Flip

Dominik Tonn

COLLABORATORS

	TITLE : Flip		
ACTION	NAME	DATE	SIGNATURE
WRITTEN BY	Dominik Tonn	February 15, 2023	

REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

Contents

Chapter 1

Flip

1.1 Flip, one of the fastest Flick Animation Players for AGA Machines

Flip

A freely distributable Flick animation player for AGA Amigas

Written by Dominik Tonn

Copyright © 1993/1994 Dominik Tonn

All Rights Reserved

Distribution, Copyright and Legal Stuff

Introduction

Requirements

Usage

Frame Rate Table

Revision History

Bugs

Non-Bugs and future enhancements

Thanks

Contacting the Author

1.2 Distribution

Distribution, Copyright and Legal Stuff.

The Flip executables and documentation are Copyright © 1993/1994

by Dominik Tonn, All Rights Reserved.

Flip is being distributed as Freeware. It may be freely distributed

to any bulletin board service, network, or public domain collection, so long

as no fees (beyond reasonable media fees) are charged for such distribution.

If you're rich and want to donate me something see Contacting the Author .

If you want to use Flip in a commercial package, for commercial

demonstrations or something similiar you have to ask me for permission first.

(See Contacting the Author for ways to get in contact with me)

A license to use Flip could be yours today!

Special permission is hereby granted to include Flip in Aminet CD-Rom and

Fred Fish's Amiga Library.

Flip is NOT public domain. The author retains all rights to the program.

Disclaimer

No warranties of any kind are made as to the functionality of this program.

If it burns your hardrive, causes a thermonuclear meltdown or eats your cat,

the author cannot be held responsible for it. You are using it at your own risk.

1.3 Introduction

Introduction

Flip is a player for FLI and FLC animation files, common for PCs and

compatibles. It is not as fast as a player for the PC but i think it is the

fastest Flick file player for the Amiga 4000/040. Since the frame information

in Flick files are stored in Chunky format and the Amiga only supports planar

Screenmodes yet, much CPU performance is needed to convert the Chunky data

in acceptable frame rates.

Features:

- Flip supports ALL Flick formats, also wierd sizes like 347x252 for example.

- Screen centering. As a funny effect it plays faster when the screen has a little

offset from the left border. I guess it limits waitstates on Chipmem.

- Incredibly fast on a A4000/040, fastest player available i guess. :)

- Now supports Flick file speed information.

- Direct asynchronous playback from Disk.

- Adjustable Framerate.

- Optimised code for 68040 and 68020/030

1.4 Requirements

Requirements

- AGA Chipset

- Kickstart 3.0 or better

- Fastmem and CPU performance recommended, 68040 works best :)

- At least 200kb of free mem, 64kb free Chipmem

Flip is tested on A4000/040, A4000/030 and A1200

1.5   Usage

Usage

-----

from CLI: Flip Filename [options]

Options: INFO - print FLI/FLC-file information only.

ONCE - plays animation once.

NORM - disables optimised refresh

DISK - plays file from disk

LOOPS n - plays FLI n times

FPS n - plays n frames per second (if possible)

WARP - plays with maximum speed

To stop Flip, click the screen or hit any key.

1.6   Frame Rate Table

Frame Rate Table

Venus.flc: 200x200, 72 frames, 1541747 bytes,

ftpable from NASA public FTP server: explorer.arc.nasa.gov

/pub/SPACE/ANIMATION/venus.zip

Fly.fli : 320x200, 10 frames, 47084 bytes

ftp'ed from anonymous FTP server, dunno which

(Perhaps from a local BBS)

| Amiga 4000/040 25 MHz | other FLIs |

Version | Fly.fli | Venus.flc| 320x200 | Comment

--------+-----------+-----------+------------+--------

1.00 | 12.5 fps | 0.9 fps | | promoted to DblPal

1.02 | 14.4 fps | 1.1 fps | | .

1.10 | 3.3 fps | 3.3 fps | | .

1.20 | 21.5 fps | 9.2 fps | | .

1.30 | 24.4 fps | 9.8 fps | | .

1.40 | 25.6 fps | 19.3 fps | | .

1.46 | 26.3 fps | 20.3 fps | | .

1.50 | 28.0 fps | 31.4 fps | 24-28 fps | promoted to DblPal

1.50 | 31.5 fps | 34.5 fps | 27-32 fps | without Modepromotion ->Pal

1.53 | 68.3 fps | 36.7 fps | 30-40 fps | promoted to DblPal

1.62 | 212.8 fps | 45.6 fps | 40-100 fps | DblPal, warp option

For improving Speed disable the Modepromotion, this saves bandwidth

for Chipmem, else Flip gets more waitstates for Chipmem.

| Amiga 4000/030 25 MHz | other FLIs |

Version | Fly.fli | Venus.flc| 320x200 | Comment

--------+----------+----------+-----------+--------

1.62 | 90.0 fps | 23.6 fps | ??? | no mode Promotion,

| | | | warp option

The framerate on the A1200 varies much, mostly depending on the Fli file,

but at least it runs on it with 10 to 40fps.

