akMPEG

COLLABORATORS

	TITLE : akMPEG		
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WRITTEN BY		November 23, 2024	

REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

Contents

Chapter 1

akMPEG

1.1   akMPEG_Documentation

```
                     akMPEG V3.02 (23.9.1999)

                          - SHAREWARE -

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                    A PerSuaSiVe SoftWorX PRODUCT.

                       Needs Kickstart V3.x
                  GUI created with StormWizard 2.0

             Actively supports PowerPC (TM) via powerUP (TM)
                 and ppc.library (or -emulation V0.6b+)

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                      The program's purpose
                        How to install it
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                          How to use it
                    Evaluation restrictions
                         Correspondence
                             Thanks
                        Version-History


                        _
                  _ //
           Only \X/ Amiga makes it possible.


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                            WWW Support Site
                    http://www.ar-kleinert.de (AWeb-II)

                   Simon Edward's Image Engineer WWW Site
                 http://www.amigaworld.com/support/imageengineer/
                 (Image Processing program produced by Simon Edwards)
```

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See registration form for details.

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1.5 purpose

 akMPEG is a program that has been designed to play MPEG animations
 on CyberGfx or compatible systems with a 68030 or greater CPU.
 Recommended is at least a 68030-50 or 68040-25 CPU.

 There are PPC versions available as well (040+PPC or 060+PPC).

 It allows several ways to replay animations:

   - in an overlay window on any kind of CyberGfx screen
     (requires cgxvideo.library and a graphics card capable of Overlay)

   – in a normal window on any kind of a 16/24 bit deep CyberGfx screen

   – on a 16/24 bit deep CyberGfx screen (auto-selection)

   – on a 8 bit deep AGA or CyberGfx screen (requires OS 3.1)

Please note, that conventional color 8 bit screen or window displays
(CyberGfx or AGA) are not supported due to speed reasons
(the window of the 24 bit player simply will stay empty).

Using the juggling-gigs.mpg animation from the Aminet CDs
(showing Urban Mueller juggling with harddisks) on a
CyberStormPPC system equipped with 68040-25 and PPC604e-180
the following results have been achieved with akMPEG 2.60:

800x600 8/16/24 Bit CyberGfx WB Screen (CV64/3D):
----
    mpOV   9.222222 FPS   040-25   (sometimes 9.576923)
 PPCmpOV   62.250000 FPS   PPC604e-180   (sometimes 83.000000)

Own screen (24/8 Bit CV64/3D)
----
    mp24sc   5.533333 FPS   040-25   (sometimes 5.659091)
 PPCmp24sc   41.500000 FPS   PPC604e-180   (sometimes 49.800000)

    mp8sc   10.375000 FPS   040-25   (constantly)
 PPCmp8sc   83.000000 FPS   PPC604e-180   (sometimes 124.500000)

Display disabled

 If display has been disabled completely,
 the V2.60 values for PPC oszilate between
 83 and 124.5 FPS (no idea, why) and the
 68k delivers ~10.4 FPS for Overlay/Gray
 and ~6 FPS for any 24 Bit display.

 So, if you have a faster/slower graphics
 card, you may estimate the max. possible FPS
 rate from these values.

Basically it shouldn't matter whether the original or the emulation
ppc.library is being used. I've been extensively using both without
problems, while the numbers above have been taken with the original.

NOTE: MPEG files with audio part are not supported – yet.

      There's MPEG-1 (ISO/IEC IS 11172-2) video bitstreams and
      MPEG-2 ISO/IEC DIS 13818-2.

      Currently the player only supports video streams without audio parts,
      thus no "MPEG system" animations.

1.6 installation

Even if you use the supplied Installer-Script, you should read the following
notes. If you do not own the standard Installer-Program you should read
them even more carefully and follow the instructions given.

Note: Should after starting the installer script appear an error message
      "Can't find program 'Installer'" (or similar), you have to enter
      the correct path to your Installer program via the Workbench menu
      Icon/Information.

If you own a KeyFile, place it to "S:", or place it elsewhere and change
the environment variable "KEYPATH" to the corresponding directory.

   Needed Workbench Resources

HardDisk-Users won't perhaps have to install any additional Workbench
Resources to their HardDisk.
Disk-Users will have to copy the following libraries into their
"LIBS:"-Directory, if these not already do residate in ROM (may depend
on the version of the operating system):

  – gadtools.library   V37+   (V39 versions recommended;
  – asl.library   V37+   it's really time to upgrade
  – utility.library   V37+   to OS 3.1)
  – workbench.library   V37+
  – icon.library   V37+

Users of OS V2.04 or greater should also install the following
libraries:

  – amigaguide.library V34+
    (please avoid using V34 – it's known to cause problems)

   Other needed Resources

You will also need to have the following libraries installed
(compare system requirements):

  – cybergraphics.library   V40+
  – cgxvideo.library   V41+   (only for Overlay-Support)

GUI has been designed with StormWizard 2.0, so this program needs
"wizard.library" V37+ (you can find a copy on Aminet under
"biz/haage/WizardLibrary.lha").

