

## **SuperView-Library**

COLLABORATORS

	TITLE : SuperView-Library		
ACTION	NAME	DATE	SIGNATURE
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REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

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## Chapter 1

# SuperView-Library

### 1.1 SuperView Library Documentation

superview.library V9.12

- FREeware -

© 1993-94 by Andreas R. Kleinert. All rights reserved.

This program has been written under OS V3.1 and is therefore fully compatible. It needs OS V2.04+.

Release Date : 29.12.1994

Copyrights  
Disclaimer  
Distribution  
Requirements  
How to install and configure it  
Short: Purpose and Abilities  
Supporting Software  
SVObject Descriptions/History  
SVDriver Descriptions/History  
SVOperator Descriptions/History  
Possible future enhancements ...  
History  
Thanks and Greetings  
Used literature for developing  
Credits  
How to contact the author

—  
\_ //

Only \X/ Amiga makes it possible!

### 1.2 Copyright

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The superview.library and all the distributed files (e.g. the documentation files) are (C)copyright 1993-94 by Andreas R. Kleinert. All rights reserved.

The usage of the "superview.library"'s functions for own program projects, no matter if commercial or non-commercial, is allowed without any restrictions.

Some of the mentioned names or products may be copyrighted by companies or trademarks of companies.

Remark: Drawericons have been taken from Fred Fish's AmigaLibDisks.

## 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.

## 1.4 Distribution

Table of contents:    \textdegree{} Non-commercial distribution and usage  
                      \textdegree{} Commercial usage / distribution licenses  
                      \textdegree{} "Agreement-by-usage" condition

Non-commercial distribution and usage  
-----

The program SuperView-Library in this version is freely distributable. You may copy it, if the copyright notice is left intact and all of its parts are included in the distribution.

The program may be put on public domain disks or included in public domain disk libraries.

Special permission hereby goes to Fred Fish's AmigaLib-Disks and the german series (in alphabetical order) :  
AmigaSzene, BerndSPD, FRANZ, GPD, SaarAG, TAIFUN and TIME.

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.

The program must not be sold in any way, but it is allowed to take a nominal fee including the costs for copying.

Programmers of freely distributable programs, which make use of superview.library, may create their own distributions of superview-library for inclusion with their programs, but they must state within the program's documentation from where the whole and original distribution can be obtained (e.g. from AmiNet).

---

I would like to get a copy of the final program, if possible (or at least an EMail reporting that such exists).

Commercial usage

-----  
This program MUST NOT be included in commercial packages or commercial program collections without my written permission, e.g. expressed in a license agreement.

Nevertheless programmers of commercial programs may integrate support of superview.library into their programs and make full use of its facilities.

So there are no restrictions in using, programming and supporting it, but no commercial distribution (e.g. shipping the library together with commercial programs) is allowed.

Also, in my opinion, there's no difference in selling freely distributable software together with your product or instead directly including it with the package. A license will be needed for this.

Also I demand to get a copy of the final commercial program directly from the company or one its subsidiaries.

Contact me for detailed information on license agreements.  
The fees are moderate and will not substantially decrease your effective profit too much. Last not least it is the best solution to please your customers.

... and REMEMBER :

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

## 1.5 Abilities, Purposes and much more

The "superview.library" consists of many functions and sub-libraries, which allow quick and easy displaying, saving, converting and processing of various picture formats (IFF-ILBM, GIF, JPEG, PCX, Targa, TIFF, ...).

It has been designed for the purpose to display and process any common type of bitmap graphics as fast and as comfortable as possible on almost any Amiga hardware configuration.

External Viewer-Libraries (SVObjects), Graphic Card Drivers (SVDivers) and various Operators (SVOperators) allow easy but flexible configuration, usage and expansion.

Programmers may send me their own SVObjects, SVDivers or SVOperators, if they want to have them added to the main distribution archive or put onto the DeveloperDisk, which is available for the library.

---

## 1.6 Installation and Configuration

Just use the supplied Installer-Script, or "by hand"-copy "superview.library" and "superviewsupport.library" to your "LIBS:"-Directory, the SVOjects to "LIBS:svobjects/", the SVDDrivers to "LIBS:svdrivers/" and the SVOperators to "LIBS:svoperators/" !

"datatypes.library" V39+ is only needed, if OS3-DataTypes are wished to be supported.  
Please take care, which libraries are also additionally needed by the single SVOjects/Drivers/SVOperators !!!

"AddBuffers"-Values for the used Drives should at least be around 25, sometimes more might be useful.

### Assignments

~~~~~

As always, there have to be the standard assignments to be present like "ENV:", "ENVARC:" and so on

Additionally, you should create an assignment called "VMEM:", which is intended to contain virtual memory image files, which may be created either by superviewsupport.library (vmem\_XXXXXXX) or JPEG.svobject (jpeg\_XXX).

It does not always make sense, to place this directory somewhere on a Ram-Disk, because most programs will perhaps only try to place files there, after they already checked, that there's no more memory available (so even your Ram-Disk would not grant more space).

It is suggested to place this Assign on a fast harddisk or partition, with a high AddBuffers value.

### Common ENV-Variables

~~~~~

You may set the following environment variables at the location "ENV:superview-library". SuperViewPrefs can be used for this.

Name	Content
Default.svdriver	Name of default-ScreenDriver. Read by superview-library at first opening. MUST NOT contain any extra characters (spaces, tabs, etc.).

### ControlPad-Switches

~~~~~

```
ControlPad-Name      : "ENV:superview-library/LIBRARY.controlpad"
ControlPad-Commands : - ANYDATATYPES
                      ; if this KeyWord is set, ANY DataTypes will
                      ; be loaded and tried to be displayed in some
                      ; way (e.g. not only pictures, but also 8SVX
                      ; sounds or ANIM-Files ...)
```

[ There are also several SVOjects/Drivers/Operators, which support environment variables.

Default-values will be used, if these are not set. ]

## 1.7 Overview of currently available SVOjects

Available SVOjects (as far as known) :

| SVOject             | Type | Read-Support          | Write-Support         |
|---------------------|------|-----------------------|-----------------------|
| IFF-ILBM            | EXT  | (system-dependent)+24 | (system-dependent)+24 |
| IFF-ACBM            | EXT  | (system-dependent)    | (system-dependent)    |
| OS3-DataTypes       | INT  | all Pictures          | (not available)       |
| PCX upto V3.0       | EXT  | max. 8/24bit Files    | max. 8/24bit Files    |
| SVO upto V1.0       | EXT  | (system-dependent)+24 | (system-dependent)+24 |
| GIF upto 89a        | EXT  | max 8bit Files        | max 8bit Files        |
| BMP (W*nd*ws)       | EXT  | max 8/24bit Files     | max 8/24bit Files     |
| Icon (W*nd*ws)      | EXT  | 16 Color Icons        | (not available)       |
| FBM (*nix)          | EXT  | max 8/24bit Files     | max 8/24bit Files     |
| PNM (*nix)          | EXT  | max 8/24bit Files     | always as 24bit Files |
| C64 (Koala, Doodle) | EXT  | max 4bit Files        | (not yet available)   |
| IMG (GEM/Ventura)   | EXT  | max 8bit Files        | (not yet available)   |
| TIFF (V5.0)         | EXT  | max 8/24bit Files     | max 8bit Files        |
| Targa               | EXT  | max 8/24bit Files     | max 8/24bit Files     |
| WPG (WordPerfect)   | EXT  | max 8bit Files        | (not yet available)   |
| SunRaster (RAS)     | EXT  | max 8/24bit Files     | max 8/24bit Files     |
| Pictor/PCPaint/PIC  | EXT  | max 8bit Files        | (not yet available)   |
| MAC (MacPaint)      | EXT  | max 1bit Files        | (not yet available)   |
| IFF-YUVN            | EXT  | 24bit Files           | always as 24bit Files |
| JPEG (JFIF)         | EXT  | max 8/24bit Files     | always as 24bit Files |

There's also an "Unpack.svobject" in the Bonus-Directory, which allows reading of packed files without explicitly unpacking them before (supports XPK and PP20).

Planned SVOjects (no guarantee !) :

- RIFF
- MTV
- SGI
- RLE
- PCD (yes, the one from the CD-ROMs ...)
- and more

## 1.8 Overview of currently available SVDrivers

Available SVDrivers (as far as known) :

| SVDriver   | Requirements                 | BITPLANE | ONEPLANE |
|------------|------------------------------|----------|----------|
| ECS        | ECS, OS V2.04+ (V37), 68000+ | (system) | 8bit     |
| AGA        | AGA, OS V3.00+ (V39), 68020+ | (system) | 8/24bit  |
| EGS-System | EGS-Graphic-Libraries        | 8bit     | 8/24bit  |

OpalVision      OpalVision Card      8bit      8/24bit

Planned SVDrivers (no guarantee !) :

- Picasso
- Retina
- and more ;)

## 1.9 Overview of currently available SVOperators

Available SVOperators (as far as known) :

SVOperator

|                   |                                                        |
|-------------------|--------------------------------------------------------|
| XOR               | nice effects ...                                       |
| 24BitToHam6       | dithers 24 Bit RGB to HAM6                             |
| Dither24Bit       | dithers 24 Bit RGB to 2..256 Colors                    |
| HilbertDither256  | dithers to Black & White                               |
| ExtractGrayScales | converts (upto) 256 Colors or 24 Bit to Gray           |
| ExtractRed        | extracts Red values from (upto) 256 Colors or 24 Bit   |
| ExtractGreen      | extracts Green values from (upto) 256 Colors or 24 Bit |
| ExtractBlue       | extracts Blue values from (upto) 256 Colors or 24 Bit  |
| TopToBottom       | turns top to bottom ...                                |
| LeftToRight       | turns left to right ...                                |

Planned SVOperators (no guarantee !) :

- 24 Bit -> HAM8
- HAM6/8 -> 16/256 Colors
- 256 Colors -> 24 Bit
- and more ;)

## 1.10 Software supporting SuperView.library

The following programs are currently supporting the "superview.library" :

- SuperView
- SimpleView (superview.library Example Program)
- MicroView (superview.library Example Program)
- KFracPlus
- SIP (for examinations)
- DRAFU (unreleased Beta-Version)
- SuperLoader (Steve Quartly's OpalVision-Loader)
- ...

## 1.11 Thanks, greetings, credits and the rest

---

I perhaps have to thank many persons for supporting me with ideas,  
Bug-reports and so on :

Thanks go to (in alphabetical order) :

\* Jan van den Baard

... for his great tool GadToolsBox, which I used to design the GUI of  
SuperViewPrefs.

\* Gerd Frank

... for Beta-Testing, Bug-Reports and for his many ideas and suggestions,  
concerning superview.library and SuperView (also see notes there) !  
And last not least for the new AmigaGuide Documentation... ;)

\* Martin Schulze

... for uploading SuperView onto the AmiNet and including it into  
the SaarAG series, so that it reached more people out there.  
Also for sending and receiving all those mails, which did not find  
their way through the labyrinth of Fido-Gateways ;-)

\* Detlef Winkler

... for the new Icons for Doc- and AmigaGuide-Files, included with  
the Library. He also designed some more Icons for use with SuperView.

\* and last NOT LEAST

- all \_registered\_ users of SUPERVIEW for supporting Shareware !!  
(ORDER YOUR KEYFILE NOW !)

- the people mentioned below (still in alphabetical order ;-)

|         |             |                                                                                                      |
|---------|-------------|------------------------------------------------------------------------------------------------------|
| Alex    | Carbin      | TuC / Co-Sysop Century                                                                               |
| Sven    | Drieling    | Indy - Creator of "PowerBrei" DiskMag                                                                |
| Fred    | Fish        | AmigaLibDisks                                                                                        |
| Stefan  | Grad        | GPD-Disks                                                                                            |
| Paul    | Huxham      | (Co-)Programmer of OpalVision-SVDriver                                                               |
| Stefan  | Kremer      | TuC / Sysop Century                                                                                  |
| Alex    | Lange       | Time PD-Disks                                                                                        |
| H.P.    | Lattka      | Franz PD-Disks                                                                                       |
| Andreas | Manewaldt   | Taifun PD-Disks                                                                                      |
| Axel    | Melzener    | Game Object Design                                                                                   |
| Andreas | Neumann     | Creator of the PCQ-Support includes and modules.                                                     |
| Michael | Petrikowski | Amiga Szene PD-Disks                                                                                 |
| Thomas  | Saenger     | Sysop of "elephant BBS", my Fido-Boss                                                                |
| Michael | Trautmann   | PC-Programmer, for information on WinIcons.                                                          |
| Steve   | Quartly     | (Co-)Programmer of OpalVision-SVDriver,<br>also wrote "SuperLoader" and "SqOpal".                    |
| NJ      | Verenini    | The one, who created this nice "Spumoni's Workbench"<br>JPEG-Picture (AmiNet) with SuperView ... :-) |
| Detlef  | Winkler     | For ideas and support on 24 Bit ILBM and YUVN.                                                       |

- some users, which reported bugs via mail, e-mail or telephone

(only the ones, which have not already been listed above) :

Thomas Alexnat  
Rudi Brand  
Aaron Digulla  
Thomas Gundlach  
Richard Hartmann  
Reinhard Theling

and more.

Maybe I forgot some people to list here, but nobody's perfect... ;-)

## 1.12 How to contact the author

If you like, you may send me some money. Perhaps this will motivate me to continue programming such programs or just making updates of this one. Send bug-reports, money or whatever to :

Andreas R. Kleinert,  
Grube Hohe Grethe 23,  
D-57074 Siegen,  
Germany.

Phone: +49-271-331859 (weekdays after 18.00h)  
+49-271-332147 (weekdays after 18.00h)  
EMail: Fido Andreas Kleinert 2:2457/435.10  
Usenet/InterNet Andreas\_Kleinert@superview.life.sub.org  
\*\*\* "life.sub.org" will soon change to  
\*\*\* "ftn.sub.org" (November 94)

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

Andreas\_Kleinert@pl0.f435.n2457.z2.fido.sub.org (Germany)  
Andreas\_Kleinert@pl0.f435.n2457.z2.fidonet.org (US)

When reporting any bugs, please don't forget to include a detailed description of the bug and tell me, if it is reproduceable or not. Also mention the version number of superview.library (and e.g. SuperView) which caused the bug and describe your system configuration (Amiga model CDTV, CD-32, 600 (HD)/500 (+)/1000/1500/1200 (HD)/1300/2000/2500 (UX)/3000 (T)/4000 (/030/040) (T), Kickstart/OS Version, RAM, HardDisk, special Hardware/Software).

## 1.13 The future of the SuperView.library

Future enhancements :  
=====

All parts will be made bigger, better, faster and more!

(Of course you're invited to help doing so ... ;-)

---

## 1.14 History

Please note the version-dependencies :

| superview.library | SVObjects   | SVDivers  | SVOperators |
|-------------------|-------------|-----------|-------------|
| Version 1         | -           | -         | -           |
| Version 2         | Version 1   | -         | -           |
| Version 3-8       | Version 1,2 | Version 1 | -           |
| Version 9         | Version 1,2 | Version 1 | Version 1   |

V9.12 (29.12.1994) :

-----

- New features:
  - added "Dither24Bit.svoperator" for quick and easy dithering of 24 Bit RGB data to 2..256 Colors (default is 256). May e.g. be used with AGA.svdriver to dither graphics before displaying them.
  - added "Unpack.svobject" to Bonus-Directory, which allows to parse PP20- or XPK-packed files through superview.library, without doing any further actions on them before (writes temporary files to VMEM:)
  - added "PNM.svobject" for reading (PBM,PGM,PPM) and writing (PPM) of binary PNM-Files, as e.g. used by the (Net)PBM package. Supports binary (P4/P5/P6), but not yet ASCII (P1/P2/P3) data.
  - added 24 Bit support to "FBM.svobject" (reading and writing)
- Bug-Fixes:
  - "SunRaster.svobject": 24 Bit files had the ColorMap flag set and contained wrong planetype flag. Fixed.
  - fixed bug in "FBM.svobject" ("bits" value might not have been "8" always -> misinterpreted as "depth").
  - fixed bug in the (re-)initialization module of all SVDivers and SVOperators (except OPAL), which might cause a small memory loss, when re-loading the specific module after it has been flushed out of memory, while superview.library wasn't flushed.

V9.10/9.11 (18.12.1994) :

-----

- Bug-Fixes in V9.11:
  - TIFF.svobject: there always popped up some requesters with debugging info in V9.10
- New features:
  - added SVOperator-Support for 24 Bit graphics to AGA.svdriver: via a ControlPad you may now specify, what should be done before displaying 24 Bit graphics (e.g. calling the new "24BitToHam6"-Operator. See notes below and docs of AGA.svdriver).
  - added "24BitToHam6.svoperator" to allow (quick and easy) conversion of 24 Bit RGB data to HAM6.
  - PCX.svobject: added write support for 24 Bit graphics (unencoded)
- Bug-Fixes:
  - PCX.svobject: (several)
- Misc:

- added several new Icons, which have been designed by Detlef Winkler. Thanks !  
(See SuperView documentation files, if you wish to contact him.)
- designed better GUI and Icon for SuperViewPrefs
- Documentation and Programmers Section:
  - added some more details to the distribution/license conditions: not actually changed, but precised.
  - revised and updated "requirements" section of this documentation
  - fixed some bugs inside the function reference docs (programmers), where some function names and an offset had been wrong (-> Andreas Neumann)
  - revised Includes slightly
  - included PCQ-Pascal support-stuff to the Programmers part of the library distribution.  
Contains Include-Files and two Example-Sourcecodes (based on superview-lib 9.x and superviewsupport-lib 4.x includes).  
Many thanks to Andreas Neumann (NEUDELSOFT), who created/edited these Files and Programs !
  - removed revision history of versions before V9.1 because of disk space reasons ... ;-)
  - See Docs of any older version, if you're interested in it.
  - JPEG.svobject still came with the old doc-file (V2.4).  
Now V2.5-Docs are included, describing the (small) changes.
  - "SimpleOP.c" example program was neither correct nor useful (just debugging code). Now you may take a look at it...
  - fixed bug within programmer's documentation:  
SuperWrite has only ONE parameter, not TWO !  
(This bug happened while transferring some paragraphs from superplay-lib's documentation to superview-lib's Docs... ;-)

#### V9.9 (20.11.1994) :

- 
- improved AGA.svdriver a little bit (OS 3.1)
  - added WinIcon.svobject for W\*nd\*ws (TM) Icons, although I do not really know, whether anyone might need this...
  - added "VIRTUAL MEMORY" support functions to superviewsupport.library.  
Use them as a programmer, or if you're a user, just wait, until they'll be used by superview-lib...
  - fixed bug in BMP.svobject, where the buffer of a written graphics would have been turned upsidedown after the operation (-> Detlef Winter)
  - there were still alignment bugs inside ILBM24-Support (-> Detlef Winkler, Steve Quartly)
  - recompiled JPEG.svobject and changed and optimized some parts.  
Note, that temporary files no longer will be put in "JPEGTMP:", but in "VMEM:"

#### V9.8 (04.11.1994) :

- 
- argh!  
Not again!  
SVOperators still did not have their own directories and would have been copied (one after another) to a file called "libs:svoperators".
-

- Now finally fixed (SORRY!)
- added SVOperators for extraction of RED, GREEN and BLUE values from (upto) 256 Color graphics or 24 Bit graphics (with 256 Color graphics as result). Those resulting graphics may easily be converted to 256 Color grayscale graphics or simply be used for a "quick view" on 24 Bit graphics.
    - > ExtractRed, ExtractGreen, ExtractBlue
  - replaced "256ToGray.svoperator" with "ExtractGrayScales.svoperator", which now will also work with 24 Bit sources.
  - updated InterNet-address list

V9.7 (29.10.1994) :

-----

- added some functions to superviewsupport.library
  - (-> Steve Quartly)

V9.6 (28.10.1994) :

-----

- library startup-code: SVDriver and SVOperator lists had not been freed (small memory loss, but not significant and only, when expunging the library without reboot)
- programmers: "svobjects.fd" was "svoperators.fd" and vice versa. Fixed.
- SVL\_FileInfoRequest() now also will inform about plain SV\_GfxBuffers, which resulted out of an SVOperator action ("virtual graphics"). The results e.g. can be seen when dithering a picture via SuperView and then calling "FileInfo": now there's information available, and you'll see, that the ColorDepth will have changed.
- Installer-Script did not install the SVOperators. Users had to do this separately. Sorry: has been fixed.
- ILBM.svobject did no longer write from BitPlanes, only from ChunkyPixel-Buffers (aaaaahhhhh, not AGAIN ...)

V9.5 (21.10.1994) :

-----

- AGA.svdriver V1.11 had a small (?) bug: autoscrolling of large pictures had been disabled while fixing several other things (forget to re-activate) it. Sorry. Now it will work again (BTW: ECS.svdriver did not have this bug).

V9.4 (15.10.1994) :

-----

- included new YUVN.svobject (IFF-YUVN). Already with full write-support (+ clipboard reading/writing).
- improved SVOperators: - HilbertDither256
- fixed bugs in SVObjects: - ILBM: 24 Bit now really works with all solutions and all destination programs (hopefully ;-)

