

**EGSTV**

<b>COLLABORATORS</b>
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# Chapter 1

## EGSTV

### 1.1 Index

Welcome to EGS-TV / EGS-TV-Professional (V3.5)

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***          New! now usable without VLab!          ***
*** EGS-TV: the Desktop-Video-Software for all EGS users ***
***          New! now with IV24-support!            ***
***          New! now with handy scanner support!    ***
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Disclaimer

Copyright and Distribution

What is EGS-TV? (EGS-TV is (c) by Helmut Hoffmann 1994)

What is EGS? (EGS is (c) by VIONA-Development)

Using EGS-TV with VLab framegrabbers

Using EGS-TV with IV24 video boards

Using EGS-TV with handy scanners

Using EGS-TV as stand alone program

EGS-TV-Professional

Why should I use EGS-TV?

Features of EGS-TV (demo, full and professional version)

Important requirements for EGS-TV

Installing EGS-TV

Important notes for problems or in case of trouble (please read!)

The fontsensitive user interface of EGS-TV

>>> Using EGS-TV <<<

How should I register to get the full version?

What do I get when I register?

Getting updates and upgrades

About the author

Hard- and Software used while developing EGS-TV

Special Thanks

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Information about other useful EGS programs

Version history

## 1.2 Disclaimer

I tried my best to make this program error-free. It has been checked with enforcer and mungwall and works without problems on my configuration. Nevertheless, as there are so many possible configurations of Amigas, EGS-Systems, framegrabbers, I can not guarantee that this software will work on your configuration. Especially the complex EGS-System does not have the desired stability in some situations. In cases where I found problems with EGS, I tried to workaround them, or explained them in this document.

This software (program and documentation) is provided "as is" and comes with no warranty, either expressed or implied. The author is in no way responsible for any damage or loss that may occur due to direct or indirect usage of this software. You use this software entirely at your own risk.

## 1.3 Copyright and Distribution

EGS-TV software (program and documentation) is copyright by

Helmut Hoffmann  
Rubensstrasse 4  
D-41063 Mönchengladbach  
  
Germany

The demo version of EGS-TV may be freely distributed and used as long as the following conditions are met:

- 1) All files have to be kept together
- 2) No file may be modified or crunched/packed.

The only official way to distribute EGS-TV demo packed is the original egstv.lha or egstv.lzh-archive.

EGS-TV may not be disassembled or analysed. The limitations integrated in the demo version may under no circumstance be removed or bypassed.

- 3) Distributors may only charge for the duplication process (including media) and not for the software. These charges may not exceed the following limits:
  - a) EGS-TV demo on a PD-disk: 8\$ (US-dollar) including postage&packing (in Germany: 12DM)
  - b) EGS-TV demo on a PD-CD-ROM: 50\$ (US-dollar) including postage&packing (in Germany: 75DM)
  - c) EGS-TV demo on a BBS/Mailbox/ftp-site or other electronically

callable system: Maximum charge 4\$ (US-dollar) (in Germany: 6DM)  
for downloading

Anyway, it must be made explicitly clear to the buyer, that he does not pay for the program (demo) itself but only for the duplication service.

- 4) It is not allowed to distribute EGS-TV with any commercial product without a written permission by me. One exception is the distribution of the demo version with products, not exceeding the above price limits (e.g. a cover-disk magazine for 8\$ or less).

The following companies have my explicit permission to distribute the EGS-TV demo with their products: NOVA Design, Ingenieurbüro Helfrich, Macrosystem

If you want to distribute EGS-TV demo with your commercial product (hardware or software) write to me for details.

If you want your software or hardware product to be capable of working directly with EGS-TV you can also contact me (address as above).

- 5) The registered version may not be redistributed. It may only run on one machine per registration. It is allowed to make a backup copy of the original disk.

You can currently contact me by EMail:

hhoff@pool.informatik.rwth-aachen.de

If you want to register or have suggestions (and if you don't get an answer by EMail) please write by ordinary mails to my address above.

