

akJFIF_Documentation

COLLABORATORS

	<i>TITLE :</i> akJFIF_Documentation		
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
WRITTEN BY		July 25, 2024	

REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

Contents

1	akJFIF_Documentation	1
1.1	akJFIF : Documentation	1
1.2	copyright	2
1.3	disclaimer	2
1.4	distribution	2
1.5	payment	3
1.6	Usage and so on	3
1.7	Making use of 680x0 CPUs	4
1.8	correspondence	4
1.9	thanks	5
1.10	prefs	5
1.11	history	7

Chapter 1

akJFIF_Documentation

1.1 akJFIF : Documentation

akJFIF.datatype V43.15

- licenseable SHAREWARE -

© 1996 by Andreas Ralph Kleinert. All rights reserved.

A PerSuaSiVe SoftWorX PRODUCT.

Needs Kickstart V3.x

Release Date : 24.11.1996

Copyright
Disclaimer
Distribution
Payment
Usage and Notes
68030-68060
Prefs
Correspondence
Thanks
Version-History

_ //
Only \X/ Amiga makes it possible!

The CHAOS-Theory (rough english translation):

The Chaos theory for example deals with trying to catch the god damned butterfly, which caused the many storms the last times.
(see "Witches Abroad" by Terry Pratchett)

Ahm...well:

...and thanks for all the fish.

1.2 copyright

The akJFIF.datatype in this version and its documentation files are (C)opyright 1996 by Andreas R. Kleinert. All rights reserved.

The right of using this program is granted to you by paying the a SHAREWARE-fee of 15 DEM (10 U\$) or equivalent to the author, or by being a owner of a Shareware program or commercial software, whose authors did avoid that for the users of their software (see below).

This software is based in part on the work of the Independent JPEG Group.

Should any of the listed terms and clauses within this document not be valid in conjunction with the law of certain countries this does not affect the validity of the other clauses.

1.3 disclaimer

The author takes no responsibility for any results of the use of this program.

This software is provided "AS IS" and there is no warranty of any kind, so that you use this software at your own risk.

The author reserves the right to discontinue development of the program.

1.4 distribution

The akJFIF.datatype in this version is freely distributable (SHAREWARE). You may copy it, if the copyright notice is left intact and all of its parts are included in the distribution.

This program MAY be included in commercial packages or commercial program collections without my written permission, nevertheless it must not be sold commercially as a single program.

WHEN being included with commercial or Shareware programs I hereby demand to receive a free copy of the final program - after you did so, the users of your program no longer need to pay the Shareware fee to me.

This program may be put on public domain disks or included in public domain disk libraries - when being distributed that way, it is allowed to take a nominal fee including the costs for copying, without considering that as "commercial" in the above mentioned sense.

This program may also be distributed via electronic mail and may be put into mailboxes as long as the redistribution conditions are

respected in all points.

By using or distributing this program you automatically agree to all of the above conditions and terms.

1.5 payment

You may send cash money in an envelope, euro-cheques, or just transfer the 15 DEM (10 U\$) shareware fee to the following account (mention your name): Deutsche Bank Siegen, BLZ 46070090 Kto. 0298174

1.6 Usage and so on

Usage

Just install the datatype files to their appropriate directories, and copy the akJFIFPrefs command to SYS:Prefs (optionally).

Please make sure, that there is a directory available, where temporary data can be stored. There must be an assignment called "VMEM:" to this directory (just like with SuperViewLibrary).

The assignment originally would have been "JPEGTMP:" for the JFIF sources, but the memory manager has been strongly modified and enhanced - on a system with many RAM available you will perhaps never actually encounter usage of that directory.

Do not assign it to "T:" - just create a safe place for it.

* if your datatypes stop working (unknown file format), please don't blame me, but at first check, whether you've still installed an already expired beta version of picture.datatype V43

Program information

akJFIF.datatype is a new JPEG datatype, which is based on the latest IJG JFIF sources V6a.

So it does support progressive JPEG and all the other things introduced with V6a (note: it reads progressive JPEG, but DataTypes cannot display images progressively - instead only as a single chunk).

With V39-V42 picture.datatype it produces 256 color palette-based (with either none, floyd-steinberg or ordered dithering) or HAM6/8 output, with Ralph Schmidt's picture.datatype V43 as well optionally 24 Bit output may be done.