- ```
- misc: * note, that one of my InterNet addresses has been removed
        from the list (no longer valid)
- and more ?!
```

V9.3 (09.10.1994) :

-----

- ```
- aargh: there was no "svoperators"-directory in the archive's
      "libs"-path, so that XOR.svoperator had been copied/renamed
      to the FILE "svoperators".
I'm awfully sorry about this !
(Thanks to Sven Driehling for reporting this !!)
- fixed some bugs within the documentation and elsewhere
  (-> Sven Driehling)
- added missing FD-File (and entries within the other files)
  (-> Sven Driehling)
- added SVOperators :   - "HilbertDither256" for fractal Hilbert
                        dithering from 256 Colors to 2 Colors
                        Black & White
                        - "256ToGray" for converting 256 Colors
                        to Gray (colormap operation)
- note: be careful when using the IFF24 Bit support.
  Problems have been reported when converting from Targa (or similar)
  to 24 Bit IFF. Watch out for a bug-fixed version.
  (-> Detlef Winter)
```

V9.2 (02.10.1994) :

-----

- added 24 Bit-Support for IFF-ILBM (reading and writing), which has been suggested by several people.  
(requested by Detlev Winkler)
- small bug-fix inside BMP.svobject  
(mentioned by Gerd Frank)
- added ControlPad-Switch (ENV:SuperView-Library/LIBRARY.controlpad) to allow (again) displaying DataTypes other than for GfxFormats (set ANYDATATYPES as switch).  
This is only for people who like to "display" sounds by putting the "play sound" button onto a Screen ... ;-)  
This option is disabled by default, so that DataTypes other than of kind "picture" will be rejected usually.  
(requested by Gerd Frank)

V9.1 (30.09.1994) :

-----

- added SVOoperator-Support (and some new functions)
- fixed some very bad bugs concerning Oneplane/Chunky-Pixel support
- slightly changed (cleaned up) distribution conditions, to prevent future misunderstandings

```

*****
* Revise history entries before V9.1 have been deleted      *
*                   to save diskpace !                      *
*****

```

\*\*\*\*\*

## 1.15 ILBM.svobject

© 1994 by Andreas R. Kleinert, Grube Hohe Grethe 23, 57074 Siegen, Germany

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Version : 2.15  
Release Date : 16.11.1994

### Description

~~~~~

ILBM.svobject is an external Library-Module for the superview.library V2+.

It contains SVDriver-Support for the superview.library V3+, and needs any SVDriver with Bitplane-Support.

It supports reading and writing of IFF-ILBM Files.  
In detail these are :

#### Reading :

- IFF-ILBM uncompressed 1..24 Bit
- IFF-ILBM CmpByteRun1 compressed 1..24 Bit

#### Writing :

- IFF-ILBM uncompressed 1..24 Bit
- IFF-ILBM CmpByteRun1 compressed 1..24 Bit

Reading/writing from/to ClipBoard is supported.

### History

~~~~~

V2.15 (16.11.1994) :

- there were still alignment bugs inside ILBM24-Support:  
one occurred with both - CmpByteRun1 and uncompressed - and  
one only with uncompressed pictures

V2.14 (28.10.1994) :

- since there was a special case for 24 Bit Buffers, no longer  
simple BitPlane-Buffers (only ChunkyPixel) would have been  
accepted (error\_action\_not\_supported).  
Fixed.

V2.13 (15.10.1994) :

- bug-fixed 24 Bit-Support: - some programs (V\*\*\*T\*\*) do not like it, when the CAMG-ScreenMode is invalid, but not HAM. Now we do not write any CAMG-Chunks with 24 Bit-Files, because even HAM8 would not be the "right one" for 24 Bit (just for `_dithered_` 24 Bit).
- odd-width pictures would not have been read/written correctly.  
Simple bit-shifting bug (forgot to add 7 before dividing through 8). Fixed.

V2.12 (02.10.1994) :

- added 24 Bit support for reading and writing  
(should work without problems, although it uses a large amount of memory and is very particular concerning the integrity of the supplied files for read attempts).

V2.11 (12.06.1994) :

- now GfxBuffer-writing no longer results in wrong x/yAspect values

V2.10 (05.06.1994) :

- SVOobject flags now reflect, that GfxBuffers can be written
- now "aspect"-values are set to non-zero, if writing an ILBM from a GfxBuffer

V2.9 (03.06.1994) :

- files with odd width would have been saved without pad-bytes :  
this caused no problems when reading them into ILBM.svobject, but almost all other program might have complained about a "corrupt IFF file". Files now are written padded to word boundaries. Even CBM's "MultiView" and "ILBMload" now seem to be pleased with the "odd-width" files written by this program.
- reading of uncompressed padded "odd-width" files would not have worked, now it works, but un-padded files will no longer be read correctly. Compressed files are ALWAYS read correctly, no matter, if they are padded or not (because I do not use the standard decoding routines :-)

V2.8 (27.05.1994) :

- now saving of GfxBuffers is possible : internal write routines have been completely rewritten, so that supplied Screens are transferred to GfxBuffers before saving. BitPlane AND OnePlane Buffers upto 8 Bit are supported : they are converted to each other by using the appropriate functions of `superviewsupport.library V3+`.

V2.7 (15.05.1994) :

- the Clipboard feature did not work, since ILBM.svobject and ACBM.svobject had been externalized. Specifications had to be changed slightly - in a compatible way - to re-arrange READING to work again. For WRITING only superview-Library had to be changed.
- Besides : the Clipboard would not have been closed correctly, anyway, because - yet another bug - there was a function call missing.

V2.6 (07.05.1994) :

- use of SAS/C V6.51
- use of new "superviewsupport.library" V1  
This saves some space again (here : ca. 1100 Bytes).

V2.5 (02.04.1994) :

- improved speed of CmpByteRun1 decoding routines
- improved adjusting of unencoded picture data
- un"#define"d CRNG support routines, which are not used since V2.1 anyway. This saves some code again.
- un"#define"d some more (yet) dead code (AUTH, ANNO, ...)

V2.4 (27.03.1994) :

- removed internal SVDriver-Replacement, so that we now are really dependent on external SVDrivers in libs:svdrivers. This saves about 1600 Bytes disk space and reduces redundancy.
- replaced SAS/C's sprintf()-routine with own, RawDoFmt()-based one. This saves again about 1800 Bytes.
- now using Utility-Library for integer operations (activated SAS/C's UTILLIB option) : this increases 68000-codesize a little bit, but increases speed on 68020+ systems (should also decrease codesize, but does not ...)

V2.3 (25.03.1994) :

- slightly improved internal BitMap-to-BitMap routine

V2.2 (17.03.1994) :

- fixed "large memory usage" bug in internal ECS-ChunkyPixel routine
- added several security checks (zero-pointers)

V2.1 (09.03.1994) :

- now with SVDriver-Support. Not yet necessarily needed.
  - Clipboard-Support was deactivated accidentally. Now is no longer.
  - fixed small bug in memory management routines
  - fixed bug in reading and writing "big width" pictures
-

- (> Standard-Width for the specific ScreenMode) :
- BitMap->BytesPerRow was bigger than thought (for 736 was 96, not 92, so e.g. saving will result in an Width of 768)
- now sets BMHDF\_CMAPOK in bmhd->flags (former pad1) if running under V39 and writing 32 Bit-ColorMaps
- removed "ColorMap replacement" routine
- internal routines : AUTOSCROLL now really works with big-sized Screens
- ColorCycling (CRNG)-Support removed
- fixed several other little bugs

V1.2 (06.02.1994) :

- File Information did not work

V1.1 (16.01.1994) :

- first version

## 1.16 ACBM.svobject

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Version : 2.11  
Release Date : 12.06.1994

### Description

~~~~~

ACBM.svobject is an external Library-Module for the superview.library V2+.

It contains SVDriver-Support for the superview.library V3+, and needs any SVDriver with Bitplane-Support.

