÌÀÐÉÔ ÔÏÏÏÏÏ GUI:

- ◆ ×ÅÒÓΕΝ GTK
- ◆ ×ÅÒÓΕΝ GLIB
- ◆ ×ÅÒÓΕΝ libpng
- ◆ ÓΕÔÔΑΑΕΝ Ó GUI, × ΕÏÏÏÏÏÏÏ ΔΟΙΝ×ΙΝΑΟΟΝ ΔΟΙΑΙΑΙΑ

B.4.2. áΔΔΑΟΑΟΩΟΑ Ε ΑΟΑΕ×ΑΟΥ

- εΙΛΕΙΟΙΑΑΕΝ Ï CPU (ÛÏÏ ÓΟΑΑÏÏΑΑÔ ÔÏÏÏÏÏ ΔÏÄ Linux):

```
cat /proc/cpuinfo
```

- δΟΙΕÛ×ΙΑΕÔΑÏØ Ε ÏÏΑÏØ ×ΕΑΑÏ ΕΑΟÔÛ, ΙΑΔΟΕΙΑÔ:

- ◆ ASUS V3800U ÐΕΔ: nVidia TNT2 Ultra pro 32MB SDRAM
- ◆ Matrox G400 DH 32MB SGRAM

- δΕΔ ΑΟΑΕ×ΑΟΑ Ε ΧΑΟΟΕΝ, ΙΑΔΟΕΙΑÔ:

- ◆ ÷ÓÔÏΑÏÏÛΕ × X'Û
- ◆ nVidia 0.9.623
- ◆ Utah–GLX CVS 2001–02–17
- ◆ DRI ΕÛ X 4.0.3

- δΕΔ Ε ΑΟΑΕ×ΑΟ Û×ÏÏÏ×ÏÏ ΕΑΟÔÛ, ΙΑΔΟΕΙΑÔ:

- ◆ Creative SBLive! Gold Ó OSS ΑΟΑΕ×ΑΟΑΙΕ ÏÏ oss.creative.com
- ◆ Creative SB16 Ó OSS ΑΟΑΕ×ΑΟΑΙΕ ΕÛ ΝΑΟΑ
- ◆ GUS PnP Ó ALSA OSS ÛÏÏÏÏÏÏÏ

- αΟΙΕ ÷Û ÓÏÏÏ×ΑΑÔΑÓØ, ΙΑ Linux ÓΕÓÔΑΙΑΕ ×ΕΙΑÐΕÔΑ ×Û×ÏÄ lspci –vv.

B.4.3. δΟΙΑΙΑÏÛ ΕÏÏÆΕÇÕÒΑΑΕΕ

αΟΙΕ ÷Û ΔÏÏÏÐΑΑÔΑ ÏÛΕΑΕÏ ΔΟΕ ×ÛΔÏÏÏΑÏΕΕ ./configure, ΕÏΕ ΑΟΙΕ Α×ÔÏÏΔΟΑΑΑΙΑÏΕΑ ÐΑÇÏ–ÔÏ ÏΑ ΟΟΑΑΑÔÛ×ΑΑÔ, ΔΟÏÐΕÔΑΕÔΑ configure.log. δΑÏ ÷Û ÏÏΑÔΑ ΙΑΙΑÔÏÏÏÏÏÏ ÏÔ×ΑÔ, ΙΑΔΟΕΙΑÔ ΑΟΙΕ Ô ÷ΑΟ ΟÏÏÏ ÏΑÓÏÏÏÏÏ ×ΑΟÓΕΕ ÏΑÏÏ ΑΕΑÏΕÏÔΑΕΕ, ΕÏΕ ΑΟΙΕ ÷Û ÛΑΑÛÏΕ ÔÔÔΑÏÏ×ΕÔØ ΔΑΕΑÔ ΟΑÛÔΑΑÏÏÏÏ (ÔÏÔ ÓΑÏÛÏ, Ó ÔÏÆÆΕΕÏÏÏ –dev). αΟΙΕ ÷Û ΑΟΙΑΑÔΑ, ÐÏÏ ÛÏÏ ÏÛΕΑΕΑ, ×ΕΙΑÐΕÔΑ × ÓÏÏÏÏÏÏÏ ÆΑÏÏ configure.log.

B.4.4. δΟΙΑΙΑÏÛ ΕÏÏÐΕÏÏÏΕΕ

δÏÔΑÏÏÏÏÔΑ, ×ΕΙΑÐΕÔΑ ÛÔΕ ÆΑÏÏÛ:

- config.h
- config.mak

αΟΙΕ ΕÏÏÐΕÏÏÏΕΝ ÏÏΑΑΟΟΝ × ÏΑÏÏ ΕÛ ÛÔΕΕ ΕΑΟΑÏÇÏ×, ×ΕΙΑÐΕÔΑ ÛÔΕ ÆΑÏÏÛ:

É ×ÏΘΔÏËÚ×ÄÄËÖÀ ÈÒÁÛ. ëÄË ÕÏØËÏ ÷Û ÜÏÏ ÓÄÄÏÄÄÖÀ, gdb ×ÄÏËÖ ÷ÁÓ È ΔÏËÇÏÄÛÄÏËÄ ÈÏÏÄÏÏË ÕÏÏËË, ÇÄÄ ÷Û ÄÏÏÏÛ ÏÄÄÏÄÏ

```
bt
disass $pc-32 $pc+32
info all-registers
```

B.4.6.2. ëÄË ÉÚ×ÏÄÐØ ÐÏÏÄÛÏÄ ÈÏËÏÏÄÄÈÄ ÉÚ ÄÄÏÄÄ [core dump]

ÏÛÄÄËËÄ ÕÏÄÄÏÄÛËË ÈÏÏÄÏÏÛËË ÄÄËË:

```
bt
disass $pc-32 $pc+32
info all-registers
```

ðÄÄÄÏÏ ðÏÏÏÏ ×ÛÐÏÏËËÄ ÕÄËËÄ ÈÏÏÄÏÏ:

```
gdb mplayer --core=core -batch --command=ÈÏÏÄÏÏÛËË-ÄÄËË > mplayer.bug
```

B.5. ñ ÛÏÄÄ, ÐÏÏ Ñ ÄÄÏÄÄ...

äÏËË ÷Û ÕÏÛÄÄÏËË ðÏÄ×ËÏØÏÄ ÕÏÄÛÛÄÏËÄ ÏÄ ÏÛËÄËÄ ÕÄË, ÈÄË ÕÄÏÏËÄÛÄÏÏ ×ÛÛÄ, È ÷Û Õ×ÄÏÄÛ, ÐÏÏ ÜÏÏ ÏÛËÄËÄ × MPlayer'Ä, Ä ÏÄ ÏÛËÄËÄ ÈÏÏËÏÏÏÏÄ ÈËË ðÏÏËË ÄÄËË, ÷Û ÕÏÄ ðÏÏËË ×ÏÄ ÄÏËÏÏÏÏÏÄËÄ È ÏÄ ÏÏÄÏÄ ÏÄËËË ÕÄÛÄÏËÄ, ×ÄÛË Û×ÏËÏ×ÛÄ ÄÏÄË×ÄÏÄ × ðÏÏÄËÄ, ÕÏÇÄÄ ÷Û ÏÏÄÏÄ ðÏÄðËÏÄÏÏÏÏ ÏÄ ÕÄÏÏÛËËÏ mplayer-advusers È ðÏËÏÏÄÏÏ ÕÏÄÛÛÄÏËÄ ÏÄ ÏÛËÄËÄ ÕÏÄÄ, ÐÏÏÄÛ ðÏÏÏÏËË ÄÏÏÄ ÕÏÏÛË È ÄÛÏÏÏÛËË ÏÏ×ÄÏ.

ÏÄÏÄËËËÄ ×ÏËÏËËÄ, ÐÏÏ ÄÏËË ÷Û ÄÏÄÄÏÄ ÏÏÏÛÏÄÏÏ ÕÏÄÄ ×ÏÏÏÏÛËË ÏÏ×ËÏËË× ÈËË ×ÏÏÏÏÛ, ÏÄ ÈÏÏÏÛÄ ÏÏ×ÄÏÛ ðÏËÏÏÏÏÏ×ÏÄÏ × ÄÏËÏÏÏÏÏÄËË, ÕÏ ÷ÁÓ ðÏËËÏÏËËËËËÈÈ ÈËË ÏÄÏÇÄÄÏ ×ÏÄÏÏÏ ÕÏÇÏ, ÐÏÏÄÛ ÏÏ×ÄËËË. ðÏÏÏÏÏ ÏÄ ÛÄ×ÄÏ×ÄËË ÏÄÏ ÏÄÏÏÄÏË È ðÏÄËËË×ÄËËËËË ÏÄ -advusers ÕÏÏËË, ÄÏËË ÷Û ÄÄËËË×ËËËËËË ÛÏÄÄÏÄ, ÐÏÏ ÷Û ÄÄÏÄÄÏÄ, È ÏÛÛÄÄÏÄ ÕÄÄÑ ðÏÏÄ×ËÏÏÛËË ðÏÏÛË×ÄÏÄÏÄ ÈËË ÕÄÛÏÄÄÏÏËËËË MPlayer'Ä. äÏËË ðÏÄËËÄËËÄ ðÏÄ ÜÏÏÏ ÈÏËËËËËË, ÷ÄÏ ÏÄ ÕÏÏÏÄ×ËË ÕÏÏÄÄ ðÏÏÏÏË, ÈÄË ÏÄÄÏ ðÏÄËËËËËËËË...