You must use the included preferences program for best configuration.

akJFIF.datatype is SHAREWARE, the future depends on YOU (-> see README).

1.7 Making use of 680x0 CPUs

If you do own an 68020/030+68881/882 FPU or 68040/060+FPU you may wish to make use of these.

Usually, Amiga OS' mathieeee-Libraries do automatically manage the coprocessor support, but for some reasons, these libraries are not used with this datatype:

- they can't be shared between processes
- they are not actually optimized for 68040/060+FPU as with OS 3.1

Unfortunately, the used mathtrans.library does not support an FPU at all.

But there's a solution: it is strongly suggested, to use some of the available math-library replacements and/or patches from Aminet.

FMath from Martin Berndt, for example does replace all of them:

- mathieeedoubbas.library
- mathieeedoubtrans.library
- mathieeesingtrans.library
- mathtrans.library

It is strongly recommended to install V40.6 or a newer version from Aminet (Aminet:util/libs/FMath406.LHA).

There's also a bug in mathieeesingbas.library (which resides in ROM), so that you should install a patch for that:
For example "SetMathPatch" (coming with e.g. GhostScript) or a newer SetPatch Version V43.x (recommended - e.g. available as "public beta" from ftp.amiga.de).

1.8 correspondence

```
|
|   You may reach me the following way.
|   Send bug-reports, money or whatever to:
|-----|
|   * SuperView Development & Registration *
|   * DRAFU Development & Registration *
|   * Image Engineer Registration Site Europe *
|
|
|           PerSuaSiVe SoftWorX
|
|           Andreas R. Kleinert
|           Sandstrasse 1
|           D-57072 Siegen
|           Germany, Europe
|
| Any snail mail to the old address will still be routed.
|
|           Phone:  +49-271-22869 also FAX + AM
|
```

```
|
|                                     +49-271-22838
|
|                                     Weekdays after 17.00h.
|
|      When calling via phone you may leave a message,
|      if I'm not available - but don't expect me
|      calling back to USA, Australia, ... since
|      german phone rates are HIGHLY expensive.
|_____|
```

E-Mail:

DO not SEND ANY binaries (or uuencoded) VIA THE
 FOLLOWING EMAIL ADDRESSES, EXCEPT MAYBE small ONES
 VIA t-online.de (smaller or equal 16 KB).
 THANK YOU.

```
- Fido      Andreas Kleinert 2:2457/350.18
- Usenet
      Andreas_Kleinert@superview.ftn.sub.org  (Fido-Gate)
      Andreas_Kleinert@t-online.de           (T-Online)
      ARK@COB.wwbnet.de                     (Z-Netz)
```

- If nothing else works, try one of these public
 Fido-Usenet gateways:

In Germany:
 Andreas_Kleinert@pl8.f350.n2457.z2.fido.sub.org

From USA or elsewhere:
 Andreas_Kleinert@pl8.f350.n2457.z2.fidonet.org

Please note, that the "superview.ftn.sub.org"
 domain will perhaps be renamed in late 1996.

1.9 thanks

Thanks go to (in order of appearance ;-)

=====

```
- Martin Sprenger      - Kristian Phillips    - Swen K. Stullich
- Brad Avery           - Erik Magnusson      - Matthias Kraft
- Allan Odgaard        - Francesco Doro      - Per Jonsson
- Ariel Magnum         - Jürgen Klein        - Gabriele Guardì
- Arno Richter         - Philippe Reux       - Matteo Tenca
- Odd H. Sandvik       - Ingo Jürgensmann   - John Millington
- Jerome Lovy          - Carlos Lopez Otero  - Henk Jonas
- Albert Meyer         - Thomas Boerker     - André Laemmer
- Edwin h. Bielawski
```

1.10 prefs

akJFIFPrefs

 akJFIFPrefs is the Preferences Program for akJFIF.datatype.
 GUI has been created with Designer 1.54 by Ian O'Connor.
 Icon by Detlef Winkler (same as SVPrefs.info)

You can do the following settings, which will be written
 to ENV: and/or ENVARC: into a settings file called
 "Datatypes/akJFIF.prefs":