For PowerPC support (optional modules) the following libraries
are needed:

  – ppc.library   V45+ (V46+ recommended)

For asynchroneous IO the following library is needed:

  – asyncio.library   V39+

Note, that only the 68k player will make use of asyncio.library

and that normal dos.library calls will be done, if it can't be found.
With the PPC player, we try to achieve IO speedup in a different way.

1.7 updatenote

General
~~~~~~~
Although the akMPEG archive does contain most of the needed parts,
you might wish to get updates sometimes.

The newest version usually can be found on Aminet under
Aminet:gfx/show/akMPEG2.LHA

1.8 usage

The GUI is quite self-explaining:

    - PPC support can be switched on or off (when available)
    - B- and P-Frames may be skipped (default is "do not skip")
    - looping is possible (default is "only play once")
    - 16 bit overlay, 24 bit window, 24 bit screen
      and 8 bit screen (gray) display is possible

The MPEG players are external programs, that are run
asynchroneously. So it is possible to play more than
one animation at once. Or utilize PPC and 68k at the same
time. However, it is not possible to open more than one
overlay window at once (all except the first one will
show "Please wait..." until the resources again are free).

One may also start the external player tools from Shell
(PPC version is named similarily, with "PPC" as prefix).

The syntax can be requested by starting with "?" as the only
parameter. It's the same for both programs:

  akmp [-display=(ov|24|24sc|8sc)] [-nop -nob]
       [-pubscr=pubscreenname] [-loop] anim.mpg

Replay can be aborted via the player windows' close-gadget
- the gadget is present in the on-screen replay modes as well,
although it may not be visible there (click at upper left corner).

Unless "loop" is specified, the animation only will be played once.
With "loop", it will be played "endless" (well, until someone hits
the close-gadget).

Example display parameters for different replay modes:

    (PPC)akmp -display=ov anim.mpg   Overlay
    (PPC)akmp -display=24 anim.mpg   16/24 Bit Window
    (PPC)akmp -display=24sc anim.mpg   16/24 Bit Screen

```
    (PPC)akmp -display=8sc anim.mpg     8 Bit grayscale Screen (requires OS 3.1 !)
```

 Unless specified otherwise, "ov" is the default setting for display.

 That's it :-)

 Tooltypes

 DEF_DIR   default directory
 PUBSCR_OV   public screen name for overlay window display (mpOV)
 PUBSCR_24   public screen name for 16/24 bit window display (mp24)

Overlay Support

 With an installed cgxvideo.library you can make use of the overlay
 feature of any graphics cards that supports overlay (through this
 library, that is).

 The CV64/3D supports video overlay, unless the driver's MULTIMEDIAMEM
 setting has been changed, so that the 1 MB of texture/overlay memory
 is being utilized for conventional display. One overlay "window"
 at a time is possible.

 With the BVision/PPC (which perhaps also applies to the CyberVision/PPC)
 it has been reported, that adding the tooltype VLAYER=DESTRUCTIVE
 to the BVision Monitor Driver will enable overlay support through
 cgxvideo.library, at least with CyberGraphX V4.1 (the commercial release).

 It's highly recommended to make use of overlay when available, since
 it will allow for fastest and smoothest replay on your respective card.

1.9   evaluationrestr

This is the evaluation version of akMPEG, which is SHAREWARE.

  - in the unregistered version, MPEGs show vertical stripes
    when being replayed (except with the grayscale player)
  - registered version shows filename instead of Copyright

MPEGs with black vertical stripes may look "darkened"
compared to normal replay (I'd assume that's an optical effect).

1.10   history

V3.02 (23.9.99):

   - fixed some more typos in the docs

V3.01 (21.9.99):

- fixed a few typos in the docs
- added info on how to use overlay with the Permedia cards BV- and CV-PPC
  (-> Jonathan Hart)
- updated system requirements; since there's actually no FPU code
  included (everything's eleminated by the preprocessor)
  there's no reason why akMPEG shouldn't even run on a 680LC040;
  we also compiled for 68030 now, so that 030-50 users are no longer
  "excluded" here (this shouldn't affect 040 performance anyhow)

- Aminet release

V3.00 (12.9.99):

- 68k and PPC: merged the four single players into one;
               this saves quite some space and results
               in a smarter setup;
               added new "-display" option to change
               the "output device"

- fixed problem with uninitialized return code (no effect with old code)
- PPC: fixed problem with IDCMP setup (no effect with old code)
- small changes everywhere :-)

V2.75 (9.9.99):

- added "LOOP" mode
  (-> Georg Rottlaender)
- in case internal MPEG stream creation did fail, the 68k
  version would not have released its MPEG filehandle
- unreleased version

V2.70 (8.9.99):

- spaces in MPEG paths did cause trouble
  (-> Tom Lively)
- added 3 new tooltypes
  (-> Tom Lively)
- (hopefully) fixed all remaining holes in error handling;
  in two (rare) cases we just would have exit()'ed without
  closing the display window and releasing the resources
  (-> Jonathan Hart)
- 68k: now making use of asyncio.library V39+ if present.
       Normal dos.library calls will be done, otherwise.
- PPC: we try to achieve IO speedup in a different way.
- GUI now does PPC auto-detection: if a PPC is present,
  the PPC players automatically become default. This also
  initializes ppc.library and its LoadSeg patch if not already
  done during system startup.

- Aminet release

V2.60 (3.9.99):

- small optimizations
- huge speedup of overlay display (CV64/3D et al)
  (thanks to Frank Mariak for the hint)