ðÏËÏÏÄÏËÄ Ç. éÚ×ÄÏÏÛÄ ðÏÏÄÏÄÛ

ÏÏÄÄÏÏÄËÄ

- C.1. ÏÏÄÛÄ ÕËËËÄÏÏ/CPU-ÏÏÄÄËËËËËÛÄ ÏÛËÄËË/ðÏÏÄÏÄÛ
- C.2. ðÄÛËËËËË ðÏÏÄÏÄÛ A-V ÕËËËËËËËË È ðÏÏËÄ ÄÏÄËË ðÏÏÄÏÄÛ
 - C.2.1. ÏÄÛÄ ÛÄÄÄÏÏËÄ ÄÏÄËË ÈËË ðÏÄÏÛ×ËËËËË Û×ÏË (ÏÏÛÄÏÏ×ÏÄÏ ÕÏ ×ÏÄË ÈËË ÏÏËËË ÄÄËÄËË)
 - C.2.2. ðÏÄËË ÛÄÄÄÏÏËÄ/ÄÄÏËËËËËËËË, ÏÏÄÄËËËËËÄÑ ÄÏÑ ÏÄÏÇÏ ÈËË ÏÄËËËËËËË ÄÄËËË×
 - C.2.3. ÷ÏÄÛÄ ÏÄÏ Û×ÏËÄ
 - C.2.4. ÷ÏÄÛÄ ÏÄ ÈÛÏÄÏÄÏÄËË (ÏÏÏËË ðÏÏÏÏÏÄ ÕÄÏÏÄ/ÛÄËËË ÏËÏÏ)
 - C.2.5. ðÏÏÄÏÄÛ ×Û×ÏÄÄ ×ËÄÄÏ

C.1. ΠΙΣΤΩΤΑ ΟΕΟΟΑΙΙ/CPU-ΟΒΑΑΕΑΕΕΡΠΥΑ ΥΕΑΕΕ/ΘΟΙΑΙΑΥ

- SIGILL (ΟΕÇΙΑΙ 4) ΙΑ P3, ΕΟΘΠΠΘΥΟÑ 2.2.x ΝΑΟΑ:

ΘΟΙΑΙΑΙΑ: × ΝΑΟΑΕ 2.2.x ΙΑΟ ΑΙΟΟΑΟΠΠΠΕ(ΟΑΑΙΟΑΑΥΑΕ) ΔΙΑΑΑΟΟΕΕ SSE

ΘΑΥΑΙΕΑ: ΙΑΠΠ×ΕΟΑ ΝΑΟΙ ΑΙ ×ΑΟΟΕΕ 2.4.x

ΙΑΕΙΑ: ./configure --disable-sse

- ΘΙ×ΟΑΙΑΟΟΙΥΕ SIGILL (ΟΕÇΙΑΙ 4):

ΘΟΙΑΙΑΙΑ: ÷Û ΟΕΠΠΕΙΕΟΙ×ΑΙΕ Ε ΥΑΘΟΟΟΕΙΕ MPlayer ΙΑ ΟΑΥΙΥΕ ΙΑΥΕΙΑΕ (ΙΑΘΟΕΙΑΟ ΟΕΠΠΕΙΕΟΙ×ΑΙΕ ΙΑ P3 Ε ΥΑΘΟΟΕΑΑΟΑ ΙΑ Celeron

ΘΑΥΑΙΕΑ: ΟΕΠΠΕΙΕΟΘΕ MPlayer ΙΑ ΟΠΕ ΟΑ ΙΑΥΕΙΑ, ÇΑΑ ÷Û ΑΘΑΑΟΑ ΑÇΙ ΕΟΘΠΠΟΥΙ×ΑΘΘ!

ΙΑΕΙΑ: ./configure --disable-sse Ε Ο. Δ. ΠΔΑΕΕ

- "Internal buffer inconsistency" ×Ι ×ΟΑΙΝ ×ÛΠΠΠΑΙΕÑ MEncoder'Α:

ΘΟΙΑΙΑΙΑ: ΕΥ×ΑΟΟΙΑÑ ΘΟΙΑΙΑΙΑ, ΕΙÇΑΑ lame < 3.90 ΕΠΠΕΙΕΟΙ×ΑΙΟÑ, ΕΟΘΠΠΘΥΟÑ gcc 2.96 ΕΙΕ 3.x.

ΘΑΥΑΙΕΑ: ΕΟΘΠΠΘΥΟΘΕΟΑ lame TM3.90.

ΙΑΕΙΑ: ΟΕΠΠΕΙΕΟΘΕΟΑ lame, ΕΟΘΠΠΘΥΟÑ gcc 2.95.x, Ε ΘΑΑΙΕΟΑ ×ΟΑ ΘΘΑ ΟΟΟΑΠΠ×ΙΑΠΥΑ ΔΑΕΑΟΥ lame, ΠΕ ΠÇΙΕ ΑÛΘΘ ΟΕΠΠΕΙΕΟΙ×ΑΙÛ, ΕΟΘΠΠΘΥΟÑ gcc 2.96.

- ΕΟΘΠΠΑΠΠΥΕ MP2/MP3 Û×ΘΕ ΙΑ PPC:

ΘΟΙΑΙΑΙΑ: ΕΥ×ΑΟΟΙΑÑ ΥΕΑΕΑ ΕΠΠΕΙΝΑΕΕ × GCC ΙΑ PPC ΔΙΑΘΕΠΟΙΑΕ, ΔΠΕΑ ΙΑΘ ΟΑΥΑΙΕÑ.

ΙΑΕΙΑ: ΕΟΘΠΠΘΥΟΘΕΟΑ FFmpeg'Ι×ΟΕΕΕ (ΙΑΑΙΑΠΠΥΕ) MP1/MP2/MP3 ΑΑΕΙΑΑΟ (-ac f ffmpeg)

- sig11 × libmpeg2, ΘΘΕ ΙΑΟÛΟΑΑΕΟΙ×ΑΙΕΕ+ΕΠΠΑΕΟΙ×ΑΙΕΕ:

ΘΟΙΑΙΑΙΑ: ΕΥ×ΑΟΟΙΑÑ ΥΕΑΕΑ × MMX Θ GCC 2.95.2, ΙΑΠΠ×ΕΟΑ ΑΙ 2.95.3.

C.2. ΘΑΥΠΕΡΠΥΑ ΘΟΙΑΙΑΥ A-V ΟΕΠΠΕΠΕΥΑΑΕΕ Ε ΘΟΠΡΕΑ ΑΘΑΕΠ ΘΟΙΑΙΑΥ

C.2.1. ΙΑΥΑÑ ΥΑΑΑΟΘΕΑ ΑΘΑΕΠ ΕΙΕ ΘΟΑΟΥ×ΕΟΘΥΕ Û×ΘΕ (ΟΘΥΑΟΘ×ΟΑΘ ΟΙ ×ΟΑΙΕ ΕΙΕ ΠΠÇΕΙΕ ΑΕΑΕΙΑΙΕ)

- ΙΑΕΑΠΠΑ ΙΑΥΑΑ: ΔΠΠΕΑ ΑΘΑΕΠ ΑΘΑΕ×ΑΘΑ! – ΔΠΘΟΙΑΘΕΟΑ ΕΟΘΠΠΟΥΙ×ΑΘΘ ΑΘΘÇΠΕ ΑΘΑΕ×ΑΘ, ΔΠΘΟΙΑΘΕΟΑ ALSA 0.9 OSS ΥΠΟΠΝΑΕΑ, ΕΟΘΠΠΘΥΟÑ -ao oss, ΟΑΕΘΑ ΔΠΘÛΟΑΕΘΑΘΘ -ao sdl, ΕΠΠÇΑΑ ÛΟΠ ΔΠΠÇΑΑΘ. ΑΟΠΕ ÷ΑÛ ΑΕΑΠ ΕΠΠΟΠΠ

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ΔΟΙΕÇΟΥ×ΑΑΟΩΝ Ó -nosound, ÷Ù ΠΠΟΑΟÀ ÀÙÔØ Õ×ΑΟΑΐÙ: ÛΟΐ ΔΟΙΑΐΑΐΑ ÷ÁÛÆ Û×ÕËΐ×ΐË ËÁÒÔÙ (ΑΟΑÊ×ΑΟΐ×).

- ΔΟΙΑΐΑΐÙ ΑΟÆËΐ ΑÕÆΑÒÁ (ÒÁΐΑÒ ÆÕÆΑÒÁ ΐΔÒΑΑΐΝΑΟΩΝ ΐΔÒÁ×ËΐØΐ)

ΐΑËËÄ: ΐΔÄËÑ MPlayer'Á -abs

- ΔΟΙΑΐΑΐΑ ΠΑΟΟΐΟΥ ΟΐΐΔΐΕΟΐ×ΑΐËÑ – ΠΠΟΑÔ ÀÙÔØ ÷ÁÛÆ ËÁÒÔÁ ΐΑ ΔΐΑΑΑÒÖË×ΑΑÔ ΠΑΟΟΐÔÔ ΟΐΐΔΐΕΟΐ×ΑΐËÑ, ΕΟΔΐΐØÚÓΑΐÔÁ × ÷ÁÛËË ÆΑËËΑË – ΔΐΔÒΐΑÔËÔÁ ΔΐΑÇËΐ ΑΐΝ ΕΐΐΑΐΑΐËÑ ΠΑΟΟΐΟΥ ΟΐΐΔΐΕΟΐ×ΑΐËÑ (-af resample=...)

