tapavi

COLLABORATORS

	TITLE : tapavi		
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WRITTEN BY		July 25, 2024	

REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

Contents

Chapter 1

tapavi

1.1 main

```
                          TAPAVI 1.5
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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.
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1.2 requirements

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   The mimimum 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.

CVID(24)   24-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

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. The latest version of XAnim can be obtained from the
Aminet sites as gfx/show/xanim6.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 requires a Picasso II, which it is optimised for, and
     with which it can display 24-bit animations.

1.8   cd-roms

I am compiling a list of the CD-ROMs that TAPAVI works with. If
you would like to add to the following list of CDs, please email
me the name and publisher of the CD and the output from TAPAVI's
VERBOSE command.

Best of the Best Volume 2: Girls on Girls, by Interactive Classics
Inc. These are 10 frames per second, with CRAM(8) video and PCM(8)
audio.

Betty Boop Classic Collection, by Chestnut (CDRP Inc.). These are
from 4 to 8 frames per second, with CVID(24) video and PCM(8)
audio.

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.

Thanks to Gregory Donner for donating the Betty Boop CD, which I
used to add and test CVID(24) support!

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

The XAnim program is written by Mark Podlipec. XAnim6 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.

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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    16 Willis St
    Wellington
    New Zealand

Or: jbickers@templar.actrix.gen.nz

Or: +64 4 801 8768 (home) +64 4 474 6625 (work)

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.
    95.03.01  Added CVID(24) video.
    95.03.08  Added summary codec information output.
```