```
    - fixed installer icon tooltype entries
      (-> Jon Peterson)


V2.54 (2.9.99):

    - PPC: better DCT code speeds up the others a little bit;
      it seems that 41.5 FPS somehow is a barrier, because
      they all end up there (perhaps the bottleneck is in the
      display hardware now again)


V2.53 (1.9.99):

    - we calculate a little bit sloppier now in the 24 bit RGB
      modes (7th digit after decimal point, actually ;) and
      this gives us a few more FPS for these two players - not
      just on the 68k but also on the PPC...
    - added speed measurement numbers, using the (not so big)
      juggling-gigs.mpg animation - if anyone likes to do comparisions,
      he should use this animation with other players; because
      of its size it also should help to minimize bandwidth
      effects (Z2/Z3 or PPC bus)


V2.52 (31.8.99):

    - small changes
    - Aminet release


V2.51 (22.8.99):

    - PPC version no longer crashes on non-MPEG files;
      68k version handles this case smarter as well now
      (-> Georg Rottländer)
    - there was some debugging code left (slowdown ?)
    - note: MPEGs with header 000001BA can't be played
      (only normal, with 000001B3). They do no longer crash,
      but unless explicite support has been implemented,
      you can't play these
      (-> initial hint by Georg Rottländer)
    - MPGUI now remembers path name (from previous selection)
      (-> Georg Rottländer)


V2.50 (21.8.99):

    - added "mp24sc" and "mp8sc" screen replayers
    - fixed a few things


V2.03 (21.8.99):

    - the two 68k programs no longer are background programs,
      however all the four programs now are run asynchroneously;
      this definitely is the better choice
    - used new MPGUI design, as created by Georg Rottländer
    - fixed registration form
      (-> Georg Rottländer)
    - "?" via CLI no longer results in an (additional) "file not found"
      (-> Georg Rottländer)
    - 24 bit PPC version now reduces 68k calls by increasing internal
```

```
   buffers; not done for the 68k version, since there wasn't any
   significant difference
 - there's now a close-gadget and the possibility to stop
   animation playing
 - reduced IDCMP overhead (useful on PPC side ?)

V2.02 (20.8.99):

 - there still was a major bug in the MPEG code (all versions);
   caused strange effects (looking like shadows, double images, ...).
   Noticed this on bigger animations the first time.
   Sorry!
 - fixed version strings
 - fixed docs

V2.01 (20.8.99):

 - the GUI had a problem with spaces in path names and
   thus wouldn't have been able to start the MP players
   fromout a RAM disk

V2.00 (20.8.99):

 - added PPC support
 - added "-pubscr=name" option
 - fixed a few minor things
 - fixed PubScr release problem
 - the external .wizard file of the GUI was missing
 - 680x0 version now requires FPU

V1.00 (19.8.99):

 - first release, not yet with PPC support
```

1.11 correspondence

```
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  |                                                      |
  |               PerSuaSiVe SoftWorX                    |
  |                                                      |
  |               Andreas R. Kleinert                   |
  |               Am Kornberg 48                        |
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  |               Germany, Europe                       |
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```

```
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```

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When reporting any bugs, please don't forget to include a detailed
description of the bug and tell me, if it is reproduceable or not.
Please also mention the version number of akMPEG you used and describe
your system configuration (Amiga model 500/.../4000T-060, Kickstart/OS,
RAM, HardDisk, special configurations).

1.12 thanks

```
Thanks go to (in order of appearance ;-)
========================================
```

  (some of these people did register, others did make
   suggestions/bug reports - how about you ?)

- Georg Rottländer   - Frank Mariak   - Don Paul
- Tom Lively   - Jon Peterson   - Jonathan Hart
- Wilhelm Bumes