- ΐΑΑΐΑΐΑÑ ΐΑÛËΐÁ (CPU ËËË VGA)

ΔΐΔÒΐΑÔËÔÁ Ó -vo null, ΑΟΐË ÔÁË ΔΟΙΕÇΟΥ×ΑΑΟΩΝ ËΐΟΐÛΐ, Ôΐ Ô ÷ΑÓ ΐΑΑΐΑΐÙΑ VGA ËÁÒÔÁ/ΑΟΑÊ×ΑÒ

ΐΑËËÄ: ËÕΔËÔÁ ΑΐΠΑÀ ÀÙÔÔÔÔÀ ËÁÒÔÔ ËËË ΠËÔÁËÔÁ ΑΐËΟΐΑΐÔΑÆΑ ΐ Ôΐΐ, ËΑË ÔÔËΐΟËÔØÑ

ÔÁËÔÁ ΔΐΔÒΐΑÔËÔÁ -framedrop

C.2.2. áÔÆËΐ ÛΑΑΑÒÖËÁ/ΑΑΟËËÔΐËΐΐËΐΐΐ, ÔΔΑÆËÆËΠΑÑ ΑΐΝ ΐΑΐΐÇΐ ËËË ΐΑΟËΐØËËË ÆΑËËΐ×

- ΔΐËËË ÆΑËË

ΐΑËËÄ:

- ◆ ΐΔÄËË -ni ËËË -nobps option (ΑΐΝ ΐΑ ΟΐËΐÙË ËËË ΔΐËËËË ÆΑËËΐ×)

Ë/ËËË

- ◆ -mc 0(ÔÔΑÔÔΑÔΩΝ ΑΐΝ ÆΑËËΐ× Ó ΔΐËËË ΔÒΐΟΐËΐΐÙΐ VBR ΑÔÆËΐ)

Ë/ËËË

- ◆ -delay ËËË ËΐΔËË +/- ×ΐ ×ÔΑΐΝ ×ÙΔΐΐΑΐËÑ ΑΐΝ ΔΐΑΟÔΟΐËËË ÛΑΑΑÒÖËË áΟΐË ΐËΠΟΐ Εΐ ÛΟΐÇΐ ΐΑ ΔΐΐÇΑΑÔ, ΔΐÔΑΐÔËÔÔÁ, ÛΑËΑΠΑËÔÁ ΐΑΐ ÆΑËË, ΐÙ ΑÇΐ ΔÒΐ×ΑÔËΐ (Ë ΕÓΔÒÁ×Ëΐ).

- ÷ÁÛÆ Û×ÕËΐ×ΑÑ ËÁÒÔÁ ΐΑ ΔΐΑΑΑÒÖË×ΑΑÔ ×ΐΟΔÒΐËÛ×ΑΑΑΐËÁ ΐΑ 48ËÇÃ

ΐΑËËÄ: ËÕΔËÔÁ ΐØΠÛÔÀ Û×ÕËΐ×ÔÀ ËÁÒÔÔ... ËËË ΔΐΔÛÔÁËÔÁÔØ ΟΐΑΐØÛËÔØ fps ΐΑ 10% (ËÓΔΐΐØÛÔËÔÁ -fps 27 ΑΐΝ 30fps ÆËΐØΐ×), ËËË ËÓΔΐΐØÛÔËÔÁ ΔΐΑÇËΐ ΑΐΝ ΕΐΐΑΐΑΐËÑ ΠΑΟΟΐΟΥ ΟΐΐΔΐΕΟΐ×ΑΐËÑ(resample)

- ΐΑΑΐΑΐΑÑ ΐΑÛËΐÁ (ΑΟΐË A-V ΐΑ ΐËΐΐ 0, Ë ΔΐΟΐΑΐΑΑ ΠËΟΐΐ × ÔÔÒËËΑ ÔÔΑÔÔÔÁ Ô×ΑΐËË×ΑΑΟΩΝ)

ΐΑËËÄ: -framedrop

C.2.2. áÔÆËΐ ÛΑΑΑÒÖËÁ/ΑΑΟËËÔΐËΐΐËΐΐΐ, ÔΔΑÆËÆËΠΑÑ ΑΐΝ ΐΑΐΐÇΐ ËËË ΐΑΟËΐØËËË ÆΑËËΐ×

C.2.3. ÷ÏÄÝÀ ÎÀÔ Ú×ÕËÁ

- ÷ÁÛ ÆÁËÌ ÉÓÐÏØÚÕÀÔ ÎÀ ÐÏÄÄÒÖË×ÁÁÏÛË ÁÕÄËÏ ËÏÄÄË

ÐÒÏÐÖËÔÁ ÄÏËÔÏÁÏÔÁÄËÀ É ÐÏÏÇËÔÁ ÎÁÏ ÄÏÄÁ×ÉÔØ ÐÏÄÄÒÖËÔ ÆÏÏ ÎÁÇÏ

C.2.4. ÷ÏÄÝÀ ÎÀÔ ÉÛÏÄÒÁÔÁËÏÑ (ÔÏØËÏ ÐÒÏÓÔÏÁ ÓÁÒÏÁ/ÚÁÏËÏÏÄ ÏËÏ)

- ÷ÁÛ ÆÁËÌ ÉÓÐÏØÚÕÀÔ ÎÀ ÐÏÄÄÒÖË×ÁÁÏÛË ×ÉÄÄÏ ËÏÄÄË

ÐÒÏÐÖËÔÁ ÄÏËÔÏÁÏÔÁÄËÀ É ÐÏÏÇËÔÁ ÎÁÏ ÄÏÄÁ×ÉÔØ ÐÏÄÄÒÖËÔ ÆÏÏ ÎÁÇÏ

- Á×ÔÏÄÔË×ÁÔËË ×ÛÄÒÁÏÛË ËÏÄÄË ÎÁ ÏÏÁÔ ÁÄËÏÄËÔÏ×ÁÔØ ÆÁËÏ, ÐÏÐÒÏÄËÔË ×ÛÄÒÁÔØ ÄÒÇÏË, ÉÓÐÏØÚÕÏ ÏÄËË –vc or –vfm
- ÷Û ÐÛÒÁÔÁÔØ ÐÒÏËÇÒÁÔØ DivX 3.x ÆÁËÏ, ÉÓÐÏØÚÕÏ OpenDivX ÄËËÏÄÒ ËÏË XviD (–vc odivx) – ÔÓÔÁÏ×ÉÔÁ Divx4Linux É ÐÄÒÄËÏÏËËËÔËÔË ÐÏÄÄÒ

C.2.5. ÐÒÏÄÏÁÏÛ ×Û×ÏÄÁ ×ÉÄÄÏ

ÐÄÒ×ÏÁ ÛÁÏÁÔÁËË: ÏÄËËË –fs –vm É –zoom – ÛÔÏ ÔÏØËÏ ÒÁËÏÏÁÏÄËËË, (ÐÏËÁ) ÎÁ ÐÏÄÄÒÖË×ÁÁÏÛÁ ×ÓÁÏË ÄÒÁË×ÁÔÁËË. ÐÄË ÐÔÏ ÛÔÏ ÎÁ ÏÛËÄËÁ ÁÔÏË ÏÏË ÎÁ ÒÁÄÏÔÁÔ. ÔÏØËÏ ÎÁËÏÔÏÛÁ ÄÒÁË×ÁÔÁ ÐÏÄÄÒÖË×ÁÔÁ ÎÁÔÛÔÁÄËÔÏ×ÁÏË, ÎÁ ÏÖËÄÄËÔÁ ÛÔÏÇÏ ÏÔ x11 ËÏË dga.

ÏÄÒÄÁËËÁ OSD/ÓÔÁÔËËÔÏ×.š

- x11 ÄÒÁË×ÁÔ: ÉÛ×ËÏËÔÁ, ÏÏ ÎÁ ÏÏÁÔ ÁÛÔØ ÓÄË×ÁÔ ÉÓÐÒÁ×ÏÁÏ
- xv ÄÒÁË×ÁÔ: ÉÓÐÏØÚÕËÔÁ ÏÄËË –double

ÚÁÏËÏÏÄ ÉÛÏÄÒÁÔÁËË ÐÒË ÉÓÐÏØÚÏ×ÁÏËË mga_vid (–vo mga / –vo xmg).š

- mga_vid ÎÄÒÁ×ËÏÏÏ ÏÐÒÄÄÏÏÏÄ ÒÁÛÏÄÒ RAM ÎÁ ÷ÁÛÄË ×ÉÄÄÏ ËÁÒÔÁ, ÐÄÒÄÛÁÇÒÔÛËÔÁ ÏÄÔÏØ, ÉÓÐÏØÚÕÏ ÏÄËË mga_ram_size

ÐÒËÏÏÄÏËÁ D. MPlayer skin format

ÓÏÄÄÒÖÁËËÁ

D.1. Overview

D.1.1. Directories

D.1.2. Image formats

D.1.3. Skin components

D.1.4. Files

D.2. The skin file

D.2.1. Main window and playbar

D.2.2. Subwindow

D.2.3. Skin menu

D.3. Fonts

D.3.1. Symbols

D.4. GUI messages

MPlayer – The Movie Player for LINUX

The purpose of this document is to describe the MPlayer skin format. The information contained here might be wrong, for

1. It is not me who wrote the GUI.
2. The GUI is not finished.
3. I might be wrong.

So do not be surprised if something does not work as described here.