- 1) DECODE_METHOD=(FAST_INTEGER|SLOW_INTEGER|FLOATING_POINT)
- 2) DITHERMODE=(NO_DITHERING|DITHER_FLOYD-STEINBERG|DITHER_ORDERED|HAM_OUTPUT)
- 3) V43MODE=(256|24BIT)
- 4) HAM_MODE=(HAM6|HAM8)
- 5) COLOR_QUANTIZING=(SLOW|FAST)
- 6) UPSAMPLING=(ON|OFF)
- 7) PROGRESSBAR=(ON|OFF)

That's mostly self-explaining, but as an example,
 here are the default settings and a short explanation:

```
DECODE_METHOD=FAST_INTEGER
DITHERMODE=DITHER_ORDERED
V43_MODE=24BIT
HAM_MODE=HAM6
COLOR_QUANTIZING=FAST
UPSAMPLING=OFF
PROGRESSBAR=ON
```

Please note, that it does not suffice to simply specify the preferred options. Some also do react as switches. Here are some examples how to manage specific configurations:

HAM Output (V40/V43):	DECODE_METHOD=FAST_INTEGER	*
	DITHERMODE=HAM_OUTPUT	
	V43_MODE=256	x
	HAM_MODE=HAM8	*
	UPSAMPLING=OFF	*
Dithered Output (V40/V43):	DECODE_METHOD=FAST_INTEGER	*
	DITHERMODE=DITHER_ORDERED	*1
	V43_MODE=256	
	COLOR_QUANTIZING=FAST	*
	UPSAMPLING=OFF	*
256 Colors (V40/V43):	DECODE_METHOD=FAST_INTEGER	*
	DITHERMODE=NO_DITHERING	
	V43_MODE=256	
	COLOR_QUANTIZING=FAST	*
	UPSAMPLING=OFF	*
24 Bit (V43):	DECODE_METHOD=FAST_INTEGER	*
	DITHERMODE=NO_DITHERING	
	V43_MODE=24BIT	
	UPSAMPLING=OFF	*

```

x   here: ignored
*   may be changed
*1  may be changed to: DITHER_FLOYD-STEINBERG

```

General Explanation of Options

```
=====
```

1) DECODE_METHOD

```
-----
```

```

SLOW_INTEGER:   slow, but accurate integer algorithm
FAST_INTEGER:   faster, but less accurate integer algorithm
FLOATING_POINT: floating point algorithm

```

2) DITHERMODE

```
-----
```

```

NO_DITHERING:      no dithering, best pen selection
DITHER_FLOYD-STEINBERG: slow, high quality, floyd-steinberg dithering
DITHER_ORDERED:    ordered dithering on fixed palette
HAM_OUTPUT:        generate HAM output from 24 Bit data

```

3) V43_MODE (only with "NO_DITHERING")

```
-----
```

```

256:   enable dithered 256 color output for V43 picture.datatype
24BIT: do raw 24 Bit output with V43 picture.datatype

```

4) HAM_MODE (only with "HAM_OUTPUT")

```
-----
```

```

HAM6: generate HAM6 output
HAM8: generate HAM8 output

```

5) COLOR_QUANTIZING (not with "DITHER_ORDERED", "HAM_OUTPUT" or 24 Bit)

```
-----
```

```

FAST: high speed color quantization
SLOW: high quality color quantization

```

6) UPSAMPLING

```
-----
```

```

ON:   do careful upsampling of chroma components
OFF:  do faster, but sloppier upsampling of chroma components
      (often very small visual impact)

```

7) PROGRESSBAR

```
-----
```

```

ON:   pop up percentage display
OFF:  do not pop up percentage display

```

1.11 history

History

```
=====
```

```

V43.15 (24.11.96)  : - progress bar now treated like requester.
                      Now will check pr_WindowPtr before trying
                      to open on (default) pubscreen

