PalomaPEG

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COLLABORATORS

	TITLE : PalomaPEG		
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REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

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PalomaPEG

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PalomaPEG - Real-time MPEG1 video capture program for PicassoIV/Paloma

Version 0.1

(06.12.1999)

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Features What is it?

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SPEEEEEED Result About the speed...

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1.2   Required hard & software...

Required hardware:

Kickstart 3.0+

PicassoIV Graphic board with Paloma module

68020 or Faster (You do not need FPU!)

about 100kb of Free memory (Fast recommented)

Required software:

Picasso96 graphics system release 1.37 or newer (latest version recommended)

reqtools.library v38 or newer (included)

PalomaTV.config file (tuner stuff)

Recommended minimum configuration:

68040 or 68060 with some fast memory available.

1.3   Features:

This a small program to demonstrate the power of the 68k Amigas, with some HW torture :)

So... it is a relatime MPEG1 video encoder...

Features:

Save 1:5-1:10 compressed MPEG1 (ISO standard) video

100% assembly code (short & fast)

1.4   The shell parameters:

Usable parameters are: (shell only!)

FILE/M,W=WIDTH/K/N,H=HEIGHT/K/N,FRAMES/K/N,FPS/K/N,ACCUPAK/S

FILE

The output MPEG file, if you don't specify a file, a file-requester appears, and you will be able to select files there.

(i recommend to save the file to RAM: because it will be small due the real-time compression)

WIDTH and HEIGHT

You can specify the video size. Default is 160x128. (it will be round to 16base, because the MPEG macroblocks are 16x16)

FRAMES

You can specify the number of the captured frames.

FPS

Frames per second: Allows you the specify the capture speed.

(default is max. possible FPS)

ACCUPAK

A switch to turn on the ACCUPAK mode during the RAW video transfer.

This one speed up the video transfer, and 'cause' about 10-15% speedup.

(maybe more on Zorro2 systems)

1.5   About PalomaPEG's speed

On my 68060/50Mhz+PIV ZIII mode i got about 22-27FPS in default size.

I think it is a nice value, compared to other Amiga MPEG players (!) :)

(yeah, it is faster than most of the MPEG players on Amiga...)

1.6   Frequently Asked Questions

Question:

The captured video was captured at xx FPS (a number which is not 25), but the MPEG players report, how the video file frame rate is 25FPS. It is a bug?

Answer:

No.... Sadly the MPEG standard not allow to set any FPS into the file, so i set always 25FPS as rate. Use a player where you can select the framerate (example RiVA).

(the lowest LEGAL MPEG framerate is ~25FPS, but there is some illegal code for 15FPS or similars, sadly not all players support the illegal framerates)

Question:

The captured video is grayscale only... what did i wrong?

Answer:

Nothing ;) The actual version capture grayscale only video. I plan to add color support later. (when i see enought intrest for the program..)

Question:

Will be there PPC version?

Answer:

Maybe. But i need a PPC board first... (just imagine the speed of the PPC version... 352x240 @ 25FPS on 603/604 :)

1.7   About the author

Some foreword:

Im a really Amiga fan... I have 5 Amigas (A500, A1200, CDTV, CD32, A4000 and i like all...) and i collect weird Amiga HW/SWs (Like beta/unfinished Zorro cards, etc...).

I'm looking for an original C= MPEG Module for my CD32, so if you have any then please contact me!

Oky... now the standard text:

If you have any problems, suggestion, bug reports then write to:

snail mail: László Török

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EMAIL: torokl@alpha.dfmk.hu

WWW: http://www.dfmk.hu/~torokl

(PalomAVI, PalomaPEG, MooVId, PIV-MooVId, Savage homepage)

iRC (mostly mornings) : pH03N1x@iRCNET (mostly #amigahu channel)

(sometimes on #amigager, but my german is very limited ;)

As you can see my english knowledge is very limited... so sorry for my english bugs...

1.8   Revision history

revision history:

0.1b First public version

(06.12.99)

1.9   To do list/bug list

Known bug:

None

Todo:

Color support

Real-time audio capture

PPC version

GUI

1.10   Used hard & software

Hardware:

A4000 (REV D) - with 030/882 on the Motherboard (!)

& CyberStorm MKII (060/50) & 2meg Chip + 16 meg Fast on MB, 128 MB fast on MKII

PicassoIV + Paloma A/V module + PabloII + Concierto

A2091 SCSI controller (with oldie C= 6.6 ROMS ;)

Buddha&CatWeasel Z2 controller (6x IDE & 2x Drive)

Commodore A2091 SCSI board (Z2)

Samsung SyncMaster 15GL

2x120watt audio (B&W DM 603 Speakers rox :).... (its VERY important... :)

CDTV as Audio CD Player :)

Software:

Asm-one/Asm-Pro

Docs:

ISO MPEG1 video standard

MPEG Video Compression Standard book by Joan L. Mitchell and others

(it is a great book, i recommend it!)

1.11   The author wishes to thanks:

The author wishes to thanks:

First:

The authors of the Picasso96 system (Tobias Abt and Alexander Kneer) - a really great system

Village Tronic (espec. Klaus Burkert - for the great PIV+Paloma)

Stephen <COBRA> Fellner - for the IDCT algorithm

Flemming Steffensen (for beta testing)

Jens Langner (for betatesting)

Last, but not least: the Developers of the Amiga and AmigaOS (yes this is a real OS -okay, has some bugs & missing features -, but really fun to develop on!!)

1.12   What is not in public version?

There is no color capture stuff in the public version. I will make it once, when i see intrest for the program. If you would like to support then please send me an email, or some money, because i plan to make PPC version too, just i do not have money for the PPC card ;(

1.13   Copyright

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If you are doing an article or a review of PalomaPEG then please send me a copy of the magazine! (It's not a must, but I would be very happy :)