It supports reading and writing of IFF-ACBM Files.  
In detail these are :

Reading :

- IFF-ACBM uncompressed
- (except 24 Bit-ACBMs)

Writing :

- IFF-ACBM uncompressed
- (except 24 Bit-ACBMs)

Reading/writing from/to ClipBoard is supported.

---

## History

~~~~~

V2.11 (12.06.1994) :

- now GfxBuffer-writing no longer results in wrong x/yAspect values

V2.10 (05.06.1994) :

- SVOobject flags now reflect, that GfxBuffers can be written
- now "aspect"-values are set to non-zero, if writing an ACBM from a GfxBuffer

V2.9 (27.05.1994) :

- now saving of GfxBuffers is possible : internal write routines have been completely rewritten, so that supplied Screens are transferred to GfxBuffers before saving. BitPlane AND OnePlane Buffers upto 8 Bit are supported : they are converted to each other by using the appropriate functions of superviewsupport.library V3+.
- this should also fix the problems with strange-sized pictures
- version still reflected 2.7 instead 2.8. Now we're at 2.9 :-)

V2.8 (15.05.1994) :

- AARGGHH : Reading of ACBM-Files did not work, because ULONG-array checked for wrong IFF-IDs (ID\_ILBM) !

V2.7 (15.05.1994) :

- the ClipBoard feature did not work, since ILBM.svobject and ACBM.svobject had been externalized. Specifications had to be changed slightly - in a compatible way - to re-arrange READING to work again. For WRITING only superview-Library had to be changed.
- Besides : the ClipBoard would not have been closed correctly, anyway, because - yet another bug - there was a function call missing.

V2.6 (07.05.1994) :

- use of SAS/C V6.51
- use of new "superviewsupport.library" V1  
This saves some space again (here : ca. 1100 Bytes).

V2.5 (02.04.1994) :

- un"#define"d CRNG support routines, which are not used since V2.1 anyway. This saves some code again.
  - un"#define"d some more (yet) dead code (AUTH, ANNO, ...)
-

V2.4 (27.03.1994) :

- removed internal SVDriver-Replacement, so that we now are really dependent on external SVDivers in libs:svdrivers. This saves about 1600 Bytes disk space and reduces redundancy.
- replaced SAS/C's sprintf()-routine with own, RawDoFmt()-based one. This saves again about 1800 Bytes.
- now using Utility-Library for integer operations (activated SAS/C's UTILLIB option) : this increases 68000-codesize a little bit, but increases speed on 68020+ systems (should also decrease codesize, but does not ...)

V2.3 (25.03.1994) :

- slightly improved internal BitMap-to-BitMap routine

V2.2 (17.03.1994) :

- fixed "large memory usage" bug in internal ECS-ChunkyPixel routine
- added several security checks (zero-pointers)

V2.1 (09.03.1994) :

- now with SVDriver-Support. Not yet necessarily needed.
- Clipboard-Support was deactivated accidentally. Now is no longer.
- fixed small bug in memory management routines
- fixed bug in reading and writing "big width" pictures (> Standard-Width for the specific ScreenMode) : BitMap->BytesPerRow was bigger than thought (for 736 was 96, not 92, so e.g. saving will result in an Width of 768)
- now sets BMHDF\_CMAPOK in bmhd->flags (former pad1) if running under V39 and writing 32 Bit-ColorMaps
- removed "ColorMap replacement" routine
- internal routines : AUTOSCROLL now really works with big-sized Screens
- ColorCycling (CRNG)-Support removed
- fixed several other little bugs

V1.2 (06.02.1994) :

- File Information did not work

V1.1 (16.01.1994) :

- first version

## 1.17 Datatypes support

---

The library optionally accesses OS3-Datatypes.  
Usually only the Datatypes for pictures are supported.  
This means, no Samples, Text, Amigaguide File or anything else will be displayed via the SuperView.Library (see configuration section for information on how to bypass this) !

## 1.18 PCX.svobject

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Version : 2.15  
Release Date : 11.12.1994

### Description

~~~~~

PCX.svobject is an external Library-Module for the superview.library V2+.

It contains SVDriver-Support for the superview.library V3+, and needs any SVDriver with Bitplane-/ChunkyPixel-Support.

It supports reading and writing of PCX Files.  
In detail these are :

Reading :

2-256 Colors, 24 Bit. In detail:

- PCX V2.5 upto 16 Colors (supports 4/8 color EGA/VGA palette)
- PCX V2.8a upto 16 Colors (supports 4/8 color EGA/VGA palette)
- PCX V2.8b upto 16 GreyScales
- PCX V3.00 upto 256 Colors
- PCX V2.5 - V3.00 with 24 Bit Data (see Remarks !)

Writing :

Depending on the Colordepth of the source - no matter, which WriteSubType has been specified - the following is written :

Source Colors	Version	Type	Destination Colors
2 .. 16	PCX V2.8a	planar bitmap	16
32 .. 256	PCX V3.00	chunky pixel	256
(24 Bit)	PCX V3.00	RGB planar	(24 Bit)

For 2-256 Colors It is always tried, to write the files RLE-encoded, but if encoding is ineffective (output data nearly as large or even larger than input data), the files will be written unencoded.  
24 Bit files will currently only be written unencoded.

---

## Remarks

~~~~~

- Why writing only 16/256 Color files ?

When loading 4 Color PCX files, some programs might expect a CGA style color palette, while we only write EGA/VGA palettes. For 8 Color graphics it is not clear how they should be handled.

Also, most programs do not support 32 .. 128 Color graphics, perhaps because it is not clear, how the colormap has to be stored : all at the end of the file or one hunk in the header and only the rest at the end of the file ?

So why should PCX.svobject support things, which are not defined as clear as they should be ?

- Then, why reading 4/8 Color files nevertheless ?

Because PCX.svobject wrote them - this was my fault - before I fixed this bug. So it still reads them, but no longer writes them.

- What about PCC-Brush-Files ?

These should also be supported, because they're just a variation of PCX-Files - usually only the extension is changed - but it seems to me, that some of them are not correctly written, so that reading may sometimes result in garbage.

- What about 24 Bit-Files :

Reading of RLE-encoded files works. It has been tested.  
Reading of uncompressed files should now work, due to the bug-fix in V2.11, although it has not been tested yet.  
Send me your Public Domain 24 Bit Pictures, if they do not work with PCX.svobject yet !

## History

~~~~~

V2.15 (11.12.1994) :

- simplified selection of PCX output format, since this never has been supported, anyway (now: "PCX V2.5-3.00")
- removed debugging message, which occurred with Bitplane data sometimes (also removed various debugging code)
- Oneplane data with upto 16 Colors could not be written. Fixed.
- added support for writing 24 Bit graphics (unencoded)

V2.14 (09.09.1994) :

- fixed bug in reading one of the many PCX derivatives : files, which contain RLE-codes which compress across lines (some planar files with colors <= 16) now will be read correctly (no longer garbage on the screen or "memory corrupt"). Algorithm had to be changed slightly to allow universal handling, but should not be slowed down significantly (because also some optimizations have been done ;-)
-

- also `_some_ PCC-brushes _might_ now be read (better) ?!`  
(don't know whether those, which work `_now_` also did work `_before_`  
`... ;-)`)

V2.13 (05.06.1994) :

- SVOobject flags now reflect, that GfxBuffers can be written

V2.12 (27.05.1994) :

- now saving of GfxBuffers is possible : internal write routines have been completely rewritten, so that supplied Screens are transferred to GfxBuffers before saving. BitPlane AND OnePlane Buffers upto 8 Bit are supported : they are converted to each other by using the appropriate functions of `superviewsupport.library V3+`.
- if RLE-encoding is ineffective (output data nearly as large or even larger than input data), the files will be written unencoded now

V2.11 (22.05.1994) :

- added code for reading of RLE-encoded 24 Bit Files  
(I tested it : it works)
- (hopefully) fixed bug in code for reading uncompressed 24 Bit Files  
(it forgot to adjust the code to the way, how 24 Bit Data is stored in the PCX FileFormat)

V2.10 (07.05.1994) :

- use of SAS/C V6.51
- use of new `"superviewsupport.library" V1`  
This saves some space again (here : ca. 1600 Bytes).

V2.9 (01.05.1994) :

- slightly changed writing and RLE encoding routines
- added note about PCC files to documentation

V2.8 (23.04.1994) :

- created new hierarchy for decoding routines : they are now much more flexible and error-resistant. Future expansions will be easier to make.
  - temporary buffer for rawdata is now delocated immediately after use
  - simplified ColorMap reading/handling (and GreyScale generation)
  - added support for 24 Bit graphics. Not yet tested.
  - Fixed FileInfoRequest() :
    - PCX V2.8b was reported to be "V2.5 without Palette". Fixed.
    - "ColorPlanes" was reported to be "Colordepth". Fixed.Now there are four different values for all : pixelbits, pixelbits-sized planes, colordepth and colournum.  
So the user may reconstruct the original file structure in mind.
-

V2.7 (18.04.1994) :

- changed internal creation/handling of ColorMaps :  
now PCX 2.8b with Black&White or GreyScaled BitMap-Data is  
\_really\_ supported.  
Side effect : simplified handling of different PixelBits/Plane  
combinations

V2.6 (02.04.1994) :

- improved speed of RLE decoding routines

V2.5 (27.03.1994) :

- removed internal SVDriver-Replacement, so that we now are really  
dependent on external SVDrivers in libs:svdrivers.  
This saves about 1600 Bytes disk space and reduces redundancy.
- replaced SAS/C's sprintf()-routine with own, RawDoFmt()-based one.  
This saves again about 1800 Bytes.
- now using Utility-Library for integer operations (activated  
SAS/C's UTILLIB option) : this increases 68000-codesize a little  
bit, but increases speed on 68020+ systems  
(should also decrease codesize, but does not ...)

V2.4 (25.03.1994) :

- slightly improved internal BitMap-to-BitMap routine

V2.3 (18.03.1994) :

- removed some dead code (not compiled nor linked ?!)

V2.2 (17.03.1994) :

- fixed "large memory usage" bug in internal ECS-ChunkyPixel routine
- added several security checks (zero-pointers)

V2.1 (09.03.1994) :

- now with SVDriver-Support. Not yet necessarily needed.
  - improved internal "Chunky Pixel to BitMap" (8 Bit) Routine
  - writing routine(s) :
    - added code for writing 256 Color graphics (chunky pixel)
    - 2, 4, 8, 32, 64 or 128 Colors are expanded to either  
16 or 256 Colors before writing
    - 16 Colors now written as V2.8a, also fixed some small bugs
    - increased speed for writing 16 Colors
    - fixed bug in setting map for 16 Colors  
(same as in reading routine, which was fixed in V1.2)
-

- fixed small bug in memory management routines
- internal routines : AUTOSCROLL now really works with big-sized Screens
- fixed several little bugs

V1.3 (24.01.1993) :

- fixed bug with setting ColorMap under V37/V38

V1.2 (02.01.1993) :

- fixed "wrong colors" bug
- improved speed

V1.1 (19.12.1993) :

- first version

## 1.19 SVO.svobject

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Version : 2.8  
Release Date : 01.07.1994

### Description

~~~~~

SVO.svobject is an external Library-Module for the superview.library V2+.

It contains SVDriver-Support for the superview.library V3+, and needs any SVDriver with Bitplane-/ChunkyPixel-Support.

It supports reading and writing of SVO Files.  
In detail these are :

Reading :

- SVO V1.0 ONEPLANE/BITPLANE (includes 24 Bit Files)

Writing :

- SVO V1.0 ONEPLANE/BITPLANE (includes 24 Bit Files)

### ControlPad-Switches

~~~~~

ControlPad-Name : "ENV:superview-library/SVO.controlpad"  
ControlPad-Commands : - PACKMETHOD=<xxxx>

---

```
; if this one is specified, it is tried to
; pack the resulting file with the specified
; XPK-Packer. If this fails, the file keeps
; unpacked.
```

#### File Format Information

~~~~~

Pictures in the "SVO Graphics File Format" consist of two Files :  
The Header-File (<Picture>.svo) and the Data-File (<Picture>).  
The Header-File contains information about the Raw-Data in the  
Data-File. For loading and saving the Graphics it makes no difference,  
which FileName - Header-File or Data-File - is given.  
This is managed by the svobject.

Because recognition of the Types of packed Files is only possible  
by reading the whole File into a buffer and then check it, we use  
two different Files for both : Graphics Information and Graphics.  
The Data-File CAN be packed, the Header-File MUST NOT be packed.

The SVO.object does NOT save packed data by default, but you may either  
specify an appropriate Xpk-Packer in the ControlPad or just pack it  
with a Xpk-Packer-Program after writing.

The Data saved into the <Picture> File is read from a SV\_GfxBuffer  
structure, which has either been supplied by the calling application  
or has been created from a supplied Screen-Pointer.  
This data may be of type BITPLANE (like in an IFF-ACBM : BitPlane  
after BitPlane, but without padding) or ONEPLANE (8 Bit ChunkyPixel  
or 24 Bit RGB-Data).

This allows efficient packing and unpacking with PowerPacker and all  
other XPK-Packers.

Remember, that the original Data written by the SVO.object may not  
necessarily be packed and therefore might need a lot of disk space.  
So better pack it immediately after it has been written.

#### Source-Code

~~~~~

The "SVO Graphics File Format" is an "Open File Format", which means,  
that everyone is invented to use and support it and to make suggestions  
to improve the File Format or the Algorithms to handle it.

To allow support of the File Format and to give an example, how to write  
your own superview.library compatible "svobjects", this distribution  
contains the full SourceCode of the "SVO.svobject".

Feel free to use it for your own, commercial or non-commercial, programs !

