SoftCinema

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COLLABORATORS

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REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

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Chapter 1

SoftCinema

1.1 SoftCinema

```
                      SoftCinema V0.12
            Copyright ©1999-2001 by Total Vision Inc.
                  http://softcinema.amiga.pl
                    e-mail:noe@webnet.pl


            Movie Player for PowerUP equiped Amigas.



                     Supported formats:

                   QuickTime Movie (QT/MOV)
                    QuickTime VR (QTVR/MOV)
                    Video for Windows (AVI)
```

```
   Introduction  What the hell is that?
     Features    Who requested fountain?
  Requirements   Do I need a pc?
  Instalation    Where I should put it?
     Usage       Keyboard not found. Press F1 to continue.
  Registration   Money, Money, Money, must be funny, In a rich man's world... ;)
    Authors      Someone is still developing for Amiga?
    History      What has been.
  QuickTimeVR    Virtual Reality at home...
```

1.2 Introduction

```
 SoftCinema is a Movie/Animation player for Amiga computer
 equiped with PowerPC processor. This program is SHAREWARE, which
 means, that you should register it to take adventage of all
 options. It is also early version. If you decide to register,
 I will get proof, that my work has sense, and I will get
 motivation for future improvements.
```

Unregistered version plays only first 30s of animation.
If you are viewing QuickTimeVR file, camera rotation is
limited.
But it is enough to see what it can do for you.

I would like to thanks all the people who has already registered
SoftCinema and who has send me bug reports, or suggestions.

1.3 Features

Program can be started from both CLI and Workbench.

Animation can be played in window opened on public screen, or
on full screen. If your graphics card offers overlay, SoftCinema
can take adventage of it.

This program uses AGA, or a graphics card under CyberGFX control.

SoftCinema can also play audio tracks, using AHI.

Actually following movie formats are supported:

QuickTime Movie (.qt, .mov))
QuickTime VR (.qtvr, .mov))
Video for Windows (.avi)

Actually supported codecs (compression formats)

QT Video
  Apple Video   (RPZA)   16 bit
  Radius Cinepak   (CVID)   8/16/24/32 bit
  CCITT H.263   (H263)   24 bit
  Intel Indeo 3.1   (IV31)   24 bit !
  Intel Indeo 3.2   (IV32)   24 bit !
  Intel Raw YUV   (YVU9)   24 bit !
  Intel Indeo 4.1   (IV41)   24 bit !
  Intel Indeo 5.0   (IV50)   24 bit !
  Microsoft Video 1 (MSVC/CRAM/WHAM) 8/16 bit
  Apple Graphics   (SMC)   8 bit
  Apple Animation   (RLE)   8/16 bit
  Photo JPEG   (JPEG)   8/24 bit
  Motion JPEG A   (MJPA)   8/24 bit
  Motion JPEG B   (MJPB)   8/24 bit
  3ivX MPEG-4   (3iv1)   24 bit !
  OpenDivX MPEG-4   (DIVX/DIV1) 24 bit

QT Audio
  Uncompressed PCM (raw)   MONO/STEREO 8/16 bit
  Uncompressed signed PCM (TWOS)   MONO/STEREO 8/16/32 bit
  IMA ADPCM 4:1   (IMA4)   MONO/STEREO 16 bit
  a-LAW   (alaw)   MONO/STEREO 16 bit
  $\mathrm{\mu}$-LAW   (ulaw)   MONO/STEREO 16 bit
  MPEG audio layer III (ms0055/.mp3) MONO/STEREO 16 bit

```
AVI Video

  Radius Cinepak    (CVID)   8/16/24/32 bit
  CCITT H.263   (H263)   24 bit
  Intel Indeo 3.1   (IV31)   24 bit !
  Intel Indeo 3.2   (IV32)   24 bit !
  Intel Raw YUV   (YVU9)   24 bit !
  Intel Indeo 4.1   (IV41)   24 bit !
  Intel Indeo 5.0   (IV50)   24 bit !
  Microsoft Video 1 (MSVC/CRAM/WHAM) 8/16 bit
  Photo JPEG    (JPEG)   8/24 bit
  Rainbow Runner JPEG (DMB1)   8/24 bit
  Motion JPEG   (MJPG)   8/24 bit
  Microsoft RLE8    (0x01000000)  8 bit
  OpenDivX MPEG-4   (DIVX/DIV1) 24 bit


AVI Audio
  WAVE PCM    (0x0001) MONO/STEREO  8/16 bit
  Microsoft ADPCM   (0x0002) MONO/STEREO  16 bit
  a-LAW     (0x0006) MONO/STEREO  16 bit
  $\mathrm{\mu}$-LAW       (0x0007) MONO/STEREO  16 bit
  DVI/IMA ADPCM   (0x0011) MONO/STEREO  16 bit
  MPEG audio layer III  (0x0055) MONO/STEREO  16 bit
```

