TIFFView

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COLLABORATORS

	TITLE : TIFFView	

ACTION	*NAME*	*DATE*	*SIGNATURE*
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REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

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Chapter 1

TIFFView

1.1 TIFFView Guide 1.16 Copyright © 1993-95 B. Wynants

Table of Contents:

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

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.

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 then 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 1.16

  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 6.55.

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.
```

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:

       email    : bert.wynants@innet.be

       Fido     :  2:292/603.76 (Bert Wynants)

       SnailMail: Wynants Bert
            Hogeheide 6
            B-2260 Heultje-Westerlo
            Belgium - Europe
```

1.21 Program History

```
  Changes & Fixes:

  1.16
    Fixed guru on 68000 machines, 1.15 would only work correctly on
        a 68030+ (Thanks to Bill Bennett and others for reporting)
    Fixed bad icon in 1.15 archive (Thanks to Rudy Kohut for reporting)
        Sorry, it's back the old icon, nothing fancy :-)
```

```
  Fixed broken IFF reading
  Changed email adress

1.15
  added TIFF.Datatype to archive
  several small fixes
  recompiled with SAS/C 6.55
  used JPEG Code 5b

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.