#### History

~~~~~

V2.8 (01.07.1994) :

- writing of SVO-Files did not work since V2.6
- now it may be specified in "ENV:superview-Library/SVO.controlpad", whether written SVO-Files should be packed and which packer should be used ("PACKMETHOD=xxxx")
- SVO-Files now are written in the way the data has been stored in the GfxBuffer (either ONEPLANE or BITPLANE). Screens are transferred to BITPLANE data. Reading of such files was already possible, but not yet writing. This will sometimes allow more efficient packing with XPK (e.g. when ONEPLANE-8 data with only 16 Colors is used as input).

#### V2.7 (05.06.1994) :

- SVOobject flags now reflect, that GfxBuffers can be written

#### V2.6 (27.05.1994) :

- 17.05.94 : modified Doc-File slightly
- now saving of GfxBuffers is possible : internal write routines have been completely rewritten, so that supplied Screens are transferred to GfxBuffers before saving. BitPlane AND OnePlane Buffers upto 8 Bit are supported : they are converted to each other by using the appropriate functions of superviewsupport.library V3+.

#### V2.5 (07.05.1994) :

- use of SAS/C V6.51
- use of new "superviewsupport.library" V1  
This saves some space again (here : ca. 500 Bytes).
- version still reflected 2.3 instead 2.4. Now we're at 2.5 :-)

#### V2.4 (27.03.1994) :

- removed internal SVDriver-Replacement, so that we now are really dependent on external SVDivers in libs:svdrivers.  
This saves about 1600 Bytes disk space and reduces redundancy.
- replaced SAS/C's sprintf()-routine with own, RawDoFmt()-based one.  
This saves again about 1800 Bytes.
- now using Utility-Library for integer operations (activated SAS/C's UTILLIB option) : this increases 68000-codesize a little bit, but increases speed on 68020+ systems  
(should also decrease codesize, but does not ...)

#### V2.3 (25.03.1994) :

- slightly improved internal BitMap-to-BitMap routine

#### V2.2 (17.03.1994) :

- fixed "large memory usage" bug in internal ECS-ChunkyPixel routine
  - added several security checks (zero-pointers)
-

V2.1 (09.03.1994) :

- very first "version 2" SVOobject with SVDriver-Support
- found bug in the SVO-FileFormat, when storing the 16-Bit and 32-Bit ModeIDs :  
both are just defined as 16-Bit-UWORDS, so that the 32-Bit ModeID is theoretically `_scratch_` !  
It does seem to work with SAS/C V6.5 nevertheless, but with this version the following work-around is done :  
The former "svo\_Pad1" field becomes "svo\_Version", which indicates extensions to the old 822-Byte-Header.  
With V1 a new 32-Byte-ModeID field is added, so that the old one becomes obsolete for reading of newer files.  
The OLD ViewMode32-Field is still written as before, but will only be read when handling files with version < 1 (= (BYTE)0).
- internal routines : AUTOSCROLL now really works with big-sized Screens
- fixed small bug in memory management routines

V1.4 (24.01.1994) :

- little internal improvements

V1.3 (16.01.1994) :

- improved speed

V1.2 (04.01.1994) :

- changed to recognize (reject) possible enhanced, future SVO Files (16-24 Bit)

V1.1 (19.12.1993) :

- first version

## 1.20 GIF.svobject

© 1994 by Andreas R. Kleinert, Grube Hohe Grethe 23, 57074 Siegen, Germany  
(Also see notes under "Credits".)

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Version : 2.12  
Release Date : 22.07.1994

---

## Description

~~~~~

GIF.svobject is an external Library-Module for the superview.library V2+.

It contains SVDriver-Support for the superview.library V3+, and needs any SVDriver with ChunkyPixel-Support.

It supports reading and writing of GIF Files.  
In detail these are :

## Reading :

- GIF 87a
- GIF 89a

## Writing :

- GIF 87a
- GIF 89a

Source Colors	Version	Type	Destination Colors
2 .. 256	GIF 87/89a	chunky pixel	2 .. 256

A special 68030+ Version of GIF.svobject is called "GIF.svobject.030" and has to be copied/renamed to GIF.svobject before usage (it runs on the 68020 as well, but might be more suitable for the 68030 : Only the Compiler knows about it ... ;).

GIF.svobject works fine with Instruction Cache (Burst) and Data Cache (Burst).

## Bugs and other Problems

~~~~~

Fixed : The Decoding Routines are fully re-entrant since V2.2 !

Please note, that the Encoding Routines of the Library are not (yet) fully re-entrant, so that only one Task may Encode a picture at a time. The Library itself manages it, that the other Task has to Delay() until the Encoding Routines are "free" again.

This makes NOT REALLY A MATTER, because Encoding takes so much of the processor's time, that it is NOT EFFICIENT to ENCODE TWO OR MORE pictures AT THE SAME TIME ANYWAY !

Nevertheless for example it is possible to decode a picture at the same time an other is been encoded, due to the fact, that the decoding routines do not share any data or variables with the encoding routines.

## History :

~~~~~

V2.12 (22.07.1994) :

- fixed bad bug, which may have occurred when writing GIFs :  
one sub-routine of the SVO\_Write() function is not fully re-entrant,  
that's nothing new (it is protected against being called twice

at a time, anyway).

The actual bug was, that for the second, third ... n-th call not all of the global static variables had been re-initialized again. This may have caused badly written GIFs with a high likelihood. Nevertheless there was a small chance to write more than one correct GIF.

Anyway : This is now fixed !!

- fixed small bug, which yet only occurred once :  
GIFs may contain various "extension" blocks, which do not really have a defined length. This "dynamic length" feature was only correctly implemented for "comment" blocks, so that e.g. a big-sized "application" block would have caused the program to be kept in a never-ending loop (with a high likelihood).  
This small bug is now fixed.  
Maybe you've never been confronted with it.

V2.11 (13.07.1994) :

- little improvements on LZW-decoding

V2.10 (05.06.1994) :

- SVOobject flags now reflect, that GfxBuffers can be written

V2.9 (03.06.1994) :

- again did some optimization of LZW decoding routines :
  - replaced some weird loops with simple bit-shifting operations
  - forced longword-usage for 68030 version  
(there's still room for more optimization, but can you tell me, HOW this can be done without producing garbage ... ?!)
- version still reflected 2.7 instead 2.8. Now we're at 2.9 :-)

V2.8 (27.05.1994) :

- now saving of GfxBuffers is possible : internal write routines have been completely rewritten, so that supplied Screens are transferred to GfxBuffers before saving. BitPlane AND OnePlane Buffers upto 8 Bit are supported : they are converted to each other by using the appropriate functions of superviewsupport.library V3+.

V2.7 (07.05.1994) :

- use of SAS/C V6.51
- use of new "superviewsupport.library" V1  
This saves some space again (here : ca. 1600 Bytes).

V2.6 (16.04.1994) :

- now using "libcall" pragmas in 68030-Code, which should be faster
  - strongly optimized LZW decoding routines : these will hopefully
-

be much faster on 68000 machines. On the 68030 it's hard to decide, whether there's an increase or not.

- interlaced and simple raster decoding has been joined to one single routine, so that there are no longer any unnecessary redundancies
- side effects of these changes :  
interlaced graphics should be read somewhat faster, because the "skipping code" for the passes has been changed to allow simple adaption of the raster file decoding routine
- shortly : it's smaller (some routines), faster, better !

#### V2.5 (27.03.1994) :

- removed internal SVDriver-Replacement, so that we now are really dependent on external SVDivers in libs:svdrivers.  
This saves about 1600 Bytes disk space and reduces redundancy.
- replaced SAS/C's sprintf()-routine with own, RawDoFmt()-based one.  
This saves again about 1800 Bytes.
- now using Utility-Library for integer operations (activated SAS/C's UTILLIB option) : this increases 68000-codesize a little bit more than 68030-codesize, but increases speed on 68020+ systems (should also decrease codesize, but does not ...)

#### V2.4 (25.03.1994) :

- slightly improved internal BitMap-to-BitMap routine

#### V2.3 (17.03.1994) :

- fixed "large memory usage" bug in internal ECS-ChunkyPixel routine
- added several security checks (zero-pointers)
- multiple encoding was not enabled (although possible, since the decoding routines are fully re-entrant since V2.2) due to an internal flag check : now they are.  
This will perhaps not be fast at all, but for 4-Color GIFs it should suffice ... ;)
- improved (hopefully) LWZ-Decoding a little bit
- improved handling of "worst case" : unexpected end of file situations (source buffer for GIF Encoding too small)  
Now will be handled faster.
- changed 68020 version to 68030 version : both processors are binary compatible, but perhaps there are differences in execution time, which may be important for optimizations ...

#### V2.2 (13.03.1994) :

- decoding routines now are fully re-entrant (no more local static variables inside decoding routines)
  - AGAIN : fixed same bug as in V1.2 (GIF87a ColorDepth)  
(re-occured in V2.1)
  - this version has been released as bug-fix to V2.1  
(superview.library V3.1 release)
-

V2.1 (09.03.1994) :

- now with SVDriver-Support. Not yet necessarily needed.
- added Write Support for GIF 87a and GIF 89a under usage of `_strongly_` modified FBM routines (see copyright notices under credits)
- improved internal "Chunky Pixel to BitMap" (8 Bit) Routine
- optimized GIF decoding a little bit !?
- fixed small bug in memory management routines
- internal routines : AUTOSCROLL now really works with big-sized Screens
- fixed several little bugs

V1.4 (29.01.1994) :

- fixed bug with reading of interlaced GIFs
- fixed bug in former optimizations
- small speed improvements
- added special 68020+ version (GIF.svobject.020) to the distribution archive

V1.3 (24.01.1994) :

- fixed bug with setting ColorMap under V37/V38

V1.2 (16.01.1994) :

- fixed bug with GIF87a inconsistence with global and local colordepth

V1.1 (02.01.1994) :

- first version

## 1.21 BMP.svobject

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Version : 2.10  
Release Date : 16.11.1994

Description

~~~~~

BMP.svobject is an external Library-Module for the superview.library V2+.

It contains SVDriver-Support for the superview.library V3+, and needs any SVDriver with ChunkyPixel-Support.

---

It supports reading and writing of W\*nd\*ws V3.x (TM) BMP Files.  
In detail these are :

Reading :

- unencoded BMP "wallpapers" in 1, 4, 8 or 24 Bit ColorDepth.
- RLE-encoded BMP "wallpapers" in 8 Bit ColorDepth.

Writing :

Depending on the Colordepth of the source the following is written :

| Source Colors | Version   | Type             | Destination Colors |
|---------------|-----------|------------------|--------------------|
| 2             | BMP V3.00 | packed chk. pix. | 2                  |
| 4 .. 16       | BMP V3.00 | packed chk. pix. | 16                 |
| 32 .. 256     | BMP V3.00 | chunky pixel     | 256                |
| (24 Bit)      | BMP V3.00 | RGB pixel        | (24 Bit)           |

History

~~~~~

V2.10 (16.11.1994) :

- fixed bug, where the buffer of a written graphics would have been turned upsidedown after the operation (if source wasn't a BitMap)

V2.9 (02.10.1994) :

- BMP.svobject was not able to make ScreenShots, because a source SV\_GfxBuffer had always been required (and accessed: Enforcer-Hit ?) for some flag checks (instead of first generating the buffer from the Screen and then checking it).  
This has been fixed, ScreenSaving is possible now.

V2.8 (11.06.1994) :

- added code for reading and writing of (unpacked) 24 Bit Files
- added code for reading RLE-encoded 8 Bit files (RLE8).  
(29 of 30 pictures caused no problems, and the last one might not have been written correctly ?!)
- all BMP files are now written line-padded (longword-boundaries), if necessary and all line-padded files should now be read correctly (even more correctly than before :-)
- (hey : V2.7 was written on 05.06.94, not 06.05.94 ... )

V2.7 (05.06.1994) :

- SVObject flags now reflect, that GfxBuffers can be written

V2.6 (27.05.1994) :

- now saving of GfxBuffers is possible : internal write routines have been completely rewritten, so that supplied Screens are transferred to GfxBuffers before saving. BitPlane AND OnePlane Buffers upto 8 Bit are supported : they are converted to each other by using the appropriate functions of superviewsupport.library V3+.

#### V2.5 (07.05.1994) :

- use of SAS/C V6.51
- use of new "superviewsupport.library" V1  
This saves some space again (here : ca. 1600 Bytes).
- removed some unused variables in write-routine

#### V2.4 (27.03.1994) :

- removed internal SVDriver-Replacement, so that we now are really dependent on external SVDrivers in libs:svdrivers.  
This saves about 1600 Bytes disk space and reduces redundancy.
- replaced SAS/C's sprintf()-routine with own, RawDoFmt()-based one.  
This saves again about 1800 Bytes.
- now using Utility-Library for integer operations (activated SAS/C's UTILLIB option) : this increases 68000-codesize a little bit, but increases speed on 68020+ systems  
(should also decrease codesize, but does not ...)

#### V2.3 (25.03.1994) :

- slightly improved internal BitMap-to-BitMap routine
- there occurred some bugs with graphics, which had a width, that did not automatically implied longword-alignment :  
Now the inserted pad-bytes are read correctly for those files.

#### V2.2 (17.03.1994) :

- fixed "large memory usage" bug in internal ECS-ChunkyPixel routine
- added several security checks (zero-pointers)
- fixed bug in reading and writing of "Black & White" (2 Colors) BMP-Files, also changed docs (and revision notes) as far as affected by the bug-fix
- note, that 4 Color BMP Files - following to the specifications they do not exist - will neither be read nor be written (8; 2:2:2:2)
- cleaned up some garbage in this doc-file ;)

#### V2.1 (09.03.1994) :

- now with SVDriver-Support. Not yet necessarily needed.
  - improved internal "Chunky Pixel to BitMap" (8 Bit) Routine
  - fixed some small bugs in reading : handling ColorMaps handled correctly now
  - writing routine(s) :
    - added code for writing 2 .. 256 Color graphics
-

- 2 Colors are written as packed chunky pixel (8; 1:1:1:1:1:1:1:1)
- 16 Colors are written as packed chunky pixel (8; 4:4)
- 256 Colors are written as chunky pixel (8; 8)
- 4, 8, 32, 64 or 128 Colors are expanded to either 16 or 256 Colors before writing
- internal routines : AUTOSCROLL now really works with big-sized Screens
- fixed small bug in memory management routines
- fixed several little bugs

V1.2 (26.01.1994) :

- fixed code for recognition of "not supported" (future or 24-Bit) Files

V1.1 (24.01.1994) :

- first version

## 1.22 WinIcon.svobject

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Version : 2.1  
Release Date : 06.11.1994

### Description

~~~~~

WinIcon.svobject is an external Library-Module for the superview.library V2+.

It contains SVDriver-Support for the superview.library V3+, and needs any SVDriver with ChunkyPixel-Support.

It supports reading of W\*nd\*ws V3.x (TM) Icon Files.  
In detail these are :

Reading :

- WinIcon files with exactly 16 Colors  
(more than one Icon per file should work, but hasn't been tested yet.)

### History

~~~~~

V2.1 (06.11.1994) :

- first version.
-

## 1.23 FBM.svobject

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(Also see notes under "Credits".)

