

TIFFView

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Chapter 1

TIFFView

1.1 TIFFView Guide 1.14 Copyright © 1993-95 B. Wynants

Table of Contents:

Welcome to the TIFFView AmigaGuide®. Select any of the following topics:

- Introducing TIFFView
- System requirements
- How to use TIFFView
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- ARexx Port
- Known Problems
- Tips
- To Do's
- About the program
- About the author
- Program History

1.2 Introducing TIFFView

This is a utility to read, view and print TIFF, MacPaint, GIF & IFF, JPEG or any image you have a DataType for, and to write them back as TIFF, JPEG or IFF files.

Starting from version 1.11 TIFFView requires at least 2.04. To get the most out of it you must have an Amiga with the AGA chipset. Then you can open your images at 8-Bit Color or Gray!

The name TIFFView did cover the functionality of the first releases but since then other file types where added, therefor TIFFView should get a new name and one of the next releases may get another name.

1.3 TIFF Files

TIFF Files (Tag Image File Format) are files commonly used in the graphic computer world (Mac, Sun, NeXT, IBM)

TIFFView is compatible with the 6.0 specs of TIFF.

supported TIFF:

- multiple image TIFF
- 1,2,3,4,5,6,7,8,24,32 Bit
- Line-art, gray, palette images, 24 bit color RGB, 32 Bit color CMYK.

1.4 MacPaint Files

MacPaint Files are that old files used on Macintosh. I included this format because some clip-art libraries still use this format...

1.5 GIF Files

GIF Files (Graphics Interchange Format(c)) are files that are commonly used in the BBS and IBM World it is however limited to 256 colors.

supported GIF: GIF87a & GIF89a

- multiple image GIF files
- 1,2,3,4,5,6,7,8 Bit interlaced & non interlaced files
- Line-art, gray, palette images.

The Graphics Interchange Format(c) is the Copyright property of CompuServe Incorporated.

GIF(sm) is a Service Mark property of CompuServe Incorporated.

1.6 IFF Files

IFF Files (Interchange File Format) are files that are commonly used in the Amiga World.

supported IFF:

- 1,2,3,4,5,6,7,8 Bit
- Line-art, gray, palette images.

1.7 JPEG Files

JPEG (pronounced "jay-peg") is a standardized compression method for full-color and gray-scale images. JPEG is designed to handle "real-world" scenes, for example scanned photographs. Cartoons, line drawings, and other non-realistic images are not JPEG's strong suit; on that sort of material you may get poor image quality and/or little

compression.

JPEG is lossy, meaning that the output image is not necessarily identical to the input image. Hence you should not use JPEG if you have to have identical output bits. However, on typical real-world images, very good compression levels can be obtained with no visible change, and amazingly high compression is possible if you can tolerate a low-quality image. You can trade off image quality against file size by adjusting the compressor's "quality" setting.

This reading and writing is based in part on the work of the Independent JPEG Group

1.8 DataTypes Files

The `datatypes.library` provides transparent data handling abilities to applications. If TIFFView finds an image it can't read it asks to the `datatypes.library` to read the file. This enables TIFFView to read a lot more image types.

This is available from WorkBench 3.0 and higher.

1.9 System Requirements

TIFFView should run on any Amiga system with at least 512K RAM and one disk-drive. TIFFView requires KickStart v2.04 or higher to run.

TIFFView also requires the `ReqTools.library` v38 or higher. `ReqTools` is copyright 1993 by Nico François.

Should you have any trouble running TIFFView on your machine, please write to me with the full specifications of your machine, that is KickStart version, model, expansion boards etc...

1.10 How to use TIFFView

TIFFView can be started from the Shell or the Workbench.

CLI Usage:

```
TIFFView [filename(s)] [-r file]
-r file : startup ARexx command (no parameters yet).
```

WB Usage:

Shift select files and double click TIFFView.

1.11 TIFFView Menu's

File Menu

Preference Menu

Operations Menu

1.12 File Menu

Open...

Calls File Requester to select an image to load.

Scan...

Not available.

Image Info...

Shows information about the currently active image.

Print

Prints the currently active image.

Kill Memory Image

Removes the memory image from the currently selected image.

Save

Saves the file using the name and path that shows in the title bar. Only enabled if something was changed to the Image and the full image is in memory.

Save As...

Saves the file using an option requester and a File Requester to select options, name and path.

Close

Closes the currently active window.
Asks if changes have to be saved if needed.

Quit

Closes all TIFFView windows and Quits.

1.13 Preference Menu

First Image Only

Used for multiple image TIFF and GIF Files.
If you check this option the reading will be slightly faster but only the first image of multiple-image files will be shown and you are not warned of the presence of more images in the file.

Full File Names

If this is checked then the window title bar will show complete file path.