Thanks to *Zoltán Ponekker* for his help.

András Mohari <mayday@freemail.hu>

D.1. Overview

It does not really have anything to do with the skin format, but you should know that MPlayer has **no** builtin skin, so **at least one skin must be installed in order to be able to use the GUI.**

D.1.1. Directories

The directories searched for skins are (in order):

1. `$(DATADIR)/Skin/`
2. `$(PREFIX)/share/mplayer/Skin/`
3. `~/ .mplayer/Skin/`

Note that the first path may vary according to the way MPlayer was configured (see the `--prefix` and `--datadir` arguments of the **configure** script).

Every skin is installed into its own directory under one of the directories listed above, for example:

```
$(PREFIX)/share/mplayer/Skin/default/
```

D.1.2. Image formats

Images must be truecolor (24 or 32 bpp) PNGs.

In the main window and in the playbar (see below) you can use images with ``transparency'`: Regions filled with the color `#FF00FF` (magenta) are fully transparent when viewed by MPlayer. This means that you can even have shaped windows if your X server has the XShape extension.

D.1.3. Skin components

Skins are quite free-format (unlike the fixed-format skins of Winamp/XMMS, for example), so it is up to you to create something great.

Currently there are three windows to be decorated: the main window, the subwindow, the playbar, and the skin menu (which can be activated by a right click).

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- The **main window** and/or the **playbar** is where you can control MPlayer. The background of the window is an image. Various items can (and must) be placed in the window: *buttons*, *potmeters* (sliders) and *labels*. For every item, you must specify its position and size.

A **button** has three states (pressed, released, disabled), thus its image must be divided into three parts vertically. See the [button](#) item for details.

A **potmeter** (mainly used for the seek bar and volume/balance control) can have any number of phases by dividing its image into different parts below each other. See [hpotmeter](#) and [potmeter](#) for details.

Labels are a bit special: The characters needed to draw them are taken from an image file, and the characters in the image are described by a [font description file](#). The latter is a plain text file which specifies the x,y position and size of each character in the image (the image file and its font description file form a font *together*). See [dlabel](#) and [slabel](#) for details.

úÁÍĀPĀĪĒĀ

All images can have full transparency as described in the section about [image formats](#). If the X server doesn't support the XShape extension, the parts marked transparent will be black. If you'd like to use this feature, the width of the main window's background image must be dividable by 8.

- The **subwindow** is where the movie appears. It can display a specified image if there is no movie loaded (it is quite boring to have an empty window :-)) **Note:** transparency is **not allowed** here.
- The **skin menu** is just a way to control MPlayer by means of menu entries. Two images are required for the menu: one of them is the base image that shows the menu in its normal state, the other one is used to display the selected entries. When you pop up the menu, the first image is shown. If you move the mouse over the menu entries, the currently selected entry is copied from the second image over the menu entry below the mouse pointer (the second image is never shown as a whole).

A menu entry is defined by its position and size in the image (see the section about the [skin menu](#) for details).

There is an important thing not mentioned yet: For buttons, potmeters and menu entries to work, MPlayer must know what to do if they are clicked. This is done by [messages](#) (events). For these items you must define the messages to be generated when they are clicked.

D.1.4. Files

You need the following files to build a skin:

- The configuration file named [skin](#) tells MPlayer how to put different parts of the skin together and what to do if you click somewhere in the window.
- The background image for the main window.
- Images for the items in the main window (including one or more font description files needed to draw labels).
- The image to be displayed in the subwindow (optional).
- Two images for the skin menu (they are needed only if you want to create a menu).

With the exception of the skin configuration file, you can name the other files whatever you want (but note that font description files must have a `.font` extension).

D.2. The skin file

As mentioned above, this is the skin configuration file. It is line oriented; comment lines start with a ';' character at the beginning of the line (only spaces and tabs are allowed before the ';').

The file is made up of sections. Each section describes the skin for an application and has the following form:

```
section = section name
.
.
.
end
```

Currently there is only one application, so you need only one section: its name is **movieplayer**.

Within this section each window is described by a block of the following form:

```
window = window name
.
.
.
end
```

where *window name* can be one of these strings:

- **main** – for the main window
- **sub** – for the subwindow
- **menu** – for the skin menu
- **playbar** – playbar

(The sub and menu blocks are optional – you do not need to create a menu or decorate the subwindow.)

Within a window block, you can define each item for the window by a line in this form:

```
item = parameter
```

Where *item* is a string that identifies the type of the GUI item, *parameter* is a numeric or textual value (or a list of values separated by commas).

Putting the above together, the whole file looks something like this:

```
section = movieplayer
  window = main
  ; ... items for main window ...
end

  window = sub
  ; ... items for subwindow ...
end

  window = menu
  ; ... items for menu ...
end

  window = playbar
```

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```
; ... items for playbar ...
end
end
```

The name of an image file must be given without leading directories – images are searched for in the `Skin` directory. You may (but you need not) specify the extension of the file. If the file does not exist, MPlayer tries to load the file `<filename>.<ext>`, where `png` and `PNG` are tried for `<ext>` (in this order). The first matching file will be used.

Finally some words about positioning. The main window and the subwindow can be placed in the different corners of the screen by giving X and Y coordinates. 0 is top or left, -1 is center and -2 is right or bottom, as shown in this illustration:

```
(0, 0)----(-1, 0)----(-2, 0)
|         |         |
(0,-1)----(-1,-1)----(-2,-1)
|         |         |
(0,-2)----(-1,-2)----(-2,-2)
```

Here is an example to make this clear. Suppose that you have an image called `main.png` that you use for the main window:

```
base = main, -1, -1
```

MPlayer tries to load `main`, `main.png`, `main.PNG` files.

D.2.1. Main window and playbar

Below is the list of entries that can be used in the `'window = main' ... 'end'`, and the `'window = playbar' ... 'end'` blocks.

```
base = image, X, Y
```

Lets you specify the background image to be used for the main window. The window will appear at the given X, Y position on the screen The window will have the size of the image.

úÁÍÅÞÁÎÉÅ

These coordinates do not currently work for the display window.

÷ÎÉÍÁÎÉÅ

Transparent regions in the image (colored `#FF00FF`) appear black on X servers without the XShape extension. The image's width must be dividable by 8.

```
button = image, X, Y, width, height, message
```

Place a button of `width * height` size at position X, Y. The specified message is generated when the button is clicked. The image given by `image` must have three parts below each other (according to the possible states of the button), like this:

```
+-----+
|  pressed  |
+-----+
```



```
| released |
+-----+
| disabled |
+-----+
```

decoration = enable/disable

Enable or disable window manager decoration of the main window. Default is **disable**.

úÁÍÅÞÁÎËÄ

This doesn't work for the display window, there is no need to.

hpotmeter = button, bwidth, bheight, phases, numphases, default, X, Y, width, height, message

vpotmeter = button, bwidth, bheight, phases, numphases, default, X, Y, width, height, message

Place a horizontal (hpotmeter) or vertical (vpotmeter) potmeter of width * height size at position X,Y. The image can be divided into different parts for the different phases of the potmeter (for example, you can have a pot for volume control that turns from green to red while its value changes from the minimum to the maximum.). hpotmeter can have a button that can be dragged horizontally. The parameters are:

- *button* – the image to be used for the button (must have three parts below each other, like in case of [button](#))
- *bwidth,bheight* – size of the button
- *phases* – the image to be used for the different phases of the hpotmeter. A special value of NULL can be used if you want no such image. The image must be divided into *numphasesparts* vertically like this:

```
+-----+
| phase #1 |
+-----+
| phase #2 |
+-----+
...
+-----+
| phase #n |
+-----+
```

- *numphases* – number of phases stored in the *phases* image
- *default* – default value for hpotmeter (in the range 0 to 100)
- *X,Y* – position for the hpotmeter
- *width,height* – width and height of the hpotmeter
- *message* – the message to be generated when the value of hpotmeter is changed

potmeter = phases, numphases, default, X, Y, width, height, message

A hpotmeter without a button. (I guess it is meant to be turned around, but it reacts to horizontal dragging only.) For the description of the parameters see [hpotmeter](#). *phases* can be NULL, but it is quite useless, since you cannot see where the potmeter is set.

font = fontfile, fontid

Defines a font. *fontfile* is the name of a font description file with a .fnt extension (do not specify the extension here). *fontid* is used to refer to the font (see [dlabel](#) and [slabel](#)). Up to 25 fonts can be defined.

slabel = X, Y, fontid, "text"

Place a static label at the position X,Y. *text* is displayed using the font identified by *fontid*. The text is just a raw string (\$x variables do not work) that must be enclosed between double quotes (but the " character cannot be part of the text). The label is displayed using the font identified by *fontid*.

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`dlabel = X, Y, length, align, fontid, "text"`

Place a dynamic label at the position `X, Y`. The label is called dynamic because its text is refreshed periodically. The maximum length of the label is given by `length` (its height is the height of a character). If the text to be displayed is wider than that, it will be scrolled, otherwise it is aligned within the specified space by the value of the `align` parameter: 0 is for right, 1 is for center, 2 is for left.

The text to be displayed is given by `text`: It must be written between double quotes (but the " character cannot be part of the text). The label is displayed using the font identified by `fontid`. You can use the following variables in the text:

Variable	Meaning
\$1	play time in <i>hh:mm:ss</i> format
\$2	play time in <i>mmmm:ss</i> format
\$3	play time in <i>hh</i> format (hours)
\$4	play time in <i>mm</i> format (minutes)
\$5	play time in <i>ss</i> format (seconds)
\$6	movie length in <i>hh:mm:ss</i> format
\$7	movie length in <i>mmmm:ss</i> format
\$8	play time in <i>h:mm:ss</i> format
\$v	volume in <i>xxx.xx%</i> format
\$V	volume in <i>xxx.xx</i> format
\$b	balance in <i>xxx.xx%</i> format
\$B	balance in <i>xxx.xx</i> format
\$\$	the \$ character
\$a	a character according to the audio type (none: n, mono: m, stereo: t)
\$t	track number (in playlist)
\$o	filename
\$f	filename in lower case
\$F	filename in upper case
\$T	a character according to the stream type (file: f, Video CD: v, DVD: d, URL: u)
\$p	the p character (if a movie is playing and the font has the p character)
\$s	the s character (if the movie is stopped and the font has the s character)
\$e	the e character (if playback is paused and the font has the e character)
\$x	movie width
\$y	movie height
\$C	name of the codec used

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The `$a`, `$T`, `$p`, `$s` and `$e` variables all return characters that should be displayed as special symbols (for example, **e** is for the pause symbol that usually looks something like ||). You should have a font for normal characters and a different font for symbols. See the section about [symbols](#) for more information.

D.2.2. Subwindow

The following entries can be used in the 'window = sub' ... 'end' block.

base = image, X, Y, width, height

The image to be displayed in the window. The window will appear at the given X, Y position on the screen (0, 0 is the top left corner). You can specify -1 for center and -2 for right (X) and bottom (Y). The window will be as large as the image. *width* and *height* denote the size of the window; they are optional (if they are missing, the window is the same size as the image).

background = R, G, B

Lets you set the background color. It is useful if the image is smaller than the window. R, G and B specifies the red, green and blue component of the color (each of them is a decimal number from 0 to 255).

D.2.3. Skin menu

As mentioned earlier, the menu is displayed using two images. Normal menu entries are taken from the image specified by the *base* item, while the currently selected entry is taken from the image specified by the *selected* item. You must define the position and size of each menu entry through the *menu* item.

The following entries can be used in the 'window = menu' ... 'end' block.

base = image

The image for normal menu entries.

selected = image

The image showing the menu with all entries selected.

menu = X, Y, width, height, message

Defines the X, Y position and the size of a menu entry in the image. *message* is the message to be generated when the mouse button is released over the entry.

D.3. Fonts

As mentioned in the section about the parts of a skin, a font is defined by an image and a description file. You can place the characters anywhere in the image, but make sure that their position and size is given in the description file exactly.

The font description file (with *.fnt* extension) can have comment lines starting with ';'. The file must have a line in the form

image = image

Where *image* is the name of the image file to be used for the font (you do not have to specify the extension).

"char" = X, Y, width, height

Here X and Y specify the position of the *char* character in the image (0, 0 is the upper left corner). *width* and *height* are the dimensions of the character in pixels.

This example defines the A, B, C characters using *font.png*.

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```
; Can be "font" instead of "font.png".
image = font.png

; Three characters are enough for demonstration purposes :-)
"A" = 0,0, 7,13
"B" = 7,0, 7,13
"C" = 14,0, 7,13
```

D.3.1. Symbols

Some characters have special meanings when returned by some of the variables used in `dlabel`. These characters are meant to be shown as symbols so that things like a nice DVD logo can be displayed instead of the character 'd' for a DVD stream.

The following table lists all the characters that can be used to display symbols (and thus require a different font).

Character	Symbol
p	play
s	stop
e	pause
n	no sound
m	mono sound
t	stereo sound
f	stream is a file
v	stream is a Video CD
d	stream is a DVD
u	stream is a URL

D.4. GUI messages

These are the messages that can be generated by buttons, potmeters and menu entries.

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Some of the messages might not work as expected (or not work at all). As you know, the GUI is under development.

Playback control:

evNext

Jump to next track in the playlist.

evPause

Forms a switch together with `evPlaySwitchToPause`. They can be used to have a common play/pause button. Both messages should be assigned to buttons displayed at the very same position in the window. This message pauses playing and the image for the `evPlaySwitchToPause` button is displayed (to indicate that the button can be pressed to continue playing).

evPlay

Start playing.

evPlaySwitchToPause

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The opposite of `evPauseSwitchToPlay`. This message starts playing and the image for the `evPauseSwitchToPlay` button is displayed (to indicate that the button can be pressed to pause playing).

evPrev

Jump to previous track in the playlist.

evStop

Stop playing.

Seeking:

evBackward10sec

Seek backward 10 seconds.

evBackward1min

Seek backward 1 minute.

evBackward10min

Seek backward 10 minutes.

evForward10sec

Seek forward 10 seconds.

evForward1min

Seek forward 1 minute.

evForward10min

Seek forward 10 minutes.

evSetMoviePosition

Seek to position (can be used by a potmeter; the relative value (0–100%) of the potmeter is used).

Video control:

evDoubleSize

Set the movie window to double size.

evFullScreen

Switch fullscreen mode on/off.

evNormalSize

Set the movie window to its normal size.

Audio control:

evDecAudioBufDelay

Decrease audio buffer delay.

evDecBalance

Decrease balance.

evDecVolume

Decrease volume.

evIncAudioBufDelay

Increase audio buffer delay.

evIncBalance

Increase balance.

evIncVolume

Increase volume.

evMute

Mute/unmute the sound.

evSetBalance

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Set balance (can be used by a potmeter; the relative value (0–100%) of the potmeter is used).

evSetVolume

Set volume (can be used by a potmeter; the relative value (0–100%) of the potmeter is used).

Miscellaneous:

evAbout

Open the about window.

evDropSubtitle

Disables the currently used subtitle.

evEqualizer

Turn the equalizer on/off.

evExit

Quit the program.

evIconify

Iconify the window.

evLoad

Load a file (by opening a file browser window, where you can choose a file).

evLoadPlay

Does the same as *evLoad*, but it automatically starts playing after the file is loaded.

evLoadSubtitle

Loads a subtitle file (with the fileselector)

evLoadAudioFile

Loads an audio file (with the fileselector)

evNone

Empty message, it has no effect (except maybe in CVS versions :-)).

evPlayList

Open/close the playlist window.

evPlayDVD

Tries to open the disc in the given DVD-ROM drive.

evPlayVCD

Tries to open the disc in the given CD-ROM drive.

evPreferences

Open the preferences window.

evSetAspect

Sets displayed image aspect.

evSetURL

Displays the URL dialog window.

evSkinBrowser

Open the skin browser window.

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E.1. GCC 2.96

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E.3. nVidia

E.4. ἄ ὀ ἱ ἄ ἄ ὀ ὀ [Joe Barr]

E.1. GCC 2.96

δΑΑΔΙΟΥΙΕΕ:§ GCC 2.95 ΟΑΟΕΕ ÜÖI IÆΕΑΕΑΙØIÛÊ GNU ÒΑΙΕÚ É ×ΑΟΟΕÑ 2.95.3
 ΙΑΕΟΕΙΑΙØII Ò×ΙΑΙΑΙΑΝ IØ IÛΕΑΙΕ × ÜÖIÊ ΟΑΟΕΕ. IÛ IÆΕIÇÄÄ IÄ ÜΑΙΑΠΑΙΕ ΔΟΙΑΙΑΙ
 ΕΙΙΔΕΙΝΑΕΕ, ΕΙΟΙΟΥΑ IÏOII ÄÛII ÄÛ IØΙΑΟΟΕ ΙΑ ØΠÊØ gcc-2.95.3. IÄΠΕΙΑΝ Ó RedHat Linux 7.0,
Red Hat ×ΕΙΑΡΕΙΕ ΟΕΙØII ΔΟΙΔΑΟΠΑΙÏOÄ CVS ×ΑΟΟΕÄ GCC É ΙΑÜ×ΑΙΕ Ä£ 2.96. RedHat
 ×ΕΙΑΡΕΙΕ ÜOØ ×ΑΟΟΕÄ × ΑΕΟΟΟΕÄØOØ×, ΔΙΟΕIΠØEØ × OI ×OÄIÑ GCC 3.0 IÄ ÄÛI ÜÄ×ΑOÛEÍ, Ä
 ΕΙ ØOÄÄI×ΑΙΟÑ ΕΙΙΔΕΙΝOÏO, ΕΙΟΙΟΥΕ ÄÛ ΕΙΟIÛI OÄÄIØÄI ΙÄ ×OÄÈ ΔIÄÄÄOØE×ÄÄIÛÈ
 ΔIÄOÆIØIÄÈ, ×ΕΙΑΡΑÑ IA64 É s390. äΕΟΟΟΕÄØÄOÏO Linux **Mandrake**, ΔIØIÄÄI×ÄI ΔOΕIÄOØ
 Red Hat É ΙÄΠÄI ΔIØOÄ×ÈÈ GCC 2.96 Ó Linux-Mandrake OÄOÈÈ 8.0.