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Version : 2.8  
Release Date : 25.12.1994

### Description

~~~~~

FBM.svobject is an external Library-Module for the superview.library V2+.

It contains SVDriver-Support for the superview.library V3+, and  
needs any SVDriver with ChunkyPixel-Support.

It supports reading and writing of FBM (\*nix) Files.  
In detail these are :

#### Reading :

|                               |                     |
|-------------------------------|---------------------|
| FBM 8 Bit, 1 Plane            | FBM 8 Bit, 3 Planes |
| 2..256 Colors; 256 Greyscales | 24 Bit              |

#### Writing :

|                    |                     |
|--------------------|---------------------|
| FBM 8 Bit, 1 Plane | FBM 8 Bit, 3 Planes |
| 2..256 Colors      | 24 Bit              |

Following to the specifications, an 2..128 Colors file takes as much  
space as an 256 Colors file : always 8 Bits are written.  
Only the ColorMap is sized differently for different ColorDepths.

### History

~~~~~

V2.8 (25.12.1994) :

- added 24 Bit support (reading and writing)
- fixed bugs in reading and writing of FBM files, which might have caused the "bits" value of the header to be interpreted wrong (especially when writing). Fixed now (must be "8" always).
- colormapped 8 Bit files with less than 256 Colors will now be identified by the length of the colormap, so that e.g. a 16 Color file will no longer be handled like a 256 Color file.

V2.7 (05.06.1994) :

- SVObject flags now reflect, that GfxBuffers can be written

V2.6 (27.05.1994) :

- now saving of GfxBuffers is possible : internal write routines have been completely rewritten, so that supplied Screens are transferred to GfxBuffers before saving. BitPlane AND OnePlane Buffers upto 8 Bit are supported : they are converted to each other by using the appropriate functions of superviewsupport.library V3+.
- besides : THIS time, the history reflected V2.4 instead of V2.5 ...

V2.5 (07.05.1994) :

- use of SAS/C V6.51
- use of new "superviewsupport.library" V1  
This saves some space again (here : ca. 1600 Bytes).
- version still reflected 2.3 instead 2.4. Now we're at 2.5 :-)

V2.4 (16.04.1994) :

- improved internal "grey-scale-generation"-routine.  
It produced sometimes wrong values for the last GreyScale-Color, which should have been real "white".  
The wrong values were like this :
  - 4 GreyScales, 4. Color : 192/192/192
  - 16 GreyScales, 16. Color : 240/240/240
  - 255 GreyScales, 16. Color : 255/255/255This is now fixed. Side-effect : the grey-value below "white" now has a bigger distance to it than to the previous value (2\*256/colornum instead of 256/colornum).

V2.3 (27.03.1994) :

- removed internal SVDriver-Replacement, so that we now are really dependent on external SVDrivers in libs:svdrivers.  
This saves about 1600 Bytes disk space and reduces redundancy.
- replaced SAS/C's sprintf()-routine with own, RawDoFmt()-based one.  
This saves again about 1800 Bytes.
- now using Utility-Library for integer operations (activated SAS/C's UTILLIB option) : this increases 68000-codesize a little bit, but increases speed on 68020+ systems  
(should also decrease codesize, but does not ...)

V2.2 (25.03.1994) :

- slightly improved internal BitMap-to-BitMap routine
- now also writes FBM (\*nix) upto 256 Colors (8 Bit).
- fixed ColorMap-generation for grey-scaled pictures with less than 8 Bit Depth (256 grey-scales) : values had been too small (too dark)

V2.1 (19.03.1994) :

- first version, not yet with write-support
-

## 1.24 PNM.svobject

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Version : 2.1  
Release Date : 25.12.1994

### Description

~~~~~

PNM.svobject is an external Library-Module for the superview.library V2+.

It contains SVDriver-Support for the superview.library V3+, and needs any SVDriver with ChunkyPixel-Support.

It supports reading and writing of PNM (\*nix) Files.  
In detail these are :

### Reading :

All binary (non-ASCII) variations of the PNM format will be read (P4/P5/P6), non-binary (ASCII) variations are not supported (P1/P2/P3).

|               |                |                  |
|---------------|----------------|------------------|
| PBM (P4)      | PGM (P5)       | PPM (P6)         |
| Black & White | 256 GreyScales | 24 Bit TrueColor |

### Writing :

All input data, no matter how many Colors actually are used, will be written as binary 24 Bit PPM data (P6).

### History

~~~~~

V2.1 (25.12.1994) :

- first version

## 1.25 C64.svobject

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(Also see notes under "Credits".)

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Version : 2.5

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Release Date : 07.05.1994

#### Description

~~~~~

C64.svobject is an external Library-Module for the superview.library V2+.

It contains SVDriver-Support for the superview.library V3+, and needs any SVDriver with ChunkyPixel-Support.

It supports reading of C64 Graphics Files (Koala, Doodle).

In detail these are :

#### Reading :

| Format | Dimensions | Colors | Displayed as | FileSize | Flexibility        |
|--------|------------|--------|--------------|----------|--------------------|
| Doodle | 320x200    | 2/16   | 320x200      | 9218     | (9200 < fs < 9230) |
| Koala  | 160x200    | 4/16   | 320x200      | 10003    | (fs == 10003)      |

#### Writing :

(not supported yet)

#### History

~~~~~

V2.5 (07.05.1994) :

- use of SAS/C V6.51
- use of new "superviewsupport.library" V1  
This saves some space again (here : ca. 1100 Bytes).

V2.4 (27.03.1994) :

- removed internal SVDriver-Replacement, so that we now are really dependent on external SVDrivers in libs:svdrivers.  
This saves about 1600 Bytes diskspace and reduces redundancy.
- replaced SAS/C's sprintf()-routine with own, RawDoFmt()-based one.  
This saves again about 1800 Bytes.
- now using Utility-Library for integer operations (activated SAS/C's UTILLIB option) : this increases 68000-codesize a little bit, but increases speed on 68020+ systems  
(should also decrease codesize, but does not ...)
- reconstructed revision notes for V2.2 and V2.3, which were mixed together in V2.3

V2.3 (25.03.1994) :

- slightly improved internal BitMap-to-BitMap routine
  - removed some dead code and variables in decoding routine
-

V2.2 (20.03.1994) :

- slightly changed recognition routine
- and more

V2.1 (17.03.1994) :

- first version with Koala and Doodle support

## 1.26 IMG.svobject

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Version : 2.7  
Release Date : 15.05.1994

### Description

~~~~~

IMG.svobject is an external Library-Module for the superview.library V2+.

It contains SVDriver-Support for the superview.library V3+, and needs any SVDriver with Bitplane-Support.

It supports reading of IMG (GEM/Metafile) Files.  
In detail these are :

### Reading :

- IMG (16 Byte Header) GreyScaled (1..8 Bits = 2..256 Colors)
- IMG (18 Byte Header) GreyScaled (1..8 Bits = 2..256 Colors)

### Writing :

(not supported yet)

### History

~~~~~

V2.7 (15.05.1994) :

- fixed version history (V2.5 mentioned twice)
- fixed subtype strings (one blank too much)

V2.6 (07.05.1994) :

---

- use of SAS/C V6.51
- use of new "superviewsupport.library" V1  
This saves some space again (here : ca. 1100 Bytes).
- removed some dead code

V2.5 (16.04.1994) :

- added support for "more than 2 GreyScales"-IMG-Files.  
Tests with 4- and 16-GreyScales have been successful, so any other color-depth should also work.
- removed some "dead" code
- removed (deactivated) debugging code
- this version uses the new "grey-scale-generation"-routine, like some of the other SVOobjects written by me.  
Upto V2.4 this was not necessary, because there were only two "Colors" possible : Black and White.

V2.4 (02.04.1994) :

- improved decoding routines slightly

V2.3 (27.03.1994) :

- removed internal SVDriver-Replacement, so that we now are really dependent on external SVDrivers in libs:svdrivers.  
This saves about 1600 Bytes disk space and reduces redundancy.
- replaced SAS/C's sprintf()-routine with own, RawDoFmt()-based one.  
This saves again about 1800 Bytes.
- now using Utility-Library for integer operations (activated SAS/C's UTILLIB option) : this increases 68000-codesize a little bit, but increases speed on 68020+ systems  
(should also decrease codesize, but does not ...)

V2.2 (25.03.1994) :

- slightly improved internal BitMap-to-BitMap routine
- V2.1 was released additionally to the superview.library's V3.2 developer release, V2.2 is now released inside the main package
- "#ifdef"-disabled some debugging code, which was never executed

V2.1 (23.03.1994) :

- first version

## 1.27 TIFF.svobject

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(Also see notes under "Credits".)

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Version : 2.8  
Release Date : 18.12.1994

#### Description

~~~~~

TIFF.svobject is an external Library-Module for the superview.library V2+.

It contains SVDriver-Support for the superview.library V3+, and needs any SVDriver with Bitplane-/ChunkyPixel-Support.

It supports reading and writing of TIFF-Files (V5.0).  
In detail these are :

#### Reading :

| Compression  | Code  | PixelBits | Planes   | Max. Depth | As       | Test |
|--------------|-------|-----------|----------|------------|----------|------|
| None         | 1     | 1         | (system) | 1*(system) | BITPLANE |      |
| None         | 1     | 8         | 1,3      | 8 / 24     | ONEPLANE | X    |
| Mac PackBits | 32773 | 1         | (system) | 1*(system) | BITPLANE | X    |
| Mac PackBits | 32773 | 4         | 1        | 4          | ONEPLANE | X    |
| Mac PackBits | 32773 | 8         | 1        | 8          | ONEPLANE |      |
| LZW          | 5     | 8         | 1,3      | 8 / 24     | ONEPLANE | (X)  |
| CCITT 1D     | 2     | 1         | 1        | 1          | BITPLANE |      |

- CCITT 1D DISABLED IN THIS VERSION : does not seem to work correctly -

Not all of these modes may work correctly and/or have been tested for working correctly. Tested were :

- None , PixelBits 8x1, ONEPLANE (problems with odd-width pics)
- None , PixelBits 8x3, ONEPLANE (problems with odd-width pics)
- Mac PackBits, PixelBits 1x?, BITPLANE (nearly no problems recognized)
- Mac PackBits, PixelBits 4x1, ONEPLANE (no problems recognized)
- LZW , PixelBits 8x3, ONEPLANE (not SURE, if working corr.)

#### Writing :

Writing is only supported for Graphics upto 256 Colors.  
They are always written as : Motorola (MM), None, 8, 1, ONEPLANE

Correctness of the written files has been tested so far.  
(Used an other program to convert the written file into IFF-ILBM and then compared the results : Just OK !)

#### Remarks

~~~~~

This SVObject was quite a hard piece of work and is still perhaps not fully free of bugs yet.

A Word About ...

-----

... pictures with more than one Strip of Data :  
They should be read correctly now, but I can only hope that the pictures have the same opinion ... ;-(

... LZW compressed pictures :  
You may feel lucky, if decoding really works.  
If it does not, let me tell you, that I only had two pictures for testing the routines : The first one produced a strange looking picture, but decompression returned no error (8 strips in the picture). The second made the decompression routines complaining about codesizes (maximum codesize is 12 Bit, but there was a bigger one).  
I didn't found any other programs (even for MS-DOS), which were able to display the content of my test-pictures ...

#### Supported

-----

The following should work almost always :

- reading of Intel- (II) and Motorola- (MM) Files
- reading of 256 Color (8 Bit) Files,  
either packed with : - None  
                              - Mac PackBits
- reading of uncompressed 24 Bit files (RGB 3x8 Bits)

#### Not supported

-----

Files with unknown compression types (e.g. CCITT Fax) are as well rejected as files with unsupported Compression/PixelBits/Plane combinations, like e.g. None/4/2.

#### Requests and Suggestions

-----

If you have some FREELY DISTRIBUTABLE TIFF-Files, which do not work with this program, you may send them to me, so that I can try  
- at least \_try\_ - to improve this program to also allow reading of these.

#### Debugging

-----

Nevertheless usually information on a specific picture can be requested, although the picture itself cannot be displayed.  
Not all applications may support this (e.g. SuperView does not), because the error return value may prevent them against doing this.

#### History

~~~~~

V2.8 (18.12.94) :

- V2.7 (at least the one, which came with V9.10) always popped up some requesters with debugging information while/after loading a TIFF file. Useful information, but unnecessary to be display \_always\_.

Removed.

V2.7 (05.06.1994) :

- fixed a bug-fix of a bug-fix bug-fix (or such a thing :-)  
ColorMaps of "II"-type files would always have been black, while  
ColorMaps of "MM"-type files would have been correct.  
Now they are both OK (forgot conversion of II-Words).
- SVOobject flags now reflect, that GfxBuffer can be written

V2.6 (03.06.1994) :

- MAJOR REVISION
- now reads the same files as before and many, many more ... :-)
- reading of "MM" files did not work correctly, because I only checked  
this with self-written files (and those had been written wrong :-(.  
So the complete UBYTE-, UWORD- and ULONG reading stuff for TIFF's  
variable length parameters has been written new.
- writing of files did not work correct because "MM" UWORDS and UBYTES  
were not shifted into the upper word before writing.  
Also fixed some minor problems.
- files without ColorMap have been reported to be "24 Bit Files". Fixed.
- reduced (temporary) memory usage for compressed pictures, where  
the size of the compressed data often is nothing against the maximum  
possible size (depending on width, height and depth).  
Now we compare our calced value against the size of the whole file,  
which actually should be the limit ...
- added decompression routines for : LZW (Code 5) and CCITT3 (Code 2).  
Although these have been derived from the original Aldus Code as  
distributed via the Nets, they may not work correctly at all, since  
I had to do many changes to get it working on the Amiga ...  
(Ever ported some code from MS-DOS ? Oh, oh ...)
- Remark : CCITT disabled in this version !
- added support for pictures with "more than one strip of data"  
(may not work with all types of compressed data : CCITT3 decompression  
routines will e.g. reject data which consists of more than one strip)
- now we assume, that files with a "PhotometricInterpretation" of 2 (RGB)  
have at least 3 "SamplesPerPixel", if nothing else is defined :  
I have seen 24 Bit RGB files, which did not contain such information !!

V2.5 (27.05.1994) :

- now saving of GfxBuffers is possible : internal write routines have  
been completely rewritten, so that supplied Screens are transferred  
to GfxBuffers before saving. BitPlane AND OnePlane Buffers upto  
8 Bit are supported : they are converted to each other by using the  
appropriate functions of superviewsupport.library V3+.

V2.4 (07.05.1994) :

- 15.05.94 : modified Doc-File slightly
  - use of SAS/C V6.51
  - use of new "superviewsupport.library" V1
-

This saves some space again (here : ca. 1600 Bytes).

V2.3 (01.05.1994) :

- with 24 Bit pictures, PixelBits-Value in GfxBuffer was not set to 24 instead of 8 accidentally. Fixed.
- version still reflected 2.1 instead 2.2. Now we're at 2.3 :-)
- "black & white" graphics without "BitsPerSample" and "SamplesPerPixel" Tags should now be read correctly instead of rejecting them (default value is "1" for both)
- still working on LZW-decoding (and working, and working, and working, and working, ... :-(

V2.2 (18.04.1994) :

- improved speed of MacPackBits decoding routines
- fixed bug, which occurred, when any BitPlane-Formats (no ChunkyPixel) had been read : Black Screen appeared. This is now fixed.
- created new hierarchy for decoding routines : they are now much more flexible and error-resistant. Future expansions will be easier to make.
- temporary buffer for rawdata is now delocated immediately after use
- reduced memory usage for BitPlane Formats a lot
- added code for reading 24 Bit Data (unpacked 8 Bit RGB)
- reduced memory usage for unpacked 8 Bit-ChunkyPixel/RGB by just taking the rawbuffer, which then hasn't to be given free anymore : no copying is done any longer !
- improved internal "grey-scale-generation"-routine.  
It produced sometimes wrong values for the last GreyScale-Color, which should have been real "white".  
The wrong values were like this :
  - 4 GreyScales, 4. Color : 192/192/192
  - 16 GreyScales, 16. Color : 240/240/240
  - 255 GreyScales, 16. Color : 255/255/255This is now fixed. Side-effect : the grey-value below "white" now has a bigger distance to it than to the previous value (2\*256/colornum instead of 256/colornum).

V2.1 (02.04.1994) :

- first version, not yet fully free of bugs - I guess :-( - and not supporting the full set of features possible

## 1.28 Targa.svobject

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Version : 2.4  
Release Date : 26.06.1994

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## Description

~~~~~

Targa.svobject is an external Library-Module for the superview.library V2+.