Screen Mode...

Shows a requester to define custom screen attributes.

Open Settings

Keep Memory Image

If checked and the original image has more colors like the screen image the complete full color image is kept in memory. This memory image is used for operations (Gamma) and for saving. This however can occupy a lot of memory.

e.g. A TIFF 24 bit image with the 'Keep Memory Image' option checked and a screen with an 8 bit representation requires 4 times the memory as without the memory image.

note: A memory image can be removed later by selecting the Kill Memory Image menu option.

All On Custom Screen

If checked, all images (also 1 bit images) open on the custom screen, otherwise 1 bit images open on the workbench screen.

Full Size

Images always open starting in Top Left corner and the maximum window size is ← used.

Cascade

Images are opened relative to previous opened window and shifted to left and bottom.

Buildin

TIFF

IFF

GIF

MacPaint

JPEG{ui}

Enables the buildin code to read this image types. If you want to read an image with a datatype, switch off the menu item for that image type.

Printer Settings

Half Size

Normal Size

Double Size

Allows to set an enlargement factor for printing.

Extra Info

Allows enabling of printing some information about the picture.

Center Horizontal

Sets print position.

Save as Settings

The Save as Settings are there to specify what kind of image has to be the default type for the Save As Options... requester.

The TIFF comp. mode option is there to generate a more compatible TIFF file for transportation across computers & applications:

- Some TIFF readers don't support 2 or 3 bit TIFF files.
(so 2 and 3 bit TIFF files are converted to 4 bit TIFF files when saving).

- 1-Bit IFF or GIF is saved as TIFF Line-Art (color information is removed) otherwise 1-Bit IFF and GIF is saved as a Palette TIFF of 1 Bit and the color information remains intact.

Without TIFF comp. mode ON the generated TIFF files are also correct according to the TIFF 6.0 standard but less common accepted by some other applications.

Create Icons?

Allows enabling of icon creation for saved files. TIFFView looks for ENV:Sys/ ↵
def_tiff, ENV:Sys/def_jpeg and ENV:Sys/def_ilbm
for the creation of it's icon. If these are not found ENV:Sys/def_picture is ↵
tried.

Dithering Settings

No Dithering

Dithering is disabled.

Simple

Just a simple and fast one dimensional dithering.

Floyd & Steinberg

Good and fast 2-dimensional dithering.

Jarvis, Judice & Ninke

Slow dithering over 3 lines.

Stucki

Slow dithering over 3 lines.

Stevenson & Arce

Slow dithering over 5 lines.

Gray TIFF

The dithering is for converting TIFF files to
1, 2, 3, 4 or 6 bit Gray images.

Color TIFF

Color to Gray: Converts Color to Gray according to the Gray settings.

Color to 3 Bit: 1 bit red, 1 bit green and 1 bit blue.

Color to 5 Bit: 2 bit red, 2 bit green and 1 bit blue.

Color to 6 Bit: 2 bit red, 2 bit green and 2 bit blue.

Color to 8 Bit: 3 bit red, 3 bit green and 2 bit blue.

Palette TIFF

Remains untouched if the number of colors is less or equal to the value specified in the color to menu.

Otherwise it is re-dithered to the value specified in the color to menu.
See Color TIFF.

Gray GIF

The dithering is for converting GIF files to 1, 2, 3, 4 or 6 bit images.

Color GIF

Remains untouched if the number of colors is less or equal to the value specified in the color to dithering menu.

Otherwise it is re-dithered to the value specified in the color to menu.
See Color TIFF.

IFF

Remains untouched if the number of colors is less or equal to the value specified in the color to dithering menu.

Otherwise it is re-dithered to the value specified in the color to menu.
HAM & EHB IFF files are not supported.

Scroll Settings

Sets scroll speed when clicking arrows from scroll bars.

Unit Settings

Used by printing for extra print information.
Used in Image Info Window to show image size.

Load Settings@.{ub}

Use these menu items to load a settings file.

Save Settings

Use these menu items to save the current settings to the tiffview.prefs file.

Save Settings As...

Use these menu items to save the current settings as a preset.

1.14 Operations Menu

Gamma mapping...

Allows definition of gamma curve to re-map the image.

Higher Gamma values give more detail in Dark Image parts (brighter Images).

Lower Gamma values give less detail in Dark Image parts (Darker Images).

No gamma is 1.0.

A Good value for dark images should be 1.5.

1.15 ARexx Port

TIFFView is equipped with an ARexx Port. The name for the ARexx Port is 'tiffview'. So if you want to send commands to that port you would have to issue

```
ADDRESS 'tiffview'
```

If you have more TIFFView's running '-number' is appended to the port name.