Those are codecs, which I could test (I got movies compressed
with those codecs) If you got movie which can not be played
or is played wrong, please contact me. Please do not send me
files without confirm !!!
I know about sorenson codec, and about Divx;) codec, and I can't do nothing
about it. However, you can read more about implementing Microsoft MPEG-4
compression (also called DivX;)) (partially succesfull) by browsing tvision $\hookleftarrow$
   archives
at yahoogroups.com. You can find some pictures of working decoder at this $\hookleftarrow$
   address:
http://frogger.rules.pl/divx.html

1.4 Requirements

```
Hardware:

  Amiga with PowerPC board.
  AGA Chipset or graphics card running under CyberGFX control.
  8 MB of memory.


Software:

  AmigaOS 3.0+
  CGFX v3+ (if you got graphics card).
  PowerUP v46+ or ppc.lib emulation for WarpOS.
  (SC requires at least version 0.7b)
  AHI v4+ for sound.
  If you are using AGA, I suggest to install FBlit
```

```
    (available on aminet).
```

1.5 Instalation

```
  Simple copy all files from this archive to any place on your HD.
  You can also use included Installer script, which will do all the required job.

  If you are still using AGA chipset, I suggest you to install FBlit.
  You can find this program on any aminet site. But do not add
  SoftCinema to the list of programs in FBlit prefs program.
  SoftCinema is automagically using FBlit features, if FBlit
  is installed on your system. As you will see, FBlit will make
  SoftCinema to run almost twice faster.

  ATTENTION! I do not take any responsibility for damages caused
  by FBlit. Please contact FBlit author in this case.

  If you want to display movies compressed with 3ivx codec, you should
  download 3ivx powerup codec from http://www.3ivx.com. Then decompress it,
  and put file called 3ivx.sc into codecs/ directory.

  You should also download codec libraries for XAnim (compiled
  for LinuxPPC) and after decrunching place it in codecs/
  directory. You can get those libraries from any XAnim mirror site,
  for example:

  http://xanim.resnet.gatech.edu/linuxELFppc.html
  http://xanim.va.pubnix.com/linuxELFppc.html

  You will need tar and gzip programs (from GeekGadgets) or untgz
  program from Aminet, or any similiar program to decrunch those files.

  Tested libraries:

  name: Intel YVU9 and Indeo 3.2 Decompression for AVI and Quicktime
  archive: vid_iv32_2.1_linuxELFppc.tgz
  file after decrunching: vid_iv32_2.1_linuxELFppc.xa size: 111544

  name: Intel Indeo 4.1 Decompression for AVI and Quicktime
  archive: vid_iv41_1.1_linuxELFppc.tgz
  file after decrunching: vid_iv41_1.1_linuxELFppc.xa size: 205232

  name: Intel Indeo 5.0 Decompression for AVI and Quicktime
  archive: vid_iv50_1.0_linuxELFppc.tgz
  file after decrunching: vid_iv50_1.0_linuxELFppc.xa size: 98588

  Please pay attention at decompressed file sizes.
  If the size is different (ie 512 bytes), it was probably decompressed
  wrong. There is program called untgz on aminet, which can do the
  decompression for you. Please do not use following decompressors:
  PPCUnTGZ.lha and PPCUnTGZWOS.lha, because those programs works wrong.

  Following libraries also works with SoftCinema:

  CCITT H.263 Video Decompression for AVI
```

Radius Cinepak Video Decompression for AVI and Quicktime

But the same codecs are implemented internally, so there is no need
to use them. I repeat, DO NOT INSTALL THIS TWO FILES, IF INTERNAL
CINEPAK AND H263 CODECS WORKS FINE.