ύΑÑ×ΙΑΙΕÑ:§ εIIÄIÄÄ GCC IØOÈÄÄÄO ×OÄ Ø×ÑUÈ Ó GCC 2.96 É ÄÄOÄ ×ÜΔOØOÈIÄ
 IÆΕΑΕΑΙØIÛÊ IØ×ÄO ΙÄ GCC 2.96. ø IÏIÇÈÈ ØÄÜOÄÄIØΠΕÈÈ OI ×OÄIØ IÉOÄ ×IÛIÆEÄIÈ
 ΔOIAIAIU Ó GCC 2.96, É IIE ØÄΕIΙΑIAI×AIÈ ÄOØÇEÄ ΕIΙΔΕIΝOÏOÛ. δOΕIÄOÛ ÜOÏ **MySQL** É
 avifile. δOÏPEÄ ΕIØÄOÄOÏIÛÄ OÓUIEÈ ÜOÏ **Linux kernel news flash I ÑÄOÄ 2.4.17** É **Voy Forum**.
 MPlayer OÄEÖÄ ΔOÄOÄOΔÄ×ÄI ØÄÜIΕΠIÛÄ ΔOIAIAIU, ΕIØIØUÄ ØÄÜOÄUÄIΕOØ ΔÄOÄEIAII
 ΙÄ ÄOØÇOÄ ×ΑOØEÄ GCC. IÄΕIØIØUÄ ΔOIAEØU ΙÄΠAIÈ IOØYÄOØ×IÑOØ IÄEIAÛ ÄIÑ
 IÄEIOÏOÛÈ ΔOIAIAI 2.96, IÏ IÛ IOEÄUÄIΕOØ ΕOΔOÄ×IÑOØ IÛEÄEÈ ÄOØÇEÈ IÄÄÄÈ, × OÏI
 ΠEÖIÄ ΔIØEÏIØEØ IÄEIOÏOÛÄ OÄEÄ IÄEIAÛ ΔOÈ×ÄIÈ ÄÛ È ΔIØÄOÄ ΔOIEÛ×IÄEÖAIØIIOÈ.

GCC 2.96 IÄ ÄIΔOØEÄÄO OÈI×II | (pipe[EÄIÄI]) × ÄOÖÄIÄIÄOÏIÛÈ ΕIÏIÄIØÄOÈÑÈ, ΔIØEÏIØEØ IÏ
 ΔIÄÄÄOØE×ÄÄO Intel'Ä×OÈÈÈ É AT&T OÈIØÄEÖEÖOÛ, Ä ÄOÈ×Ä | OÈI×II × Intel'Ä×OÈI
 ×ÄOÈÄIØÄ. δOIAIAIA × OÏI, ΠOÏ IÏ IÏΠÄ ΕÇIIOÈOØÄO ×ÄOØ ÄOÖÄIÄIÄOÏIÛÈ ÄIÏÈ. δÄΔÄOØ, ÜOÏ
 ΔOÄÄDIÏIØEÖAIØII ΕOΔOÄ×IÄII, GCC ΔÄΠÄOÄÄO ΔOÄÄOΔOÄÄIÈÄ, Ä IÄ ΔOIEΔOØEÄÄO
 ÄIÏÈ.

δÄEÖYÄÄ OÏOØIÑIÈÄ:§ Red Hat ÜÄÑ×IÑÄO, ΠOÏ GCC 2.96-85 É ÄÄIÄÄ ΕOΔOÄ×IÄIÛ.
 øEÖOÄÄÈÑ ÄÄEÖO×EÖAIØII ØIØΠUÈIÄOØ, ΕIØÑ IÛ ×OÈ ÄY£ ×EÄEÍ × ØÄOÖUÛEÄÈ OÏIÄYÄIÈÑ
 I ΔOIAIAIAÈ, ΕIØIØUÄ ΕOΠÄUÄÄO ΔIØIÄ ΔÄOÄEIAÄ IÄ ÄOØÇIÈ ΕIΙΔΕIΝOÏO. ÷ IÄÄII ØIØΠÄÄ,
 ÜOÏ ÄÏØUÄ IÄ ×ÄOÏI. δOÄÄDIÏIØEÖAIØII ÇIØI×UÈ GCC 3.x ÄÏOÏI IÄOÄÜI ØÄÜOÄUÈO ÜOÈ
 ×IΔOÏOÛ. äOIE ÷U ΕIØEÖÄ OÈIÏΔEIEØI×ÄOØ, ΕOΔIÏØUØÑ ×ÄOØEÄ 2.96, OÈÄOÈOÄ IΔÄÄÄ
 --disable-gcc-checking × configure. δIÏIÈOÄ, ΠOÏ ÷ÄI ØÄUÄOØ, É IÄ OÏIÄYÄEÖÄ IÄ
 IÛEÄEÄÈ × ÜOÏI ØIØΠÄÄ. äOIE ÷U ΔIΔOIAOÄOÄ, ÷U ÄOÄÄOÄ ΕUÇIÄIÛ ΕU IÄUÈÈ ØÄOÖUÛÈ,
 ΔIØEÏIØEØ O IÄO OÖÄ ÄÛII ÄIØOÄOÏIÏI 'OÖÄOÄIÈÈ' ΕU-ÜÄ GCC 2.96. äÄ×ÄEÖÄ IOÖÄ×EÍ ÜOØ
 OÄIØ × ΔIÈIÄ.

äOIE Ø ÷ÄO ΔOIAIAIU Ó GCC 2.96, ÷U IÏOÄOÄ OÈÄΠÄOØ 2.96-85 ΔÄEÄOÛ IÄ ftp
 OÄO×ÄOÄRedHat. ΕIÈ ΔOIOØI ΔÄOÄEÖÈ IÄ 3.0.4 ΔÄEÄOÛ, ΔOÄÄIÄÇÄÄIÛÄ IÄΠEIAN Ó
 ×ÄOØEÈ 7.2. ÷U OÄEÖÄ IÏOÄOÄ ΕOΔIÏØUÏ×ÄOØ gcc-3.2.3-11 ΔÄEÄOÛ (IÄIÆEÄEÄIØIÛÄ, IÏ
 OÄÄIØÄÄO IÏOIAIØII) É ΔIØOÄ×EÖØ ÈÈ OI×IÄOØII Ó gcc-2.96, ΕIØIØUÈ Ø ÷ÄO OØIÈO. MPlayer
 ÈÈ IÄIÄOØOÈO, É ÄOÄÄO ΕOΔIÏØUÏ×ÄOØ 3.2 ×IÄOØI 2.96. äOIE ÷U IÄ ΕIØEÖÄ ΕIÈ IÄ IÏOÄOÄ
 ΕOΔIÏØUÏ×ÄOØ ΔÄEÄOÛ, ×IO ÈÄÈ ÷U IÏOÄOÄ OÈIÏΔEIEØI×ÄOØ GCC 3 ΕU ΕOÈIÄIÇI ÈIÄÄ:

1. δIÈÄEÖÄ IÄ OÖOÄIÈÄO **gcc ÜÄOÈÄI** É OÈÄΠÄEÖÄ gcc-core-xxx.tar.gz, ÇÄÄ XXX
 ÜOÏ IÏIÄO ×ÄOØEÈ. üOÏO ÆÄEÏI ×ΕIÄΠÄÄO ΔIÏIÄÄIÛÈ ΕIΙΔΕIΝOÏO C, ΕIØIØIÇI
 ÄIØOÄOÏIÏI ÄIÑ MPlayer'Ä. äOIE ÷U OÄEÖÄ ΕIØEÖÄ C++, Java ΕIÈ ÈÄEÈÄ-IÈÄOÄØ
 ÄOØÇEÄ ÄIÏIÈEÖAIØIÛÄ ×IÛIÏIØOÈÈ GCC, ÷ÄI, ×IÛIÏIÏI, ÄÏØUÄ ΔIÄIÈÄ£Ø
 gcc-xxx.tar.gz.
2. δÄOÄÄEÖEÖÄ ÄOÈÈ×:

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- ```
tar -xvzf gcc-core-XXX.tar.gz
```
3. ÷ ΙΟΙΕΡΕΑ ΙΟ ΑΔΟΧΕΕ ΔΟΙΧΟΑΙΙ GCC ΟΙΑΕΟΑΑΟΟΝ ΙΑ × ΕΑΟΑΙΙΧΑ Ο ΕΟΕΙΑΙΥΙ ΕΙΑΙΙ, Α × ΙΟΑΑΙΘΙΙΙ ΕΑΟΑΙΙΧΑ. ΔΙΥΟΙΠΟ ×ΑΙ ΙΟΘΙΙ ΟΙΥΑΑΟΘ ΥΟΙΟ ΕΑΟΑΙΙΧ, ×ΥΘΙΙΕ×
- ```
mkdir gcc-build
```
4. δΑΔΑΟΘ ÷Υ ΠΙΟΑΟΑ ΔΟΕΟΟΘΕΟΘ Ε ΕΠΛΕΧΟΘΕΟΙ×ΑΙΕΑ gcc × ΕΑΟΑΙΙΧΑ ΑΙΝ ΟΑΙΘΕΕ, Π ÷ΑΙ ΙΟΘΙΙ ΕΠΛΕΧΟΘΕΟΙ×ΑΟΘ ΕΥ ΕΑΟΑΙΙΧΑ Ο ΕΟΕΙΑΙΥΙ ΕΙΑΙΙ:
- ```
cd gcc-build
../gcc-3.XXX/configure
```
5. ΘΕΙΘΕΙΕΘΘΕΟΑ GCC, ×ΥΘΙΙΕ× ΥΟΘ ΕΙΙΑΙΑΘ × ΕΑΟΑΙΙΧΑ ΑΙΝ ΟΑΙΘΕΕ:
- ```
make bootstrap
```
6. δΑΔΑΟΘ ÷Υ ΠΙΟΑΟΑ ΘΟΟΑΙΙ×ΕΘΘ GCC (ΕΑΕ root), ×ΥΘΙΙΕ×
- ```
make install
```

## E.2. ΔΑΟΘΟΙΟΘΟΑΙΑΙΕΑ × Α×ΙΕΡΠΙΙ(ΘΕΙΘΕΙΕΘΙ×ΑΙΙΙ) ×ΕΑΑ

ΘΟΑΟΑΑ MPlayer ΟΙΑΑΟΘΑΙ ΕΟΕΙΑΙΥΕ ΕΙΑ ΕΥ ΔΟΙΑΕΘΑ OpenDivX, ΕΙΘΙΘΥΕ ΙΑ ΟΑΥΟΑΥΑΙ ΟΑΟΘΟΙΟΘΟΑΙΑΙΕΑ × ΘΕΙΘΕΙΕΘΙ×ΑΙΙΙ ×ΕΑΑ. υΟΙΟ ΕΙΑ ΑΥΙ ΕΥΒΝΘ, ΙΑΡΕΙΑΝ Ο ×ΑΘΟΕΕ 0.90-pre1, Α ΙΟΘΑ×Α×ΥΕΕΘΝ ΑΕΕΙ divx\_vbr.c, ΙΟΙΙ×Υ×ΑΑΥΕΕΘΝ ΙΑ ΕΟΕΙΑΙΙ ΕΙΑΑ OpenDivX, ΔΙΙΑΥΕΙ ΔΙΑ GPL ΑÇΙ Α×ΟΙΘΑΙΕ, ΙΑΡΕΙΑΝ Ο ×ΑΘΟΕΕ 0.90pre9. δΑΔΑΟΘ ÷Υ ΠΙΟΑΟΑ ΟΙΥΑΑ×ΑΘΘ ΘΕΙΘΕΙΕΘΙ×ΑΙΙΥΑ ΔΑΕΑΘΥ, ΑΟΙΕ ÷ΑΙ ΥΑΕΙΡΑΘΟΝ.

αΔΟΧΕΙ ΔΟΑΔΝΟΘΟ×ΕΑΙ Ε ΔΑΟΘΟΙΟΘΟΑΙΑΙΕΑ × Α×ΙΕΡΠΙΙ ×ΕΑΑ ΑΥΙΑ ΙΘΟΕΙΕΥΑΑΕΝ ×ΟΑΙΑΙΕ ΕΙΘΕΙΝΑΕΕ ΔΙΑ ΕΠΙΘΟΑΘΙΟΑ ΑΘΕΘΑΕΘΘΘ ΔΟΙΑΑΟΘΙΟΑ. δΑΔΑΟΘ MPlayer ΔΙΑΑΑΘΘΕ×ΑΑΘ ΙΘΟΑΑΙΑΙΕΑ CPU ×Ι ×ΟΑΙΝ ×ΥΘΙΙΑΙΕΝ (ΘΕΑΘΕΘΑ **configure** ΙΔΑΕΑ --enable-runtime-cpudetection). υΟΙ ΔΙ ΘΙΠΡΑΙΕΑ ×ΥΕΙΑΡΑΙ, ΔΙΘΕΠΘΕΘ ΥΟΙ ×ΥΥ×ΑΑΘ ΙΑΑΠΘΥΘΑ ΔΙΘΑΘΑ × ΘΕΙΘΙΘΘΕ, Π ΥΑΘΙ ΘΑΔΑΘΘ ×ΙΥΠΘΙ ΟΙΥΑΑ×ΑΘΘ ΑΕΙΑΘΕΕ, ΕΙΘΙΘΥΑ ΑΘΑΘΘ ΔΑΑΙΘΑΘΘ ΙΑ ΔΑΥΤΥΕ CPU ΕΥ ΟΑΙΑΕΘΘ×Α Intel-ΟΙ×ΙΑΘΘΕΙΥΕ.

## E.3. nVidia

ΙΑΙ ΙΑ ΙΘΑ×ΕΘΘΝ ΟΙ, ΡΘΙ nVidia ΔΟΑΑΙΘΘΑ×ΙΝΑΘ ΘΠΘΕΙ Α×ΙΕΡΠΥΑ ΑΘΑΕ×ΑΘΥ (ΑΙΝ ΕΘΠΘΥΙ×ΑΙΕΝ Ο XFree86), ΕΙΘΙΘΥΑ ΡΑΘΘΙ ΑΥ×ΑΑΘ ÇΙΑΡΠΥΙΕ. Θ ΙΑΘ ΑΥΠ ΠΙÇΙ ΘΠΑΥΑΙΕΕ × mplayer-users Ι ΔΟΙΑΙΑΙΑΕ, Ο×ΝΥΑΠΥΕ Ο ΥΘΕΙΕ ΑΘΑΕ×ΑΘΑΙΕ Ο ΥΑΕΘΥΘΥΙ ΕΟΕΙΑΙΥΙ ΕΙΑΙΙ, ΕΕ ΔΠΕΕΙ ΕΑΡΑΘΘ×Π, ΙΑΘΘΑΕΙΘΠΙΘΘΑ Ε ΔΠΕΙΕ ΔΙΑΑΑΘΘΕΙΕ ΔΠΘΥΙ×ΑΘΑΙΑΕ Ε ΘΔΑΑΕΑΙΕΘΘΙ×. ΠΠÇΕΑ ΕΥ ΥΘΕΕ ΔΟΙΑΙΑΙ ΔΟΙΑΠΘΑΑΘ ΔΠΝ×ΙΝΘΘΘΝ ΟΠ×Α Ε ΟΠ×Α. ΙΥ ×ΟΑÇΑΑ Ο×ΝΥΥ×ΑΙΕΘΘ ΔΙΘΙΑ ΥΘΙÇΙ Ο nVidia, Ε ΠΠ ÇΙ×ΙΘΕΙΕ, ΡΘΙ ΥΘΕ ΙΥΕΑΕΕ ΙΑ ΟΘΥΑΘΘ×ΘΑΘ, ΡΘΙ ΙΑΘΘΑΑΕΙΘΠΙΘΘΘ ×ΥΥ×ΑΑΘΘΝ ΔΠΕΕΙΕ AGP ΡΕΔΑΙΕ, Ε ΡΘΙ ΠΠ ΙΑ ΔΠΘΡΑΙΕ ΟΠΑΥΑΙΕΕ ΙΑ ΙΥΕΑΕΑΕ × ΑΘΑΕ×ΑΘΑΕ (ΘΑΕΕΕ, ΕΑΕ ΔΘΘΘΘΙΑΝ ΙΕΙΕΝ). ΔΙΥΟΠΠΘ, ΑΟΙΕ Θ ÷ΑΘ ΔΟΙΑΙΑΙΑ Ο nVidia ΕΑΘΘΙΕ, ΙΥ ΠΠΑΙ ΘΠΘΕΙ ΔΙΘΙ×ΑΘΙ×ΑΘΘ ΙΑΠ×ΕΘΘ nVidia ΑΘΑΕ×ΑΘ, Ε/ΕΙΕ ΕΘΘΕΘΘ Π×ΘΑ ΙΑΘΑΘΕΙΘΘΕΘΑ ΔΙΑΘΘ, ΕΙΕ ΔΠΘΘΙΘΘΘ nVidia ΔΟΑΑΙΘΘΑ×ΕΘΘ ΑΘΑΕ×ΑΘ Ο ΙΘΘΘΥΘΥΙ ΕΟΕΙΑΙΥΙ ΕΙΑΙΙ. ÷ ΙΑΑΠ ΘΙΘΡΑΑ, ΑΟΙΕ ÷Υ ΕΘΠΘΥΘΘΑΘΑ Α×ΙΕΡΠΥΕ nVidia ΑΘΑΕ×ΑΘ Ε ΘΘΠΕΙΘΙΕΘΘ Ο ΔΟΙΑΙΑΙΕ, Ο×ΝΥΑΠΠΕ Ο ΑΘΑΕ×ΑΘΠ, ΥΙΑΕΘΑ, ΡΘΙ ÷Υ ΔΠΡΘΕ ΙΑ ΔΠΘΡΕΘΑ ΔΠΠΥΕ Ο ΙΑΥΑΕ ΘΘΙΘΠΥ, ΔΙΘΕΠΘΕΘ × ΥΘΠ ΘΙΘΡΑΑ Θ ΙΑΘ ΔΠΡΘΕ ΙΑΘ ×ΙΥΠΘΠΘΘΕ ÷ΑΙ ΔΠΠΡΘ.