DoMenuItem Menu Item [Sub [val]] executes a menu item like if it was selected.
Ex: domenuitem 1 6 1 ON selects scrolling speed normal

Full_file_names [OFF | ON]

Screen_Mode screenwidth [xxxx]

Screen_Mode screenheight [xxxx]

Screen_Mode screendepth [xxxx]

Screen_Mode screendisplayid [xxxx]

Screen_Mode screenautoscroll [xxxx]

Screen_Mode screenoverscan [xxxx]

```
Screen_Mode Requester                                ; pops up a requester

Open_Settings First_Image_Only [OFF | ON]
Open_Settings Keep_Memory_Image [OFF | ON]
Open_Settings All_On_Custom_Screen [OFF | ON]
Open_Settings Full_Size
Open_Settings Cascade

Buildin_settings TIFF
Buildin_settings IFF
Buildin_settings GIF
Buildin_settings MACPAINT
Buildin_settings JPEG

Printer_Settings Half_Size
Printer_Settings Normal_Size
Printer_Settings Double_Size
Printer_Settings Extra_Info [OFF | ON]
Printer_Settings Center_Horizontal [OFF | ON]

Save_as_Settings IFF_Uncompressed
Save_as_Settings IFF_Compressed
Save_as_Settings TIFF_Uncompressed
Save_as_Settings TIFF_Packbits
Save_as_Settings TIFF_LZW
Save_as_Settings JPEG_HIGH_QUALITY
Save_as_Settings JPEG_QUALITY
Save_as_Settings JPEG_SPEED
Save_as_Settings TIFF_Comp._Mode [OFF | ON]
Save_as_Settings Create_Icons [OFF | ON]

Dithering_Settings Dithering No_Dithering
Dithering_Settings Dithering Simple
Dithering_Settings Dithering Floyd_Steinberg
Dithering_Settings Dithering Jarvis_Judice_Ninke
Dithering_Settings Dithering Stucki
Dithering_Settings Dithering Stevenson_Arce

Dithering_Settings Gray [To_Line-art | 1]
Dithering_Settings Gray [To_2_Bit | 2]
Dithering_Settings Gray [To_3_Bit | 3]
Dithering_Settings Gray [To_4_Bit | 4]
Dithering_Settings Gray [To_6_Bit | 6]
Dithering_Settings Gray [To_8_Bit | 8]

Dithering_Settings Color [To_Gray | 0]
Dithering_Settings Color [To_3_Bit | 3]
Dithering_Settings Color [To_5_Bit | 5]
Dithering_Settings Color [To_6_Bit | 6]
Dithering_Settings Color [To_8_Bit | 8]

Scroll_Settings [Slow | Normal | Fast]

Unit_Settings [Millimeters | Inches | Pixels]

Configuration SAVE
Configuration SAVEAS filename
```

Configuration LOAD filename

Version

About

Open filename

PullToFront filename ; filename is name used for open

Close filename ; filename is name used for open

Save filename ; filename is name used for open

Save_As filename newfilename ; filename is name used for open

Print filename ; filename is name used for open

ImageInfo filename width ; filename is name used for open

ImageInfo filename height ; filename is name used for open

ImageInfo filename depth ; filename is name used for open

ImageInfo filename resolx ; filename is name used for open

ImageInfo filename resoly ; filename is name used for open

ImageInfo filename imageKind ; filename is name used for open memory image ↔
must be available

ImageInfo filename imageClass ; filename is name used for open

ImageInfo filename compression ; filename is name used for open
result contains the requested information

Kill Memory Image filename ; filename is name used for open

Operations Gamma factor ; factor must be 10 times to big

1.16 Known Problems

If an image is dithered to more colors than the available colors of the screen, ↔
the
image will look bad, but it is correctly in memory so saving the image will
work correct.

e.g. Opening an IFF 5 bit image (32 colors) with dithering color to 5 bit
on an interlaced 4 bits (16 colors) screen gives a bad image on that screen.

1.17 Tips

On a system with not much memory or if you only use TIFFView for viewing
leave the 'Keep Memory Image' in the 'Open Settings' sub menu off.
This saves a lot of memory if you open 24 bit images, but does not allow
you to use the Save menu item (Save As works!!) if the image has changed.

1.18 ToDo

24 bit IFF reading & saving (request by Jean-Pierre LeBel)

Image cropping tool (request by Jean-Pierre LeBel)

Implement Scanning with AGFA scanners (request by Jochen Brusseler)

1.19 About the program

Current version 1.14

This program is freeware, this means that you can copy it freely as long as you don't ask any more money for it than a nominal fee for copying. If you want to distribute this program you should keep this document with it. This program cannot be used for commercial purposes without written permission from the author.

TIFFView has proven to be stable in everyday use. The author is not responsible for any loss of data, damages to software or hardware that may result directly or indirectly from the use of this program. The author reserves the right to make changes to the software or documentation without notice.