It contains SVDriver-Support for the superview.library V3+, and needs any SVDriver with Bitplane-/ChunkyPixel-Support.

It supports reading and writing of TGA (Truevision Targa) Files. In detail these are :

## Reading :

- monochrome Targa-Files (1 Bit, planar)
- Targa with 256 Colors (8 Bit)  
(files without ColorMap are displayed in grey-scales)
- Targa 24 Bit-Files

## Writing :

Depending on the Colordepth of the source the following is written :

Source Colors	Type	Destination Colors
2 .. 256 (24 Bit)	Uncompressed chunky pixel Uncompressed BGR	256 (24 Bit)

## Remarks

~~~~~

- Currently files with Colorbits other than 1, 8 or 24 (16, 32) are not supported yet.
- ColorMaps have to be of type "3-Byte RGB".
- RLE-encoded files are rejected yet.
- The flags for "mirroring" Images vertically and/or horizontally are not fully interpreted yet, nevertheless they are checked and reported via SVL\_FileInfoRequest().  
If the VERTINV flag is not set, the picture will be assumed to be written as "from bottom to top", otherwise as "from top to bottom". Some programs do not set these flags right, when writing, so that you might get just the opposite result as expected.  
The HORIZINV flag is currently ignored : when reading such a picture as usual, you'd get a mirrored image. But this flag is also set wrong sometimes ...

## History

~~~~~

V2.4 (26.06.1994) :

- fixed small bug, which might have caused this one crashing/rejecting, when writing from a Screen (instead of a GfxBuffer).

V2.3 (12.06.1994) :

- now also writes Targa files (all input converted to either 8 or 24 Bit)
- now also reads monochrome pictures with pixelbits value of 1 (planar)
- files with no VERTINV set are now converted (top becomes bottom)
- changed way of file-recognition : files with unknown flags are now read as if theses flags would not have been set. This may cause problems with files, which depend on correct interpretation of those flags, but often they are written wrong, so that this might have caused files to be rejected. Now we check an other Byte-combination for plausibility reasons.

V2.2 (22.05.1994) :

- removed some unused debugging code : this was accidentally called always, when a picture has been loaded.  
This did not crash the program, but always caused a requester, which had to be confirmed by the User.

V2.1 (22.05.1994) :

- first version

## 1.29 WPG.svobject

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Version : 2.4  
Release Date : 22.05.1994

### Description

~~~~~

WPG.svobject is an external Library-Module for the superview.library V2+.

It contains SVDriver-Support for the superview.library V3+, and needs any SVDriver with Bitplane-Support.

It supports reading of WPG (WordPerfect) BitMap Files.  
In detail these are :

Reading :

- WPG BitMap (GreyScaled) with 1, 2, 4 or 8 Bits ColorDepth
  - WPG BitMap (ColorMap) with 1, 2, 4 or 8 Bits ColorDepth
-

Writing :

(not supported yet)

Remarks

~~~~~

WordPerfect WPG Files do not necessarily have to contain BitMap-Graphics, they also may contain various other data, e.g. Vector-Graphics.

If a WPG File contains a BitMap-Graphic in any of its Chunks, this will be displayed, otherwise the file will be rejected.

If a file does not contain any color information, WPG.svobject will generate GreyScales by default.

This will be mentioned in the FileInfoRequester.

This version actually has been tested with graphics with 1, 4 and 8 Bit ColorDepth (2, 16 and 256 Colors).

Due to the fact, that the 2 Bit-Routine is identically to the 1 Bit-Routine should not get any problems with those pictures.

History

~~~~~

V2.4 (22.05.1994) :

- fixed bug, which caused the last 4 Bytes of the ColorMap not to be read (last two Colors have been wrong, then).  
This did not concern grey-scaled Files without own ColorMaps ;-)
- fixed the same bug for BitMap data : the last 10 Bytes might not have been read.
- modified Doc-File slightly to reflect, that 8 Bit-Files are read correctly (not just since V2.4 ...)

V2.3 (15.05.1994) :

- fixed subtype strings (one blank too much)  
(better than nothing, eh ?)

V2.2 (07.05.1994) :

- use of SAS/C V6.51
- use of new "superviewsupport.library" V1  
This saves some space again (here : ca. 1100 Bytes).
- version accidentally reflected 2.5 instead 2.1. Now we're at 2.2 :-)
- removed some dead code

V2.1 (17.04.1994) :

- first version
-

## 1.30 SunRaster.svobject

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Version : 2.2  
Release Date : 24.12.1994

### Description

~~~~~

SunRaster.svobject is an external Library-Module for the superview.library V2+.

It contains SVDriver-Support for the superview.library V3+, and needs any SVDriver with Bitplane-/ChunkyPixel-Support.

It supports reading and writing of SunRaster (RAS) Files.  
In detail these are :

#### Reading :

- SunRaster with 2 Colors ( 1 Bit, planar)
- SunRaster with 256 Colors ( 8 Bit, chunky pixel)
- SunRaster with 24 Bit (24 Bit, R-G-B)

#### Writing :

Depending on the Colordepth of the source the following is written :

Source Colors	Type	Destination Colors
2..256	Uncompressed Chunky Pixel	256
(24 Bit)	Uncompressed 24 Bit RGB	(24 Bit)

### Remarks

~~~~~

- Currently files with Colorbits other than 1, 8 or 24 are not supported yet.
- only RGB-plane ColorMaps supported (or monochrome, without map)
- max. 1 plane of BitMap data allowed

### History

~~~~~

V2.2 (24.12.1994) :

- when writing 24 Bit files, Colormap specification would have been wrong, which e.g. would have confused NetPBM.  
Also the wrong planetype flag had been set. Fixed.

V2.1 (26.06.1994) :

- first version

## 1.31 Pictor.svobject

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Version : 2.1  
Release Date : 13.06.1994

Description  
~~~~~

Pictor.svobject is an external Library-Module for the superview.library V2+.

It contains SVDriver-Support for the superview.library V3+, and  
needs any SVDriver with Bitplane-/ChunkyPixel-Support.

It supports reading of Pictor/PC Paint (PIC) Files.  
In detail these are :

Reading :

- Files with 1, 4, or 8 Bit ColorDepth  
(monochrome or with EGA or VGA palette).

Writing :

(not yet supported)

History  
~~~~~

V2.1 (13.06.1994) :

- first version

## 1.32 MAC.svobject

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Version : 2.1  
Release Date : 12.05.1994

## Description

~~~~~

MAC.svobject is an external Library-Module for the superview.library V2+.

It contains SVDriver-Support for the superview.library V3+, and needs any SVDriver with Bitplane-Support.

It supports reading of MAC (MacIntosh MacPaint) Files.  
In detail these are :

Reading :

- MAC Black & White 576x720

Writing :

(not supported yet)

## Remarks

~~~~~

MacPaint Files, which are to be loaded into "MAC.svobject" should contain the specific MacBinary Header (first the 128 Byte-Header, then the MacPaint specific data appended to it).

In the PC area, there may sometimes files be found, which just contain the MacPaint 576x720 black and white Data. Due to the fact, that we can't just check the suffix or prefix of the file to be "MAC", we have to check the filetype also.

These files - without the header - can only be identified via the three leading zero bytes at the beginning of the 512 Byte MacPaint header.

But there's never a 100% guarantee that a File with three leading zeroes really is a MacPaint File !

## History

~~~~~

V2.1 (12.05.1994) :

- first version

## 1.33 JPEG.svobject

This one is a "bonus product", which has been written by me and has been distributed separately upto version 8.2.

You find it - together with its documentation and an appropriate Installer-Script - inside the Directory "Bonus".

Show Documentation

## 1.34 YUVN.svobject

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(Also see notes under "Credits".)

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Version : 2.1  
Release Date : 15.10.1994

### Description

~~~~~

YUVN.svobject is an external Library-Module for the  
superview.library V2+.

It contains SVDriver-Support for the superview.library V3+, and  
needs any SVDriver with 24 Bit ChunkyPixel-Support.

It supports reading and writing of IFF-YUVN (YUVN) Files.  
In detail these are :

Reading :

- IFF-YUVN 24 Bit (Y, 1/4 U, 1/4 V)

Writing :

- IFF-YUVN 24 Bit (Y, 1/4 U, 1/4 V)

Reading/writing from/to ClipBoard is supported.

### Remarks

~~~~~

- only 24 Bit sources will be written as IFF-YUVN.  
There's no conversion done from e.g. 256 Colors to 24 Bit  
to perform the requirements of this file format.

### Idea

~~~~~

The integration of this file format has been suggested by Detlef Winkler,  
who asked me to do some more support for amiga-like 24 Bit file formats,  
as e.g. IFF-24.

He sent me some digitized IFF-YUVN graphics, so that I was able to  
analyze the file format and to add support to superview-Library.

Thanks !

### History

~~~~~

V2.1 (15.10.1994) :

- first version with both, read- and write support

(reading/writing from/to ClipBoard also is possible)

## 1.35 ECS.svdriver

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Version : 1.11  
Release Date : 28.12.1994

### Requirements

~~~~~

- OS V2.04+ (V37)+ and its libraries
- superviewsupport.library V1+
- AMIGA with Enhanced Chip Set (ECS)

### Description

~~~~~

ECS.svoperator is an external SV\_GfxBuffer display module for superview.library V3+.

It supplies functions for V2+ SVObjects to allow object-orientated displaying of graphics on ECS Screens.

ECS.svdriver is identical to AGA.svdriver, except to the "chunky pixel" support and other features, which have been realized without V39 functions here.

This Driver supports the following :

| Dimensions | Depth | Type                    |
|------------|-------|-------------------------|
| [ECS]      | [ECS] | BITPLANE                |
| [ECS]      | 8     | ONEPLANE (Chunky Pixel) |

The 8-Bit mode will perhaps only work on ECS systems which have any Graphic Card installed, which allows 256 or more colors in a way of an Intuition emulation.

Autoscrolling of Screens larger than the actual display is supported : Just move the mouse to the boundings !

### Known Bugs

~~~~~

There's a bug in the chunky pixel routines of OS V37-40, which has been worked-around in a way, that the last (upto) 7 pixels of a chunky graphics, which has a width ending not on a byte boundary (as e.g. 433) will be cut off.

That's not really a good solution, but better than crashing the whole system.

---

Maybe this bug will be fixed in future OS or chipset versions (maybe this problem would not happen with the CD-32's Chunky Pixel Hardware ?!).

#### History

~~~~~

V1.11 (28.12.1994) :

- fixed bug in (re-)initialization module

V1.10 (28.09.1994) :

- WritePixelLine8() sometimes seems to destroy the source buffer. Fixed now by using a copy of the corresponding line content.

V1.9 (05.09.1994) :

- added work-around for chunky-pixel bug in the OS (see library-docs for V8.2)

V1.8 (11.06.1994) :

- fixed small bug in ColorMap routine : creation of RGB-values resulted in a mask of 0xFFFFFFFF00 instead of 0xFFFFFFFF (although there's not really a mask used) (V39 only)

V1.7 (07.05.1994) :

- use of SAS/C V6.51
- use of new "superviewsupport.library" V1  
This saves some space again (here : ca. 400 Bytes).

V1.6 (30.04.1994) :

- fixed small bug in memory delocation (when multiply called)

V1.5 (02.04.1994) :

- improved internal "regular case" BitMap-to-BitMap routine

V1.4 (25.03.1994) :

- slightly improved internal BitMap-to-BitMap routine
  - We now use a higher alignment for TmpRas-BitPlanes, to ensure higher compatibility (and speed increase) under V39 with the AGA chipset.  
Alignment now is done for longword-boundaries as follows :  
 $((width + 31) \gg 5) \ll 5$
-

V1.2 / V1.3 (14.03.1994) :

- there are no significant differences between V1.2 and V1.3  
(at least I don't remember them ...)
- fixed "large memory usage" bug in ChunkyPixel routine
- this version has been released as bug-fix to V1.1  
(superview.library V3.1 release)

V1.1 (09.03.1994) :

- first version

## 1.36 AGA.svdriver

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Version : 1.15  
Release Date : 28.12.1994

### Requirements

~~~~~

- OS V3.00+ (V39)+ and its libraries
- 68020+
- superviewsupport.library V1+
- AMIGA with AGA ChipSet (ECS still supported, but with restrictions)

### Description

~~~~~

AGA.svoperator is an external SV\_GfxBuffer display module for superview.library V3+.

It supplies functions for V2+ SVObjects to allow object-orientated displaying of graphics on AGA Screens.

AGA.svdriver is identical to ECS.svdriver, except to the "chunky pixel" support and other features, which have been realized with V39 functions here.

This Driver supports the following :

| Dimensions | Depth | Type                    |
|------------|-------|-------------------------|
| [AGA]      | [AGA] | BITPLANE                |
| [AGA]      | 8     | ONEPLANE (Chunky Pixel) |

ONEPLANE 24 Bit Graphics (RGB 3x8-ONEPLANE) will be displayed as "best fitting of 256 Colors" by default.

Autoscrolling of Screens larger than the actual display is supported :

Just move the mouse to the boundings !

#### ControlPad-Switches

~~~~~

ControlPad-Name : "ENV:superview-library/AGA.controlpad"  
ControlPad-Commands : - 24BITOPERATOR=ExtractGrayScales  
; e.g. "24BITOPERATOR=24BitToHam6"  
; or "24BITOPERATOR=ExtractGrayScales"  
; (case-sensitive, ".svoperator" may be added)  
; specifies, which operation should be performed  
; on 24 Bit graphics before displaying them  
; (if not specified, "on error" default handling  
; takes place)

#### Known Bugs

~~~~~

There's a bug in the chunky pixel routines of OS V37-40, which has been worked-around in a way, that the last (upto) 7 pixels of a chunky graphics, which has a width ending not on a byte boundary (as e.g. 433) will be cut off.

That's not really a good solution, but better than crashing the whole system.

Maybe this bug will be fixed in future OS or chipset versions (maybe this problem would not happen with the CD-32's Chunky Pixel Hardware ?!).

#### History

~~~~~

V1.15 (28.12.1994) :

- fixed bug in (re-)initialization module

V1.14 (10.12.1994) :

- added SVOperator-Support for 24 Bit graphics:  
via specifying "24BITOPERATOR" within "AGA.controlpad" you may decide which operation should be performed on 24 Bit graphics before displaying them (default is "picking best of 256 Colors")

V1.13 (05.11.1994) :

- when running under OS 3.1 (V40) we now do use WriteChunkyPixels() instead of WritePixelLine8().  
Because the specific bug in these routines (still) has not been fixed, we cannot write the whole array (or even full line, when odd width), but it may be faster nevertheless (no TmpRas, no separate Bitmap), at least on a CD-32.  
This will work in 8 and 24 Bit (dither) mode.