## E.4. äÖÏ âÁÒÒ[Joe Barr]

äÖÏ âÁÒÒ ÐÏÏÐËÏ ÄÒÒÏÒÀ ÒÄÐÒÒÁÄËÀ, ÐÏÏÏ ÄÄËÓÁÏËÑ ÍÁÍÁ, ÐÁÍ ÄÄÇÏÒËÏÏÏÇÏ ÍÄÛÏÒÄ MPlayer'Á, ÍÄÛ×ÁÏÏÇÏ MPlayer: The project from hell[MPlayer: ÐÒÏÄËÒ ËÛ ÁÁÁ]. ïÏ ÒÐËÏ, ÐÏÏ MPlayer ÒÏÏÏÏ ÒÓÓÁÏ×ËÒ, É ÛÁÑ×ËÏ, ÐÏÏ ÒÁÛÒÁÄÏÐËËË ÄÛËÉ ÍÄÄÒÒÒÁÍÄÛ, Á ÄÏËÒÏÄÏÒÁÄËÑ ÍÄÐÏÏË É ÏÒËÏÒÄËÒÄÏÏË. ÷ÁÍ ÒÄÛÁÒ. ùÁÒÁÍ, Ï ÍÄÇÁÒË×Ï ÒÐÏÏÑÏÏ Arpi × 10 Linux predictions for 2002[10 ÐÒÄÄÒËÁÛÁËË Ï Linux ÍÁ 2002]. ÷ ÐÏÑ×Ë×ÛÁÏÑ ÛÁÒÁÍ ÍÄÛÏÒÄ xine, ÍÄÛ×ÁÏÏÏ A streaming media player for the rest of us[ÐÏÏËË×ÛË ÐÒËËÇÒÛ×ÁÒÄÏ ÆËÏÏÏ× ÄÏÑ ÏÓÓÁÏÏÛË] Ï ÐÒÏÏÏËÏ ÒÁÛÁÒ×ÁÒÒ ÒÐÏ. ËÏÏËÏÏ, Ï × ËÏÏÁ ÛÏË ÒÓÓÁÒË Ï ÄËÒËÒÒÁÒ ËÏÏ×ÒÄ Ò ÇÄÏÄÏÏ ÄÄÒÄËÏ[Günter Bartsch], ÐÄÒ×ÏÄÐÁÏÏÏÍ Á×ÒÏÏÏ xine, ËÏÏÏÏÄ ÐÒÄ×ÏÒËÄÏ ÐÏÄÛÏÏË×ÁÒ ÒËÒÒÁÄË:

However, he also went on to say that he was "surprised" by my column about Mplayer and thought it was unfair, reminding me that it is a free software project. "If you don't like it," Bartsch said, "you're free not to use it."

[ÍÄÍÄËÏ, Ï ÒÄËÒÁ ÒËÁÛÁÏ, ÐÏÏ Ï ÄÛÏ "ÒÄË×ËË" ÏÄË ËÏÏÏËË Ï MPlayer'Á É ÐÏÄÒÏÁÏ, ÐÏÏ ÛÏÏ ÄÛÏ ÄÛ ÍÄÐÒÄ×ËÏÏÏ ÍÄÐÏËÍÄÒ ÏÄ, ÐÏÏ ÛÏÏ ÐÒÏÄËÒ Ò×ÍÄÍÄÏÇÏ ÐÒÏÇÒÁÏÏÇÏ ÍÄÄÒÐÁÏËÑ. "äÏËÉ Ï ×ÁÍ ÍÄ ÏÒÄ×ËÒÒÑ", ÒËÁÛÁÏ äÄÒÄË, "÷Û Ò×ÍÄÍÄÛ ÍÄ ËÓÐÏÏÛÍ×ÁÒ ÆÇÏ."] ]

ðÒÒÒÒÑ ÐÏÐËÉ Ä×Á ÇÏÄÄ, × ÏËÒÑÄÒ 2003, Ï ÍÄËËÓÁÏ ÄÒÒÇÏË ÍÄÛÏÒ, ÍÄÛ×ÁÏÏÛË Almost two years later in october 2003 he wrote another review called Mplayer revisited[ÏÏ×Á MPlayer]. ÷ ÛÏËË ÒÓÓÁÒË Ï ÐÒËËË Ë ÒÄËËÍ ÛÄËÏÐÁÏËÑ:

I would have to say that there have been improvements in the number of features, in performance, and in documentation. It's still not the easiest install in the world, especially for newbies, but it's a little better than it used to be.

[Ï ÄÏÏÁÏ ÒËÁÛÁÒ, ÐÏÏ ÒÏÏÐÛÁÏËÑ ËÏÏÏËËÓ ÏÏÇËË ×ÏÛÏÏÏÓÁË, ÐÒËËÛ×ÍÄËÒÄÏÏÓË É ÄÏËÒÏÄÏÒÁÄËË. ùÏÏ ×Ë ÄÝË ÍÄ ÐÒÏÓÒÄËÛÁÑ × ÏËÒÁ ÒÓÓÁÏ×ËÁ, ÏÏÄÄÏÏ ÄÏÑ Ï×ËÏË×, Ï ÛÏÏ ÏÏÐÛÁ, ÐÁÍ ÒÏ, ÐÏÏ ÄÛÏÏ.] ]

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But more importantly, I didn't notice any recent comments about user abuse. I think I deserve some of the credit for that, even if I do say so myself. Arpi and the rest of the project team must feel that way too, because they have taken care to remember me in a special section of the documentation included in the tarball. Like I said at the start, some things haven't changed at all.

Ï, ÐÏÏ ÄÏÏÁ ×ÁÏÏ, Ñ ÍÄ ÛÁÍÄËË ÏËËÄËËË ËÏÏÁÏÒÁÒË× Ï ÐÏÏÏÛÍ×ÁÒÄÏÒËË ÒÒÇÁË. Ï ÐÏÄÇÁÄ, ÐÏÏ Ñ ÒÏÏÁ ÛÁÓÏÒË×ÁÄ ÐÏË×ÁÏ ÛÁ ÛÏÏ, ËÏÑ ÏÄ É ÐÒËËÍÄËÒÑ ÇÏ×ÏÒËÒ ÛÏÏ ÒÁÏÏ. Arpi É ÏÓÓÁÏÏÛÁ ËÛ ËÏÏÁÍÄ, ÍÄ×ÁÒÏÄ, ÒÏÒÁ ÒÄË ÒÏÍÄÒ, ÐÏËÏÏËË ÏË ×ÛÄÄËËË ÏÄ ÒÐÄÄËÁÏÏÒÁ ÒÄËÄË × ÄÏËÒÏÄÏÒÁÄËË, ×ËÏÐËÏÏË × ÁÒËË×. äÄË Ñ ÒËÁÛÁÏ ×ÍÄÐÁÍÄ, ÍÄËÏÏÏÛÁ ×ÄËË ÒÏ×ÁÍ ÍÄ ËÛÍÄËËÓ.

ÏÛ ÄÛ ÍÄ ÒÏÇÏË ÏÏÐÛÁ ÒËÏÏÏËË×ÁÒ ÏÄË ÐÏ×ÒÒ×Á ÐÏ ÏÏÏÛÁËË Ä äÖÏ âÁÒÒÒ: " ùÏÏ ×Ë ÄÝË ÍÄ ÏÏÐÛÁÑ ËÓÏÍÄÏ×ÁÒÏÒËÑ ÒÓÓÁÒÑ × ÏËÒÁ, Ï ÏÄ ÏÏÐÛÁ, ÐÁÍ ÄÛÏÏ.] [It's still not

the fairest or best researched article in the world, but it's better than it used to be." ÎÄÄÄÍÕÑ, ÐÕÏ × ÓÏÄÖÀÝËË ÒÁÚ ÌÁÛË ÌÕËÄÄÏËÑ ÓÏ×ÐÄÄÕÕ. ðÁÏ ÌÁ ÌÁÏÄÄ, ÄÏÄÇÏÄÄÕÏÕÕØ ÚÁ ÚÒÄÏÕÕØ ÌÕÏÏÕËÕÕÑ ÕÏÕËÏ Ë ÌÁÛÄÏÕ Õ×ÄÏËË×ÄÄÝÄÏÕÑ ×ÏÛÒÁÕÕ, Ë, ÏÕÄÕ ÄÛÕØ, ÕÕÏÏÄËÄ ÌÕ ÌÕ ×ÏËÏ ÆÏÄËÏ.

## ðÕËÏÕÄÏÄ Ä. ëÄË ÐÒËÓÛÏÄÕØ ÐÄÕËË

ðÏÕÄÏÕËÕÕÄ, ÓÏ. ÛÕÏÕ ÆÄËÏ.