However, if you encounter any problems with movie
compressed with this 2 codecs, install those libraries, and see what
will happen (copy it to codecs directory, it will replace internal
codec). Please also inform me about yours problems.

Other libraries available on XAnim home page were not tested, because
I don't have any movies using those compressions. If you got movies
that are compressed with those codecs, please contact me.

You have to know, that author of XAnim does not allow to use those
codecs with other programs than XAnim, and that this is illegal.
I have decided to use this codecs because there is no other way
to support them (their authors does not releases their sources).
If you think that this is inmoral, simple do not install those codecs.
You have been warned. Choice is up to you.

1.6 Usage

SoftCinema can be started from both CLI and Workbench.

Starting SoftCinema from CLI:

Template:

FILE,GRAY/S,COLOR/S,DITHER/S,OVERLAY/S,FULLSCREEN/S,HAM8/S,HAM8DITHER/S,
FULLRATE/S,NOAUDIO/S,NOVIDEO/S,NODIRECTGFX/S,NOFASTGFX/S,AUTOPLAY/S,
AUTOEXIT/S,LOOP/S,NOGUI/S,VERBOSE/S

Description:

FILE/A
File name (with full path) of movie to play. If no filename
is specified, ASL requester will popup.

GRAY/S,COLOR/S,DITHER/S,HAM8/S,HAM8DITHER/S
Those parametters are for AGA only (or if you are using SoftCinema on
GFX card on 8bpp screen in window), and describes how should
be the hi- true- color mode emulated. Only one of those switches
can be used at one time. Default is GREY. Last two parameters are
only for FULLSCREEN mode.

OVERLAY/S
Enables overlay in windowed mode. Works only on CGFX.
You will need cgxvideo.library in libs:, and you should also
set tooltype VLAYER=DESTRUCTIVE in monitor icon
(DEVS:Monitors/BVisionPPC or CVisionPPC)
Remember also that on CvisionPPC/BVisionPPC it will work only on
screens with depth >= 15.

```
FULLSCREEN/S
Play animation on own screen. It also works on CGFX now.
Default off (animation in window on public screen,
usually WorkBench).

FULLRATE/S
This switch will cause movie to be played at full rate available
on your hardware (limited only by CPU power, and graphics chipset).
All frames will be displayed (no frames will be skipped, in other words).
By default frame rate is taken from stream. Also FULLRATE switches
audio off.

NOAUDIO/S
If file contains audio track, it will not be played. By default
sound is enabled.

NOVIDEO/S
If file contains video track, it wont be shown, If there is audio
track available, you will hear sound.

NODIRECTGFX/S
If this parameter will be specified, a fast direct video access routines
will be switched off, and WritePixelArray() will be used.
Fast direct cgfx routines are used by default, if you find any problems
with it, use this option to switch it off.

Also note that only the folowing pixel formats are supported right now:

  PIXFMT_RGB15
  PIXFMT_RGB16
  PIXFMT_RGB15PC
  PIXFMT_RGB16PC
  PIXFMT_ARGB24

When SoftCinema prints:
Unsupported pixel format: x

Then your screen uses different pixel format, that this 3 listed above.
I will add another conversion routines later, if there will be any
interest in this...

NOFASTGFX/S
Another option that will switch off faster gfx card support.
Default on, use thin in case of problems (random freezes, or similiar).

AUTOPLAY/S
Animation will start directly after it has been loaded, without waiting
for user action.

AUTOEXIT/S
Program will exit immediately after movie is over.

LOOP/S
Loops animation. By default SoftCinema stops at end of movie
and waits for user action.

NOGUI/S
```

```
If you run SoftCinema in FULLSCREEN mode, no GUI will be shown.
Usefull with AUTOPLAY. Of course GUI can be shown using right mouse button.


VERBOSE/S
This switch will cause that additional information will be printed in
CLI.


Starting SoftCinema from WorkBench:


Just double-click on SoftCinema icon.


Available tooltypes:


FILE=nazwa pliku
GRAY
COLOR
DITHER
OVERLAY
FULLSCREEN
HAM8
HAM8DITHER
FULLRATE
NOAUDIO
NOVIDEO
NODIRECTGFX
NOFASTGFX
AUTOPLAY
AUTOEXIT
LOOP
NOGUI
VERBOSE


Their meaning is the same as the CLI parammetters.


After running SoftCinema, window or screen will be opened.
On bottom border you will see some gadgets for program
control.

                     [+--------------------][>][^]


Slider is used for movie seeking.
Right arror gadget is used to play/pause movie.
Up arrow gadget is used for new movie selection (EJECT)
Close gadget closes window (strange, isn't it? ;).


If you are viewing QuickTime VR files there will be no
slider and PLAY/STOP gadget.


If you running SoftCinema with FULLSCREEN option
you can open/close control pane using right mouse button.


Program can be also controled via keyboard:

  SPACE - PLAY/STOP
  ENTER - EJECT
  ESC - EXIT
  - - zoom out
```

```
  + - zoom in
  TAB - switch between WINDOW/FULLSCREEN
```

