

tapavi

COLLABORATORS

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WRITTEN BY		January 29, 2023	

REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

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Chapter 1

tapavi

1.1 main

TAPAVI 1.4
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This is a residentable AVI animation player for 020+ machines with
KS 2.0 or better, for the Picasso II graphics board.

Requirements

Supported Encoding

CLI Parameters

Workbench ToolTypes

Operation

XAnim

CD-ROMs

Credits

Distribution

Contact Info

History

DISCLAIMER: It works on my machine.

1.2 requirements

The minimum requirements for TAPAVI are an Amiga with a 68020 CPU,
KS 2.0, a Picasso II graphics board, and the ReqTools library.

The ReqTools library can be found on Aminet in util/libs.

As of version 1.4, support for ECS and AGA has been removed. I have no intention of putting it back without being bribed to do so, as things are much easier (and faster!) on the Picasso.

1.3 encoding

```

TAPAVI's implementation of AVI codecs is based on the source code ←
to Mark Podlipec's
    XAnim
    program. I will add more codecs as I
need them. I think the best source for AVI files is on
    CD-ROM
'
so as I get new CDs I will extend TAPAVI's support.

CRAM(8)      8-bit video.

CRAM(16)     16-bit video.

RGB(8)       8-bit video.

PCM(8)       8-bit audio. Each byte is an unsigned value.

PCM(16)      16-bit audio. Each word is a signed value.

```

1.4 cli

The command template for TAPAVI is...

```
FILES/M, BUF/K/N, DELTA/K/N, LOOP/S, NOSHOW/S, RAW/K, SKIP/K/N, SOUND/S,
TIME/S, VERBOSE/S
```

```

FILES      A list of AVIs that you want to play. The default is
           to use a file requester.

BUF        The size in KB of the buffers to use when reading the
           animation file. Two buffers of this size are allocated
           and smaller values may make the animation smoother.
           The default is 512.

DELTA      The frame delay, in 100ths of a second, to be used for
           each video frame. If a frame is drawn in less time
           than this value, then TAPAVI will wait until the time
           expires before continuing.

```

The default value is taken from the AVI file, which contains a microsecond value that TAPAVI converts with
 $DELTA = (N / 10000) - 2$.

LOOP	Enables looping of the animation when it finishes. The default is to move on to the next file or exit when an animation ends.
NOSHOW	Disables decoding of the AVI's video stream.
RAW	A file name to which the AVI's audio stream will be saved. It may be possible to play this file using a program like Thomas Wenzel's Play16. This option is only effective when the SOUND option is used.
SKIP	A number N indicating that every Nth video frame should be skipped.
SOUND	Enables audio. The default is to have sound disabled.
VERBOSE	Enables the output of some of the AVI header chunks that TAPAVI looks at.

1.5 wb

These tooltypes are only used if they are present in the TAPAVI icon. By the time animation icons can be inspected, the configuration that these options control has already been done.

BUF=N	N is the size in KB of the buffers to use when reading the animation file. The default is 512.
DELTA=N	N is the frame delay, in 100ths of a second, allowed for each video frame. The default is taken from the AVI file.
LOOP=ON	Enables looping. The default is OFF.
SKIP=N	N is a number indicating that every Nth frame should be skipped.
SOUND=ON	Enables audio. The default is OFF.

1.6 operation

TAPAVI is able to handle about 10 frames a second on my A4000/040. AVIs that cannot be played back at the frame rate they are expecting will tend to have stuttered audio.

Smaller BUF values tend to smooth out marginal animations by spreading the IO load. If you have enough memory, then a BUF value large enough to hold the entire animation would remove the IO load altogether.

Adjusting the DELTA value to a little less than the AVI's expected frame delay may help cure problems where the audio goes faster

than the video. This has no effect if TAPAVI is just unable to decode and display video frames fast enough.

The following input can be used to control TAPAVI. It is similar to the control allowed by SPARTA Inc's ShowANIM.

Esc, RMB End the current animation.

^C, break End the program.

F1,...,F10 Set different speeds. F1 is the fastest.

Down Pause the animation, ignored if DELTA is zero.

Right, LMB Forward one frame.

Up Resume the animation.

1.7 xanim

The AVI codecs that TAPAVI supports are based on the source code to Mark Podlipec's XAnim program. XAnim supports a number of other AVI video codecs, as well as QuickTime files.

I use Terje Pedersen's port of XAnim on the Amiga. If you run it with its +v option, it will display the video and audio codecs for the file. At the moment Terje's port does not support audio. It can be obtained from the Aminet sites as gfx/show/xanim4.lha. There is another port of XAnim under way, but it currently requires KS3.1 so I have not been able to run it.

The key differences between TAPAVI and XAnim for AVI files are...

- o XAnim is more powerful and more general than TAPAVI.
- o TAPAVI plays audio.
- o TAPAVI requires a Picasso II.

1.8 cd-roms

I am compiling a list of the CD-ROMs that TAPAVI has been used with. If you would like to add to the following list, please email me the name and publisher of the CD, the output from TAPAVI's VERBOSE command, and whether or not the thing worked.

X-Rated Bloopers, by Interactive Classics Inc. These are 10 frames per second, with CRAM(8) video and PCM(8) audio.

1.9 credits

TAPAVI is written by John Bickers using SAS C 6.51.

The XAnim program is written by Mark Podlipec. XAnim4 on the Amiga is a port by Terje Pedersen.

The asynchronous file IO code is based on the ASendPacket example written by Phillip Lindsay, from Fish disk #66.

Thanks to Stephan Feinen for format information on the 00pc chunk.

ReqTools is Copyright (c) Nico François.

1.10 distribution

TAPAVI is Copyright © 1994,1995 by John Bickers.

Distribution is via normal channels. That is, distribute it for free or for Fred Fish like costs, but not more. And remember to include the documentation.

If you want to contribute something to the cause of PC animation playback, you might want to consider sending me a CD of anims, or a movie CD.

If you're putting together a CD of animations and you want to put TAPAVI onto it, by all means do so. Send me a copy of the CD in lieu of any fee.

Contact me
if you want any customisation of the
program done.

1.11 contact

I can be reached at:

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1.12 history

94.12.21 Created 1.0.
94.12.24 1.1

-
- Added async. file IO, making playback much smoother.
 - Doubled size of audio buffer.
 - Paid attention to AVI frame timing.
 - 94.12.25 1.2
 - Rewrote CRAM(8) decoding in assembler.
 - 94.12.26
 - Skips large idx1 chunks automatically.
 - Added VERBOSE option.
 - 94.12.27
 - Added RGB(8) video.
 - Made pause behaviour consistent with TAPDL.
 - 94.12.28
 - Added checking for tooltypes.
 - 94.12.29
 - Added LOOP option.
 - 94.12.30
 - Added CRAM(16) video in assembler.
 - Changed tapavi.man to tapavi.guide.
 - 94.12.31 1.3
 - 95.01.02
 - Added GRAY option.
 - 95.01.03
 - Updated c2p code to new Peter McGavin routines.
 - Removed FONT option.
 - Only opens screen when necessary.
 - 95.01.04
 - Added 00pc chunk.
 - Avoids IO when looping on files smaller than BUF.
 - 95.01.08
 - Added NODB option.
 - 95.02.13 1.4
 - Removed chunk-to-planar and draw-buffer stuff.
 - Made it Picasso II only.
 - 95.02.14
 - Added function keys for speed control.
-