## 1.4 What is EGS-TV?

EGS-TV is a Desktop Video and framegrabber software for the EGS system with harddisk recording and editing, blue screen keying system and more.

EGS-TV started as a software project which supported the VLab-Framegrabbers (made by Macrosystem) in the EGS-Environment on full color screens. Since version 3.1 it is independent of VLab and can be used as standalone program to create/edit sequences/animations in RAM or on harddisk. Even such special effects as Blue Screen Keying can be applied! Since version 3.2 the IV24 (made by GVP) is supported as framegrabber too.

EGS-TV should work on any EGS graphic board (and even without graphic board), as long as you have EGS6.0 or later installed.

New import functions make it possible to use EGS-TV without any framegrabber, but you certainly get more comfort if you use a supported framegrabber.

Picture import is possible with:

- \* ImageFX
- \* EGS-ImageFX
- \* EGS applications which use 24Bit EGS-BitMaps



The last group includes programs as PicoPainter or SpectraPaint/EGS-Paint, but many more should be compatible to this import method. The import is performed in fractions of a second by direct usage of image data; no lengthy save operations are necessary.

EGS-TV currently supports the following framegrabbers:

- \* classical VLab (as board or parallelport version)
- \* Y/C-VLab (as board or parallelport version)
- \* IV24 (GVPs Impact Vision 24)

Support of other framegrabbers is planned.

For VLab users EGS-TV does not just replace the original software, but it offers totally new possibilities and flexibility (e.g. realtime Blue-Screen-Keying, video editing system, animation generation ...).

## 1.5 What is EGS?

EGS is the quasi standard for Hi- & True-Color graphics on the Amiga computer. It is supported by different graphics cards and can display graphics on any supported screentype in a compatible way. Besides that, it offers a flexible user interface, which is much easier to program than the Amiga-Userinterface.

Some popular graphic boards which are delivered with EGS:

- \* Piccolo
- \* Rainbow
- \* EGS-Spectrum
- \* EGS-110

Some graphic boards for which EGS is available separately:

- \* EGS for all Amigas (no graphic board necessary!)
- \* Retina
- \* Picasso
- \* Merlin
- \* Impact Vision

EGS-TV does not depend on special graphics hardware. It should run in conjunction with all graphic cards (or even without) which support EGS. Only the speed and the available screen resolutions and colors might differ.

EGS is currently ported to some other graphics cards, so the number of EGS-users will hopefully increase in the future.

## 1.6 Using EGS-TV with VLab framegrabbers

VLab is a realtime framegrabber made by Macrosystem which is capable of grabbing a frame from your running Video-Source (TV-Tuner, Videotape, VideoCamcorder, ...) in full Color.

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Different version of VLab exist:

- \* The classical VLab which has two standard Video-Inputs
- \* A parallel port version of the classical VLab
- \* The Super-VLab (Y/C-VLab) which has an additional Y/C-Input for better quality when connected to a modern Super-VHS-Recorder or Hi8-Camcorder
- \* A parallel port version of the Super-VLab
- \* The VLab-Motion which is a very recent product and is capable of digitizing full sequences in one pass by hardware JPeg-compression

EGS-TV currently supports the classical and super VLabs (as board or as parallellport version). You can use several VLabs connected to your Amiga with EGS-TV (upto 6 video inputs are supported).

Due to lack of support by MacroSystem, EGS-TV currently can not support the VLab-Motion.

It is possible, to use VLabs and an IV24 together with EGS-TV. The IV24 will be connected to input number 6.

## 1.7 Using EGS-TV with IV24 video boards

The IV24 (Impact Vision 24) of GVP is a complex video board, which offers many application possibilities:

- \* realtime framegrabber
- \* genlocking
- \* 24Bit framebuffer

Currently the IV24 is only supported as framegrabber. As I do not have an IV24 for development or testing, I currently can not support more features of the IV24. Especially the IV24 can not be used concurrently as a graphic board and as a framegrabber.