If you are viewing QuickTime VR files SPACE key
(PLAY/PAUSE) does not work, but there are additional keys:

```
  kursor keys or
  left mouse button and mouse movement over window
    - camera rotation
  , - increase FOV (FieldOFView)
  . - decrease FOV (FieldOFView)
```

As usual, for PPC programs, you should set stack to at least 100Kb.
SoftCinema is not that stack hungry, like the "famous"
fastest PPC program ;), and does not requires Megabytes of stack.

In case of error a message will be shown (also if movie format
can not be recognized). Some errors are only shown as a number -
it will be changed soon.

1.7 Registration

Registration fee is 15$, 15EU, 30DM or equal amount in other
currency. If you live in Poland you should read polish guide
- there is special offer for people from Poland.

If you want to register, you should fill register form
(register_form.eng) and send it to me via email, or printed
in envelope. Please include all information about yourself - those
informations will be used only for users evidence.

Additionally you can register great MPEG movie player created
by Sebastian Jëdruszkiewicz - Frogger. If you will register
both programs at the same time, you will pay only 40DM for both
programs (instead of 60DM)

There is two ways to pay registration fee:

    - Sending money in envelope, or

  - online registration via regnet. Just point you browser to:
      https://secure.reg.net/product.asp?ID=7029

      If you want to register both SC and Frogger online, use this link:
      https://secure.reg.net/product.asp?ID=7030

The only way to pay for SoftCinema is sending money in envelope.

After I will receive your money, I will send you personal key file
via email. Please make a copy of this key, and of course do not
redistribute it.

1.8 Authors

SoftCinema was made by:

Jacek Cybularczyk (noe@webnet.pl)

ul. P.Jasienicy 4/7
70-492 Szczecin
POLSKA

Testing, english docs translation, and other help:

Sebastian Jёdruszkiewicz (bjsebo@jota.wi.tuniv.szczecin.pl)

French version of documentation: Fabrice Lehaut

German version of documentation: Timo Busshaus

Installer script: Sebastian Huebner

Special thanks for Kyle Broflovsky :-)

All icons comes from GlowIcons (c)1998 by Matt Chaput.

Maybe someone will draw some icons for me? Preety please...;)
    I am offering free key for it...

    And maybe a german translation... anyone?

1.9 Historia

09.06.1999   Every saga has a beginning...

    ...