If bugs or undocumented features occur, report it and the circumstences.

Please send all reports, ideas or congratulation

via e-mail to Dominik.Tonn@zfn.uni-bremen.de

1.7 Revision History

Revision History

1.00 25-Mar-93 First running version! It was really slow since

i used only system calls and used WritePixel.

Frame rates: varying from 0.5 to 10 per second.

1.02 06-Apr-93 Some optimization, but accomplished not much.

1.10 10-Apr-93 Implemented a chunky to planar conversion in

assembler, Frame rate stabilized to 4-5 per second

??-Sep-93 Met _ho_(James) on channel #amiga in IRC who

claimed to have coded a chunky to planar routine

which does up to 40 frames/second on a 68040.

He promised to e-mail it to me.

??-Oct-93 Finally got the routine from James! It works!

1.20 31-Oct-93 First Version with James' routine running!

Frame rate up to 10-20 per second.

(Amazing Routine!)

1.30 03-Nov-93 First release for some testers on IRC.

Haven't heard anything from them yet. :(

1.40 04-Nov-93 Made some major improvement in chunk decoding

speed.

1.41 15-Nov-93 First release for Aminet.

1.43 14-Dec-93 Found the bug that caused the palette dimming.

I exspected no gaps between the bitplanes but

sometimes there was one. Now allocating a

own custom bitmap without gaps.

1.44 04-Jan-94 Found another bug that caused severe memory

fragmentation. (Flip wrote under wierd

conditions into a memory area where the memory

list was. :])

1.45 13-Jan-94 Some code clean ups and added keypress

to terminate the animation.

1.46 14-Jan-94 some optimizations for speed, improved the

palette changing code.

Second release for Aminet.

1.50 06-Feb-94 ported all timecritical routines to assembler.

enhanced chunky2planar routine to handle bigger sizes

implemented FULL flc support and screen centering

Third release for Aminet.

1.53 27-Feb-94 Optimised the file Decoding, gave much speed.

Added Asynchronous IO for playback from Disk

68020 code added.

1.60 01-Mar-94 More optimisation of the Decoding, much more speed!

1.62 03-Mar-94 Added timing for playback, now it no longer

ignores time-delay frames. Also adjustable framerate

1.65 16-Mar-94 Bugfixes, mousepointer on playbackscreen is now off

1.66 17-Mar-94 4th release for Aminet

1.8 Bugs

Bugs

Bugs: none at the moment

(But i am working on it) :-)

1.9 Non-Bugs and future enhancements

Non-Bugs and future enhancements

Planned future enhancements:

- Non-AGA machine support

- Double Buffering

- Selectable Screenmode

- more Speed if possible, but i don't think its possible

- perhaps a GUI

- support of the CD32 Chunky2Planar hardware

other planned products:

- FLI/FLC to Anim5/7 and ILBM converter

- Anim5/7 to FLI/FLC converter

- FLI to CDXL converter

I think that should be enough work for the next time...

1.10   Thanks

Thanks

Many many thanks to James McCoull for his chunky to planar routine!

I mutated it a bit, but his spirit still works in it.

Also thanks to:

- Boris Ottlewski for digging out the documentation for the

Flic Animation Format.

- Matthias Scheler for the hint to use mungwall for debugging.

- Andreas Blohm for moral support.

- Peter McGavin for encouraging me to speed up my Player.

Our competition and information interchange brought much speed to

our players, without it Flip would still run with 20 fps.

Btw, if you don't have an AGA machine, use his player! Its really fast!

- Iljitsch van Beijnum for Beta-testing.

Thanks to the following People for Email:

Mikael Ostergren, Bastian Kinne, Nick, Florian and others i forgot.

1.11   Contacting the Author

Contacting the Author

If you want to donate something to me: Just do it! :)

Things that would be very welcome: :-)

- a A4091 SCSI II controller

- Harddrives, no matter what kind or size, MFM, RLL, SCSI, IDE

- becoming a registered developer

- scematics and circuit diagrams of the A1000 or A4000/040

(I would pay package and postage for the above thingies) ;)

Comments of the Author:

- A4000/040 is a cool machine, thanks to the Dudes@commodore.com

- StarTrek TNG is great, it gets better and better, after seeing

the 4th season i thought it couldnt get better, but the 5th&6th

season is k-rad! Keep up the good work! I can't wait for the 7th

season showing in europe.

To the people at Paramount: Please continue ST:TNG, its great!

I like to see more seasons and perhaps feature Films. DS9 is also

great, but i've only seen it up to episode #12 yet.

EMail: Dominik.Tonn@zfn.uni-bremen.de

Snail-Mail: (Don't expect quick response, except you are a donator!) :)

Dominik Tonn

Suhrfeldstr. 69

28207 Bremen

GERMANY