To use the IV24 as framegrabber for EGS-TV you need another graphic board with the EGS-System. Alternatively you can use EGS-TV on the Amiga chips with EGS. As the IV24 is used with EGS-TV only as a framegrabber, it is not necessary to have the EGS system for the IV24. Activating an EGS system for the IV24 might even prevent the use of IV24 by EGS-TV.

If you have an EGS board and an additional IV24, you can watch the running IV24 signal in a monitor window of highest quality, totally flicker free and record pictures or sequences...

The IV24 can be used concurrently with VLabs in EGS-TV. The IV24 is always connected to input number 6 of EGS-TV.

## 1.8 Using EGS-TV with handy scanners

EGS-TV has not been designed as a scan software; the handy scanner support in EGS-TV has merely been implemented for experimenting reasons. If there is enough demand, I will create a separate scanner program, which allows

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a more comfortable usage of handy scanners.

Unfortunately I currently have not enough information to implement an extensive scanner support. Currently only the following handy scanner interfaces are supported:

- \* Reisware interface (manufacturer no. 43537, device no. 17)
- \* Cameron interface (manufacturer no. 43521, device no. 16)

I could only test EGS-TV with the Reisware interface.

Please inform me, if you have a similair interface with other numbers. The Commodore program "ShowConfig", which can be found on standard workbenches in the "tools" drawer, informs you about the manufacturer and device number of your interface.

Currently the following scanners are supported:

- \* Cameron handy scanner with 16 or 256 real greyscales
- \* Reisware handy scanner (ScanKing?) with 16 or 256 real greyscales

I could only test EGS-TV with the Cameron Type 14 scanner (upto 256 real greyscales).

Pure black and white devices, which can only simulate greyscales by dithering, can currently not be used in any useful way with EGS-TV. Although scanning is already possible (and the picture is shown during scanning), the black and white pictures can not be used in EGS-TV.

EGS-TV currently only saves scan pictures as 256 greyscale pictures; 16 greyscale pictures are converted to 256 greyscales.

If there is enough demand, I will create a specialized scanner software, which does not contain such limitations and could also be used to create big black and white scans.

Important!

The scanner selection is done in the sequence control window; the Picture source button allows the selection of handy scanners as picture source in horizontal and vertical scanning mode.

The scan size has to be entered in pixels in the area size gadgets. It is used directly for "half frames". If you scan as "full frame", wide and height will be doubled.

During scanning the picture will appear in realtime in upto 256 greyscales in the right orientation (!) in the preview window.

The size limitations of the video area would certainly not be present in a specialized scanner software...

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## 1.9 Using EGS-TV as stand alone program

The usability of EGS-TV without a framegrabber is currently a bit tricky. But it is possible, to create video sequences (animations), slideshows or similar things and to use the blue screen keying effect system.

To transfer pictures to EGS-TV, there are several import functions, which are available even in the demo version. If no supported framegrabber is found, EGS-TV starts automatically in the ImageFX import mode. You can use several import sources:

- \* (EGS-)ImageFX
- \* EGS-Bitmap

The EGS-Bitmap import allows the picture import from many 24Bit EGS graphic programs, as PicoPainter, BigPainter, SpectraPaint, EGSPaint. The Import source can be selected in the sequence control window. It is not only used for sequences, but also for single grabs! Only the monitor function is only usable by framegrabbers. When using EGS-TV as stand alone program, the monitor is deactivated.

\*\*\* New \*\*\*

The professional version offers a load function for Jpeg pictures, which can also be used to insert, append, replace frames in a sequence or even combine the loaded picture with the Blue Screen Keying. The load function can be selected with the picture source button in the sequence control window in the same way as the import functions.

More functions to load pictures and frames are planned.

It is possible, to run EGS-TV together with other programs on the EGS-Default screen, which makes importing very easy.

## 1.10 EGS-TV-Professional

At the end of september 1994 EGS-TV-Professional, the high end version of EGS-TV was released. The differences are explained in the documentation. Below you find an overview of the differences. You can certainly order an Upgrade from EGS-TV to the professional version at a low price.