V1.12 (21.10.1994) :

- V1.11 had a small (?) bug: autoscrolling of large pictures had
-

been disabled while fixing several other things (forget to re-activate) it. Sorry.  
Now it will work again (BTW: ECS.svdriver did not have this bug).

V1.11 (28.09.1994) :

- WritePixelLine8() sometimes seems to destroy the source buffer. Fixed now by using a copy of the corresponding line content.
- closed "memory black hole" in 24 Bit-support :  
there was always a memory loss of <width> bytes, when displaying a 24 Bit graphics (linebuffer not freed)

V1.10 (05.09.1994) :

- added work-around for chunky-pixel bug in the OS  
(see library-docs for V8.2)

V1.9 (29.06.1994) :

- now attaches ViewPortExtra structure to Screens, if possible, so that hopefully display-speed will increase
- now opening interleaved Screens, when displaying ONEPLANE graphics for speed reasons
- also, no longer intermediate CopperList-Updates are allowed for the display screen
- one of the optimizations done in V1.8 might have caused slowe 24 Bit display instead of faster (not sure). Now we go the safe way, but still somewhat optimized.

V1.8 (11.06.1994) :

- now at least requires 68020 CPU  
(there are perhaps no AGA machines out there, which have none). This should speed up the 24 Bit "dithering" routines.  
Startup-Code is still compatible to 68000, so that an installation on 68000 systems will not cause a crash, if running V37/38.
- made all variables 32 Bit-wide
- did some optimizations
- fixed small bug in ColorMap routine :  
creation of RGB-values resulted in a mask of 0xFFFFF00 instead of 0xFFFFFFFF (although there's not really a mask used)
- removed some V37-code, which was never executed

V1.7 (22.05.1994) :

- fixed small bug in 24-Bit-Support :  
our single temporary bitplane line always had a PlaneDepth of 24, so that 16 planes were wasted useless :-(  
Now this memory is saved and also speed may increase.

V1.6 (07.05.1994) :

---

- use of SAS/C V6.51
- use of new "superviewsupport.library" V1  
This saves some space again (here : ca. 400 Bytes).
- version still reflected 1.4 instead 1.5. Now we're at 1.6 :-)

V1.5 (30.04.1994) :

- fixed small bug in memory delocation (when multiply called)

V1.4 (18.04.1994) :

- improved internal "regular case" BitMap-to-BitMap routine
- added code for dithering 24 Bit RGB-Oneplane pictures  
(is quite slow, but results in good pictures)

V1.3 (25.03.1994) :

- slightly improved internal BitMap-to-BitMap routine
- removed bug-fix from V1.2, now using BMF\_DISPLAYABLE flag, no matter if this will help or not

V1.2 (19.03.1994) :

- tried to fix bug with strange-sized (temporary) bitmaps like 694x136 :  
now uses size = ((x + 15) >> 4) << 4) for determinating the  
desired width.  
This is not completely fixed yet (seems to be an OS bug ...)

V1.1 (09.03.1994) :

- first version

## 1.37 EGS.svdriver

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Version : 1.8  
Release Date : 28.12.1994

Requirements

~~~~~

- OS V2.04+ (V37)+ and its libraries
  - superviewsupport.library V3+
  - egs.library V1+
  - egsintui.library V1+
  - egsgfx.library V1+
-

- AMIGA with EGS Graphic Card (or EGS distribution with Amiga Emulation)

#### Description

~~~~~

EGS.svoperator is an external SV\_GfxBuffer display module for superview.library V3+.

It supplies functions for V2+ SVOjects to allow object-orientated displaying of graphics on EGS Screens (Enhanced-Graphic-System Screens). All corresponding EGS-Libraries are needed.

This Driver supports the following :

Emulation	Dimensions	max. Depth	Type
EGS-Card	[EGS-Card]	8/24	ONEPLANE
		8	BITPLANE
ECS/AGA	[ECS/AGA]	8	ONEPLANE
		8	BITPLANE

Currently BITPLANE with more than 8 Bit Colordepth and ONEPLANE with other pixelbits than 8 or 24 (e.g. 16 Bit R5:G5:B5:1) are not supported.

#### EGS-Cards

-----

When using an EGS Card, all supported ColorDepths should be displayed correctly in TrueColor.

#### Amiga ECS/AGA emulation

-----

When using the ECS/AGA emulation, you should set the max. possible ColorDepth in the ScreenMode preferences program.

#### AGA :

With AGA any Graphics with less than 256 Colors should be displayed 100% correctly. Only 256 Color-graphics will usually have some Colors wrong, because those are obtained by the EGS-System for the Display itself (Window-Borders, etc.), so that they usually can't be used for the graphics. 24 Bit graphics will be dithered to 256 Colors under AGA (usually GreyScaled).

#### ECS:

Using the ECS emulation will perhaps nearly always result in very ugly Colors, if you're displaying more than, let's say, 8 Colors. This results out of the maximum ColorDepth of 16 Colors in Hires, of which some - see AGA notes - are already reserved. Of course 24 Bit graphics may also be dithered to 16 Colors/GreyScales, but better don't try it out ...

Closing of the current EGS Display is possible by freeing the handle's resources or delocating the handle, but no screen or window addresses (for IDCMP checking) are returned by the related library functions, because EGS is (as far as I know) binary incompatible to Intuition. To fix this a little bit, every time when displaying a graphic on the EGS-Screen a Workbench Window is opened which allows usual IDCMP access.

Window IDCMP and Window Flags (except backdrop/borderless) are recognized and used.

#### History

~~~~~

V1.8 (28.12.1994) :

- fixed bug in (re-)initialization module

V1.7 (16.07.1994) :

- when EGS.svdriver could not be opened, superviewsupport.library (and some others) would not have been closed (and thus could not be flushed out of memory anymore). This is now fixed (and still has to be fixed for some other SVOobjects and SVDdrivers).

V1.6 (22.05.1994) :

- replaced internal BitPlaneToOnePlane routine with its pendant from superviewsupport.library V3+

V1.5 (07.05.1994) :

- 15.05.94 : modified Doc-File slightly
- use of SAS/C V6.51
- use of new "superviewsupport.library" V1  
This saves some space again (here : ca. 400 Bytes).

V1.4 (29.04.1994) :

- MAJOR REVISION
- added support for BITPLANE formats upto 8 Bit (256 Colors), which works for V37+ and V39+ (different routines)
- fixed old bug in memory delocation routines (for temporary buffers), which had not been used between V1.2 - V1.3, thus this bug might obviously have been the reason, why V1.1 crashed with some mysterious Exec-Gurus sometimes.

V1.3 (18.04.1994) :

- MAJOR REVISION
  - changed way of setting/handling Colors : now using ObtainColor() and ReleaseColor().  
Colors are released immediately after writing the graphics into the BitMap, to allow any later displayed graphics to obtain their own colors : otherwise no more colors would be free and they would be displayed with the wrong colors.
  - improved handling of 8 Bit graphics :
    - ECS/AGA emulation :
-

256 Color graphics usually will be displayed with some wrong colors, which are actually obtained for the EGS-Display itself (Window Borders, etc.) and cannot be changed by the application. ChunkyPixel-Graphics with less than 256 Colors will be displayed 100% perfect as long as only unused Color-Registers are already obtained by any applications.

- EGS Cards :

Due to the fact, that we are working with 24 Bit, all graphics should be displayed with their 100% correct Colors.

- added support for 24 Bit graphics :

- ECS/AGA emulation :

24 Bit graphics are dithered to 256 Colors and should be displayed in GreyScales usually (see notes concerning 256 Color graphics)

- EGS Cards :

24 Bit graphics are displayed in TrueColor

V1.2 (29.03.1994) :

- small improvements :

- now using SMART\_REFRESH Window
- no longer Backdrop-Window
- fixed handling of Control-Window

- with newer versions of the EGS-Libraries it should no longer crash (tested with Version 15-Mar-1993, found on AmigaMagazin PD 4/93-4a/b)

V1.1 (17.03.1994) :

- first version with the beginnings of rudimentary EGS-Support

## 1.38 OPAL.svdriver

This one is a "third party product", which has been written by Steve Quartly and Paul Huxham.

You find it - together with its documentation and an appropriate Installer-Script - inside the Directory "Bonus".

Show Documentation

## 1.39 XOR.svoperator

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Version : 1.4

---

Release Date : 28.12.1994

#### Requirements

~~~~~

- OS V2.04+ (V37)+ and its libraries
- superviewsupport.library V4+

#### Description

~~~~~

XOR.svoperator is an external SV\_GfxBuffer modification module for superview.library V9+.

XOR.svoperator modifies a graphics in a way, that the color register numbers of the supplied picture's pixels are XOR'ed with a given value, which may be specified via ControlPads (see below).

#### ControlPad-Switches

~~~~~

ControlPad-Name : "ENV:superview-library/XOR.controlpad"  
ControlPad-Commands : - XORVALUE = <0..255>  
; 0 and 255 will not be the best decision.  
; Use 15 or something like this.

#### History

~~~~~

V1.4 (28.12.1994) :

- fixed bug in (re-)initialization module

V1.3 (01.11.1994) :

- now rejects 24 Bit data (would have produced garbage)

V1.2 (09.10.1994) :

- there was a big memory black hole in V1.1 (internal memory lists had not been delocated). Fixed.

V1.1 (30.09.1994) :

- first version

## 1.40 24BitToHam6.svoperator

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(Also see notes under "Credits".)

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Version : 1.2  
Release Date : 28.12.1994

---

## Requirements

~~~~~

- OS V2.04+ (V37)+ and its libraries
- superviewsupport.library V4+

## Description

~~~~~

24BitToHam6.svoperator is an external SV\_GfxBuffer modification module for superview.library V9+.

24BitToHam6.svoperator dithers 24 Bit RGB graphics to HAM6.

## History

~~~~~

V1.2 (28.12.1994) :

- fixed bug in (re-)initialization module

V1.1 (04.12.1994) :

- first version

## 1.41 Dither24Bit.svoperator

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(Also see notes under "Credits".)

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Version : 1.1  
Release Date : 26.12.1994

## Requirements

~~~~~

- OS V2.04+ (V37)+ and its libraries
- superviewsupport.library V4+

## Description

~~~~~

Dither24Bit.svoperator is an external SV\_GfxBuffer modification module for superview.library V9+.

Dither24Bit.svoperator dithers 24 Bit RGB graphics to 256 Colors by default. Possible is also dithering to less colors (2..256), if specified via ControlPad-Settings.

Technically, a modiflicated version of Heckbert's median cut is applied to Floyd-Steinberg dithered data.

---

## ControlPad-Switches

~~~~~

ControlPad-Name : "ENV:superview-library/Dither24Bit.controlpad"  
 ControlPad-Commands : - COLORDEPTH=<1..8>  
                           ; specifies the colordepth of the dithering  
                           ; output (1->2 Colors .. 8->256 Colors)

## History

~~~~~

V1.1 (26.12.1994) :

- first version

## 1.42 HilbertDither256.svoperator

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 (Also see notes under "Credits".)

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Version : 1.3  
 Release Date : 28.12.1994

## Requirements

~~~~~

- OS V2.04+ (V37)+ and its libraries
- superviewsupport.library V4+

## Description

~~~~~

HilbertDither256.svoperator is an external SV\_GfxBuffer modification module for superview.library V9+.

HilbertDither256.svoperator modifies any supplied source SV\_GfxBuffer in a way, that all supplied graphics with upto 256 Colors are dithered to Black & White graphics (2 Colors), as e.g. needed for desktop publishing or output on matrix printers.

It uses the fractal Hilbert curve for getting best results in eliminating the resulting errors.

As a side effect, the resulting picture will always have a width and height, which is divideable by 16 (graphics will be adjusted this way).

## ControlPad-Switches

~~~~~

ControlPad-Name : "ENV:superview-library/HilbertDither256.controlpad"  
 ControlPad-Commands : - BACKGROUND=<BLACK|WHITE>  
                           ; defines, which of the two colors will act  
                           ; as background color. Useful e.g. for printing.

## History

~~~~~

V1.3 (28.12.1994) :

- fixed bug in (re-)initialization module

V1.2 (09.10.1994) :

- added ControlPad-Switch for selection of the background color

V1.1 (09.10.1994) :

- first version

## 1.43 ExtractGrayScales

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Version : 1.2

Release Date : 28.12.1994

## Requirements

~~~~~

- OS V2.04+ (V37)+ and its libraries
- superviewsupport.library V4+

## Description

~~~~~

ExtractGrayScales.svoperator is an external SV\_GfxBuffer modification module for superview.library V9+.