```

- (-> Edwin H. Bielawski)
 - added special fix for AWeb 2.1, which has pr_WindowPtr correctly set, but does let the Datatype operations do by an "AWebIP" task, which has not. Thus when being called by "AWebIP" we now refer to the pub screen "AWeb" instead of fiddling with pr_WindowPtr
- V43.14 (23.11.96) : - progress bar window no longer auto activated
(-> André Laemmer)
- when called by IPrefs (e.g. for WBPatters), a progress bar will never pop up
 - on missing picture.datatype V39, prefs program would have claimed about missing V40
- V43.13 (12.11.96) : - changed PubScreen behaviour of progress bar
(-> Thomas Boerkel)
- V43.12 (10.11.96) : - completely recompiled with SAS/C V6.57
- added 68030, 68040 and 68060 version
(-> Ingo Jürgensmann)
 - there was a broken version of V43.11 (3.11.96) (in parts still labeled as V43.10) which unfortunately went on Aminet, but hopefully had been overwritten by the right version later
 - added doc section about 680x0 CPUs and FPU's. Please follow the instructions given and use the FMath patches, also SetPatch 43. The latest version floating around was SetPatch V43.5 - which is currently not on ftp.amiga.de, but maybe available elsewhere
- V43.11 (3.11.96) : - bugfixes
- V43.10 (30.10.96) : - the prefs program did not run with OS V39
(-> Matteo Tenca)
- V43.9 (29.10.96) : - due to a stupid bug the progress indicator was not fully re-entrant and thus multiple image loading with active progress indicator may have caused crashes.
(-> Gabriele Guardi)
- V43.8 (28.10.96) : - progress indicator window now can be closed when currently being in use (Closegadget)
(-> Ariel Magnum)
- added small pseudo installation batch file
 - upload delay because of Aminet restrictions
 - renamed archive name (no version counting)
 - updated/reworked docs
- V43.7 (26.10.96) : - renamed devs/datatypes/akJFIF to devs/datatypes/JFIF for reasons of clearness
- fixed some typos in the docs
 - fixed palette problems with HAM6/8 and e.g. MultiView
(-> Ariel Magnum, Jürgen Klein)
-

- V43.6 (23.10.96) :
- reduced size by about 30 K
 - prefs program now creates ENV:Datatypes, if not already there (and ENVARC:)
(-> Per Jonsson)
 - akJFIFPrefs.info no longer delete protected
(-> Per Jonsson)
 - merged all text files to akJFIF.guide
(-> Allan Odgaard)
 - fixed small bug in progress indicator
- V43.5 (20.10.96) :
- added HAM6/8 support
 - now even with picture.datatype V43 it is possible to use the internal dithering methods optionally
 - completely rewrote preferences and added more optional settings
 - to continue using it in V43 24 Bit mode, you now have rework your preferences as follows:
 - Dither mode: None
 - V43 Mode: 24 Bit
 - fixed bug in prefs program, which popped up an empty message requester and/or produced an enforcer hit, when leaving
(-> Martin Sprenger)
 - removed "Fastest" option - it's just the same as "Fast"
 - slow (well) quantization does not work with ordered dithering (instead turns it to floyd-steinberg dithering), thus now disabled/overridden for that case (also in the prefs program)
 - etc.
- V43.4 (18.10.96) :
- in V43 mode (with installed picdt V43), grayscaled JPEGs would not have been read
(-> Kristian Phillips)
 - updated Prefs doc file
- V43.3 (6.10.96) :
- moved Prefs from ENV:akJFIF.cfg to ENV:Datatypes/akJFIF.prefs - respectively ENVARC:
(-> Swen K. Stullich)
 - added optional progress bar percentage display (default is "on")
 - slightly fixed ModeID generation.
Please use SetPatch 43.5 for best results on OS 3.0 systems
 - changed distribution conditions: when being "licensed" by commercial or Shareware software by sending me a free copy, users of that software need no longer pay the Datatype shareware fee
- V43.2 (28.9.96) :
- upgraded to V6a sources, since some people seem to be so "version fanatic", that it doesn't matter, whether an upgrade actually makes any sense for our uses %-)
- V43.1 (17.9.96) :
- added picture.datatype V43 support,
-

- so that 24 Bit output can be done
- added akJFIF.cfg file support, so that settings may be done (speed, dithering, etc.)
- added Prefs program with GUI for changing settings
- and more

Thanks to Brad Avery, Erik Magnusson and Matthias Kraft for suggestions.

- V40.1 (2.9.96) : - first release
- not yet with picture.datatype V43 support
 - and not yet with any preferences options