TIFFView was written in C and compiled using SAS/C 6.51.

None of the files of the TIFFView package may be modified. Crunching or achieving is allowed only if none of the TIFFView files get modified by it.

Special permission is hereby granted to include TIFFView in Public-Domain collections such as Fred Fish's Amiga Library.

1.20 About the Author

If you have suggestions or remarks about this program, or if you find any bugs, please let me know.

When sending in bug reports, please state exactly under what circumstances the bug occurred, what equipment was used and what happened. If possible also try to give me enough information to reproduce the bug. It is very difficult to find bugs when you don't know exactly what happened.

Write to the following address:

Fido : 2:292/603.76 (Bert Wynants)
AmigaNet : 39:120/102.76 (Bert Wynants)

SnailMail: Wynants Bert
Kapelaniestraat 22
B-2235 Hulshout
Belgium - Europe
starting from may 1995
Wynants Bert
Hogeheide 6
B-2260 Heultje-Westerlo
Belgium - Europe

I will also try to put the latest available version of TIFFView on the following BBS (this may change without further notice):

Great Balls Of Fire BBS

ReqTools Support BBS
Herman Stevens
Lubbeek
ADS Distribution HUB
ABC Host Belgium
AFN Host Belgium
+32-16-640912 ZyXEL U-1496 E 14k4-16k8 bps
+32-16-640099 SupraFax 2400-14k4 bps
+32-16-640872 LightSpeed 1200-2400 bps
24-24 h.
Fido Node 2:292/603
NLA Node 14:200/101.0
AmyNet 39:120/102.0

1.21 Program History

Changes & Fixes:

1.14

ENV:Sys/def_picture added for icon creation
JPEG reading and writing added
File Saving choice for memory/screen image fixed
Fixed update problem with very small images

1.13

Width and Height update on the fly if the resolution changes in info ↔
window.
Busy requester has a progress bar now.
All requesters have the ReqTools backfill look now.
Using GetDiskObjectNew for WB startup now.
Aborting Creating Screen Image no longer gives a Memory Error.
Scroll bars have newlook and are one linked boopsi gadget.
Setting Scroll Speed for arrows works better.
Buildin sub menu added to override buildin reading by datatype reading.
Added support for datatypes for unknown image types.
Added icon creation for saved files.
Settings Load/Save added.
Task and port names for multiple instances of TIFFView improved and ↔
corrected.
Workbench color changing fixed. (Thanks to Peter Stuer for reporting)
Public screen handling fixed and improved.

1.12

Handling more multiple image TIFF files correctly now...
Gamma mapping on a CMYK image worked inverse.
Multiple Image GIF files are now also supported.
Complete revision of GIF reading, now I think it even works :-)
thanks to all those who reported GIF reading bugs (Bart, Peter, Tom ↔
...).

1.11

Save/Discard/Cancel Dialog added
IFF dithering added
Search scanner option removed
Gamma handling moved to image windows menu's

MacPaint reading added
Screen closing fixed for visitor window (e.g. Scale by Erik Wistrand)
interleaved screen and bitmaps added
bugfix for IFF & interleaved screen
3.0 NewLook Menu's added
color to gray conversion uses luminance calculation now
CMYK image conversion corrected
removed 1.3 compatibility
printing can be aborted now
now the custom screen uses the user font also
all requesters font sensitive
requester added for saving options
localized under OS2.1 and higher
rewrite of internal ARexx handling

1.10

Save as gives warning if destination file already exists.
some bugfixes in ARexx part.

1.09

Abort added for opening and saving images.
CMYK image conversion added (TIFF only).
Multiple file selection in file requester.
Choosing between images in case of some mullet image TIFF files.
(requested by Peter Stuer, not all multiple image files are yet ↔ supported)
Window tiling added for opening images. (Suggested by Peter Stuer)
Preferences moved to ENVARC: on a 2.0 or 3.0 system.
(Suggested by Peter Stuer)
Corrected Default prefs for 3.0.
Planar 24 bit TIFF reading added.
Interlaced GIF reading handled correct now
(Thanks Tom De Mulder for reporting).

1.04

General changes:
Using ReqTools library for better requesters.
Thanks to Nico François for ReqTools & his testing on the A4000.
1-Bit IFF -> TIFF Line-Art bug corrected.
Bug fixed which caused custom screen to generate some bad colors for ↔ menu's.
Color dithering fixed and added.
Problem with mutual excl. menu's fixed.
GIF Reading added.
Crash bug fixed for screens with more like 5 bits.
Dithering improved.

2.0 Specific:

Screen mode requester added.
Gamma Definition Requester added.
Image information Requester added.

3.0 Specific:

8 bit screens support.
256 grays or colors possible.