ExtractGrayScales.svoperator modifies any supplied source SV\_GfxBuffer in a way, that its colormap will be changed to reflect gray-scales (works with (upto) 256 Colors and 24 Bit Files).

This is a sample SVOperator for simple demonstration how to write one. It's simple, but effective.

## History

~~~~~

V1.2 (28.12.1994) :

- fixed bug in (re-)initialization module

V1.1 (30.09.1994) :

- first version

## 1.44 ExtractRed

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FREEWARE. All rights reserved.

Version : 1.2  
Release Date : 28.12.1994

### Requirements

~~~~~

- OS V2.04+ (V37)+ and its libraries
- superviewsupport.library V4+

### Description

~~~~~

ExtractRed.svoperator is an external SV\_GfxBuffer modification module for superview.library V9+.

ExtractRed.svoperator modifies any supplied source SV\_GfxBuffer in a way, that only the RED values of a picture will be extracted for creation of a new (upto) 256 Color graphics (works with (upto) 256 Colors and 24 Bit Files).

### History

~~~~~

V1.2 (28.12.1994) :

- fixed bug in (re-)initialization module

V1.1 (29.09.1994) :

- first version

## 1.45 ExtractGreen

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FREEWARE. All rights reserved.

Version : 1.2  
Release Date : 28.12.1994

### Requirements

~~~~~

- OS V2.04+ (V37)+ and its libraries
- superviewsupport.library V4+

### Description

---

~~~~~

ExtractGreen.svoperator is an external SV\_GfxBuffer modification module for superview.library V9+.

ExtractGreen.svoperator modifies any supplied source SV\_GfxBuffer in a way, that only the GREEN values of a picture will be extracted for creation of a new (upto) 256 Color graphics (works with (upto) 256 Colors and 24 Bit Files).

History

~~~~~

V1.2 (28.12.1994) :

- fixed bug in (re-)initialization module

V1.1 (29.09.1994) :

- first version

## 1.46 ExtractBlue

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FREEWARE. All rights reserved.

Version : 1.2

Release Date : 28.12.1994

Requirements

~~~~~

- OS V2.04+ (V37)+ and its libraries
- superviewsupport.library V4+

Description

~~~~~

ExtractBlue.svoperator is an external SV\_GfxBuffer modification module for superview.library V9+.

ExtractBlue.svoperator modifies any supplied source SV\_GfxBuffer in a way, that only the BLUE values of a picture will be extracted for creation of a new (upto) 256 Color graphics (works with (upto) 256 Colors and 24 Bit Files).

History

~~~~~

V1.2 (28.12.1994) :

- fixed bug in (re-)initialization module

V1.1 (29.09.1994) :

---

- first version

## 1.47 TopToBottom

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FREEWARE. All rights reserved.

Version : 1.2  
Release Date : 28.12.1994

### Requirements

~~~~~

- OS V2.04+ (V37)+ and its libraries
- superviewsupport.library V4+

### Description

~~~~~

TopToBottom.svoperator is an external SV\_GfxBuffer modification module for superview.library V9+.

TopToBottom.svoperator modifies any supplied source SV\_GfxBuffer in a way, that it will be swapped from bottom to top (works with (upto) 256 Colors and 24 Bit Files).

### History

~~~~~

V1.2 (28.12.1994) :

- fixed bug in (re-)initialization module

V1.1 (01.11.1994) :

- first version

## 1.48 LeftToRight

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FREEWARE. All rights reserved.

Version : 1.2  
Release Date : 28.12.1994

### Requirements

~~~~~

- OS V2.04+ (V37)+ and its libraries
  - superviewsupport.library V4+
-

## Description

~~~~~

LeftToRight.svoperator is an external SV\_GfxBuffer modification module for superview.library V9+.

LeftToRight.svoperator modifies any supplied source SV\_GfxBuffer in a way, that it will be swapped from left to right (mirrored) (works with (upto) 256 Colors and 24 Bit Files).

## History

~~~~~

V1.2 (28.12.1994) :

- fixed bug in (re-)initialization module

V1.1 (01.11.1994) :

- first version

## 1.49 Used literature for developing this program

## Literature:

~~~~~

- [1] "Bitmapped Graphics", 2nd Edition, Steve Rimmer, Windcrest/McGraw-Hill, © 1993 by Windcrest Books (registered Trademark of TAB Books). ISBN 0-8306-4209-9
- [2] "Supercharged Bitmapped Graphics", Steve Rimmer, Windcrest/McGraw-Hill, © 1992 by Windcrest Books (registered Trademark of TAB Books). ISBN 0-8306-3788-5
- [3] "Das Handbuch der Grafikformate", Klaus Holtorf, © 1994 Franzis-Verlag GmbH, München ISBN 3-7723-6392-X
- [4] "Amiga Magazin", Issue 2/1992, Markt & Technik Verlag AG
- [5] "DOS Extra", Issue 4/1993, DMV-Verlag
- [6] "Das Aufsteigerbuch" (C64 -> Amiga), Michael Strauch, Alexander Stellmach, © 1987 by DATA BECKER GmbH, Düsseldorf. ISBN 3-89011-134-4
- [7] "Formats.doc" of the ShowVIC distribution on SaarAG-Disk #616. ShowVIC is (C)opyright 1993 by Matt Francis.
- [8] ... and perhaps books/magazines/articles, which I don't remember yet !

## 1.50 Credits

## Credits:

~~~~~

24BitToHam6.svoperator

-----

This SVOperator bases on code, which has been included with

FBM Release 1.0 25-Feb-90 by Michael Mauldin.  
 The original code had been written by Harald C. Koch to convert  
 24 Bit RGB data (FBM format) to HAM6-ILBM files.  
 I modified it to create format-independent 8 Bit chunky Pixel buffers,  
 which can be handled by superview-library.  
 Here's the copyright notice as found in "fbham.c"  
 (revision headers cut off / left out) :

```
* fbham.c: FBM Release 1.0 25-Feb-90 Michael Mauldin
*
* Copyright (C) 1989,1990 by C. Harald Koch & Michael Mauldin.
* Permission is granted to use this file in whole or in part for
* any purpose, educational, recreational or commercial, provided
* that this copyright notice is retained unchanged. This software
* is available to all free of charge by anonymous FTP and in the
* UUNET archives.
[...]
```

Dither24Bit.svoperator

-----

This SVOperator bases on code, which has been included with  
 FBM Release 1.0 25-Feb-90 by Michael Mauldin.  
 The original code had to be strongly modified to work with common  
 24 Bit RGB Pixels instead of R-G-B planes and has been made  
 fully re-entrant (also various other changes had to be done).  
 Only the basic algorithm is similar to the original code.  
 Here's the copyright notice as found in "fbquant.c"  
 (revision headers cut off / left out) :

```
/*****
* fbquant.c: FBM Release 1.0 25-Feb-90 Michael Mauldin
*
* Copyright (C) 1989,1990 by Michael Mauldin. Permission is granted
* to use this file in whole or in part for any purpose, educational,
* recreational or commercial, provided that this copyright notice
* is retained unchanged. This software is available to all free of
* charge by anonymous FTP and in the UUNET archives.
[...]
```

C64.svobject

-----

For getting information about the C64 Koala and Doodle formats I took  
 a look into the source code of ComView 1.0 by Paul Grebenc, which can  
 be found as "C64View" on the SaarAG-Disk #523.

I did not include and use the Source Code as such, but I really learnt  
 a much out of it. The algorithms are perhaps nearly the same,  
 but because I do not use file-to-screen decoding my code is perhaps  
 some 100% faster (different structure, many optimizations).

---

## FBM.svobject

-----

For getting information on the FBM-Format I took a look into the file "fbm.h" and other source-files, which describe this file format and are part of FBM Release 1.0 25-Feb-90 by Michael Mauldin. No source-code from this package - only the "pure information" - has been used for FBM.svobject.

## GIF.svobject

-----

For the GIF LWZ Decoding Routines I used some code of the FBM Package. The code of the original routines has been strongly modified and enhanced/improved (there are almost no similarities to the original code left now).

Here's the Copyright notice as found in the file "flgifr.c" (revision headers cut off / left out) :

```
* flgifr.c: FBM Release 1.0 25-Feb-90 Michael Mauldin
*
* Modifications to GIFTORLE are Copyright (C) 1989,1990 by Michael
* Mauldin. Permission is granted to use this file in whole or in
* part for any purpose, educational, recreational or commercial,
* provided that this copyright notice is retained unchanged.
* This software is available to all free of charge by anonymous
* FTP and in the UUNET archives.
*
* Derived from 'giftorle', written by David Koblas
*
* +-----+
* | Copyright 1989, David Koblas. |
* | You may copy this file in whole or in part as long as you |
* | don't try to make money off it, or pretend that you wrote it. |
* +-----+
```

For the GIF LWZ Encoding Routines I used some code of the FBM Package. The code of the original routines has been strongly modified and enhanced/improved.

Here are the Copyright notice of these modules as found in the files "flgife.c" and "flgifc.c" (revision headers cut off / left out) :

```
* flgife.c: FBM Release 1.0 25-Feb-90 Michael Mauldin
*
* Modifications to GIFENCODE are Copyright (C) 1989,1990 by
* Michael Mauldin. Permission is granted to use this file in whole
* or in part for any purpose, educational, recreational or commercial,
* provided that this copyright notice is retained unchanged.
* This software is available to all free of charge by anonymous
* FTP and in the UUNET archives.
*
*
* flgifc.c: FBM Release 1.0 25-Feb-90 Michael Mauldin
*
* Modifications to GIFENCODE are Copyright (C) 1989,1990 by
* Michael Mauldin. Permission is granted to use this file in whole
```

```
* or in part for any purpose, educational, recreational or commercial,
* provided that this copyright notice is retained unchanged.
* This software is available to all free of charge by anonymous
* FTP and in the UUNET archives.
*
* Based on: compress.c - File compression ala IEEE Computer, June 1984.
*
* Spencer W. Thomas      (decvax!harpo!utah-cs!utah-gr!thomas)
* Jim McKie              (decvax!mcvax!jim)
* Steve Davies           (decvax!vax135!petsd!peora!srd)
* Ken Turkowski          (decvax!decwrl!turtlevax!ken)
* James A. Woods         (decvax!ihnp4!ames!jaw)
* Joe Orost              (decvax!vax135!petsd!joe)
*
```

#### TIFF.svobject

-----

Some parts of this software are based in part on code from the  
"Aldus Developers Desk" Release 90-06-14 (as found on the Nova Media  
"Grafik-Collection I CDROM", 1993, Directory "ZIP", File "TIFFRD.ZIP").

Many work had to be done, to get that code working on the Commodore  
Amiga (or even compileable under SAS/C V6.51).  
(Actually I'm not sure, if it really works ...)  
In detail, I'm making use of strongly modified versions of the lzw  
(lzwde.c) and CCITT 1D (tiff2.c) decoding routines.

#### YUVN.svobject

-----

For the 24 Bit YUV <-> RGB Conversion Routines I used some code of the  
NetPBM Package.

The code of the original routines has been strongly modified and  
enhanced/improved (there are almost no similarities to the original  
code left now, except the main algorithm).

Here are the Copyright notices as found in the specific source files :

```
/* ppmtoyuvsplit.c - convert a portable pixmap into 3 raw files:
** - basename.Y : The Luminance chunk at the size of the Image
** - basename.U : The Chrominance chunk U at 1/4
** - basename.V : The Chrominance chunk V at 1/4
** The subsampled U and V values are made by arithmetic mean.
**
** If CCIR601 is defined, the produced YUV triples are scaled again
** to fit into the smaller range of values for this standard.
**
** by A.Beck
** Internet: Andre_Beck@IRS.Inf.TU-Dresden.de
**
** Based on ppmtoyuv.c
**
** Permission to use, copy, modify, and distribute this software and its
** documentation for any purpose and without fee is hereby granted, provided
** that the above copyright notice appear in all copies and that both that
** copyright notice and this permission notice appear in supporting
** documentation. This software is provided "as is" without express or
```

```

** implied warranty.
*/

/* yuvsplittoppm.c - construct a portable pixmap from 3 raw files:
** - basename.Y : The Luminance chunk at the size of the Image
** - basename.U : The Chrominance chunk U at 1/4
** - basename.V : The Chrominance chunk V at 1/4
** The subsampled U and V values are made by arithmetic mean.
**
** If ccir601 is defined, the produced YUV triples have been scaled again
** to fit into the smaller range of values for this standard.
**
** by Marcel Wijkstra <wijkstra@fwi.uva.nl>
**
** Based on ppmtouyvsplit.c
**
** Permission to use, copy, modify, and distribute this software and its
** documentation for any purpose and without fee is hereby granted, provided
** that the above copyright notice appear in all copies and that both that
** copyright notice and this permission notice appear in supporting
** documentation. This software is provided "as is" without express or
** implied warranty.
*/

```

HilbertDither256.svperator

-----

The description of the "fractal Hilbert dithering" method has been found in the "mc magazine, issue 6/94, Franzis-Verlag GmbH". The basic techniques (L-System, 16x16 block error approximation) are perhaps the same, but the source code as such has been rewritten completely in almost any of its parts, so that it has not just been "taken out of there" (e.g. the original source was a standalone-program, which only worked with TARGA graphics, which had a width and height divideable by 16, but max. 1280x960 or 2560x1920).

## 1.51 Requirements for the SuperView.library Package

Generally, you need at least an 68000 Amiga, running with OS 2.04+. Better performance results require better Software/Hardware.

\textdegree{} For usage of the IFF-based SVObjects, like ILBM, ACBM and YUVN, you should take care to have iffparse.library V37+ on your bootdisk.

\textdegree{} For DataType support with OS 3.x+ you need datatypes.library V39 ← +  
to be present. If it is not present, datatype-support is disabled, but you might not need it, anyway.

Additionally there are some more requirements, which do not necessarily depend on the OS or the Hardware:

\textdegree{} superviewsupport.library V1+ upto V5+, where the version depends on the SVObjects/SVDrivers/SVOperators. This distribution always includes the latest version of the library.

Some SVOjects,SVDrivers or SVOperators additionally require different Hardware/Software configurations, but usually this is stated within their own documentation:

```
\textdegree{} AGA.svdriver    OS 3.x+  68020+ with ECS, AGA or GraphicsCard
                                   (not fully featured with ECS)
\textdegree{} OPAL.svdriver      OpalVision Card
\textdegree{} JPEG.svobject      68020+
\textdegree{} SVO.svobject       xpkmaster.library V2+
                                   which is (C)opyright by its authors
                                   (c/o Urban Dominik Mueller)
\textdegree{} GIF.svobject.030    68020+ version of GIF.svobject
```