10.07.1999   First frame :-) was decoded... QuickTime Cinepak
    GRAY, saved on disk.

    ...

18.09.1999 V0.5 First public release...

26.09.1999 V0.6 Fixed PCM stereo playing.
    Implemented frame skipping.
    Fixed AVI indexing (microsoft? Buuuuu...)
    Fixed QT audio track recognizing.
    Added Microsoft Video 1 (MSVC/CRAM/WHAM) codec,
    16 bit version only.
    Unregistered version now playing 30 seconds of movie.

15.11.1999 V0.7 Added GUI (Amiga type for now).
    Added Microsoft ADPCM audio codec (for AVI).
    Added Microsoft Video 1 8-bit (MSVC/CRAM/WHAM) codec.

```
        Added Apple Graphics (SMC) video codec (for QT).
        Added Apple Animation 8/16-bit (RLE) video codec
        (for QT).
        Added IMA4 stereo decompression (now working :-)
        Added FBlit internal support.
        Added ToolTypes and Workbench startup.
        Minor fixes in QT parser.
        Speedup some functions.
        All are more stable.

23.12.1999  V0.8  Added Photo JPEG video codec.
        Added Motion JPEG A video codec.
        Added Motion JPEG B video codec.
        Added Rainbow Runner video codec.
        Added a-LAW audio codec.
        Added DVI/IMA ADPCM audio codec.
        Fast direct CGFX video access routines.
        Scalable output on AGA machines.
        Keyboard control.
        Asynchronous disc reading.
        Some other changes, and bugfixes.

10.01.2000  V0.8a Mostly small bugfixes.
        SC will now work correct under WOS ppc.lib emul.

01.03.2000  V0.9  Added support for QuickTime VR (only panorama).
        Fixed AHI deinit code.
        Added support for AVI Motion JPEG codec (MJPG).
        New CLI/WB arguments/tooltypes.
        Some other fixes.

08.05.2000  V0.10 Animation scaling on CGFX added.
        FULLSCREEN on CGFX added.
        OVERLAY mode available in CGFX window mode.
        Fixed some bugs in JPEG codecs.
        Major speedup in AGA display code.
        Other changes, and optimizations under CGFX.
        New codec in AVI - Microsoft RLE8 (0x01000000)

24.01.2001  V0.11 beta
        QuicktimeVR bugfixes.
        New AVI codec: DIVX.
        New QT codec: 3ivX.
        Fixed some problems with HAM8 display.
        Fixed some problems with AVI palettes handling.
        using GRAY option now forces FULLSCREEN to use 8bpp screen.
        A lot of small changes in most codecs, mostly focused on speedup.

05.02.2001  V0.11 full release.
        a-LAW audio codec bugfixes.
        a-LAW support in QT movies.
        Completly new AsyncIO. much faster, and also fixes problems with running two ←
            or more SC at the same time.
        Optimized CCITT H.263 decoder (up to 30%).
        Optimized OpenDivX decoder (up to 25%).

03.04.2001  V0.12
```

```
    Finally all external codecs works fine under MorphOS.
    Added QuickTime audio VBR support.
    Added QuickTime OpenDivX support.
    Added window/screen display switch - TAB key.
    Added RGB15PC and RGB16PC pixel format
    And other small fixes, mostly in AVI/QT parsers.
```

1.10   QuickTime VR

```
What is QTVR?

QuickTime VR is a special QuickTime Movie format, which allow
you to to watch scene in interactive mode. There are two types of
QTVRs: VR "Panorama" lets you rotate camera, so you can watch
what is going around you. Usually camera is placed in room or
other interested place. Additionally you can zoom camera to take
a close look at things that are interesting to you.
Second VR type is "Object". There is one Object you can rotate on
any angle (camera is static) and watch it from any side you want.

Addidtionally both VR types can have hot-spots, a place which let you
move to another location, for example another room.
In current SoftCinema version you can watch only Panorama files,
(QT API wersja 1.0, 2.1, 3.0 i 4.0), Support for Objects and HotSpots
will be added soon...
```