- \* Direct harddisk recording with all features, which are already offered by EGS-TV for RAM-sequences, as appending, inserting, deleting frames, combining with Blue Screen Keying and more...
  - \* Precise timing control for sequence recording and playback (RAM and harddisk). This includes fixed intervalls as well as flexible time codes for every frame. With this feature you could also use EGS-TV as a Slide show generator and player. A realtime position and length display is available.
  - \* Jpeg as file format for pictures and to export sequences with selectable quality, smoothing and more.
-

\* Load function for Jpeg pictures (also to include into sequences ...)

## 1.11 Why should I use EGS-TV?

EGS-TV is a pure EGS program. It offers high/true-color sequence editing and animation generation for random access sequences on your harddisk (Professional version only). It can apply amazing trick technics as the Blue Screen Keying to your pictures and sequences/animations. Did you ever want to edit an 80MByte animation and delete a frame out of the middle? No problem with EGS-TV-Professional...

All this is done through a font sensitive EGS user interface which runs on your biggest screens in 24Bit color quality...

EGS-TV can import and export pictures very fast to and from many other EGS programs. It can even run on the same screen as those programs. It offers many file formats (IFF, Jpeg, YUV, PPM, QRT, Targa, DEEP, ...) and uses it's own fast sequence format for random access sequences. If you are finished with sequence editing you can export a sequence frame by frame in any of the supported file formats...

VLab and IV24 users get full sequence recording support and can grab any number of frames to compare or edit. Flexible deinterlacing (VLab only) and the Blue Screen Keying technic offer stunning effects. High color quality even for monitoring makes grabbing much easier and fun. The incredible direct export functions and the great variety of file formats make postprocessing much easier and a lot faster...

## 1.12 Features of EGS-TV

- \* Support of VLab framegrabbers (classical and Y/C version)
- \* Support of IV24 video boards as framegrabbers
- \* Import functions for video post processing or to use EGS-TV as a stand alone video sequence program with (EGS-)ImageFX and other programs (with EGS-Bitmap import; usable with PicoPainter, BigPainter, SpectraPaint, EGSPaint, ...)
- \* Monitor window (PIP) for VLab- and IV24 framegrabbers in high color quality with surprisingly fast update rates.
- \* Support for unlimited number of grab pictures (only limited by memory) in different sizes and color modes; big grabs can be viewed downscaled alternatively. This allows you to grab multiple frames and compare them to decide, which is the best to use.
- \* Desktop video system with support for unlimited number of video sequences

The demo and classical versions only support RAM sequences (all frames must fit into memory); the professional version offers all functions for

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harddisk sequences too (complete non linear video editing system). The professional version additionally offers time code support, where time codes can even be changed manually.

Editing functions: Insert/assemble recording, deleting of frames, fast forward and backward search modes, realtime playback (professional version only), combine function (to combine a new foreground and the video sequence with the Blue Screen Keying), overwrite.

- \* Flexible Blue-Screen-System (Chroma Keying) with realtime keying for VLab (by using quasi two VLab inputs concurrently) and combine function for blue screen application on video sequences (usable in all configurations). Chroma color range can be freely configured.
- \* Color intensity can be changed for preview windows and final picture export. More options will probably be integrated, if enough users register. In conjunction with a VLab even the running monitor window will be recolored in realtime.
- \* Flexible deinterlace function for VLab with different modes and strengths. This includes an Undo feature to try different parameters on a fullframe picture.
- \* Grab-Area can be selected by mouse or numerically.
- \* Demo runs on cloned default screen with 24Bit depths or direct on the DEFAULT-screen if this has the right depths. Desired depths can be configured!

Full version can be configured to use any screenmode; change of the screenmode is possible while EGS-TV is running; even foreign EGS screens can be "visited" by EGS-TV!

- \* Support of up to 6 video inputs (which may be located on several frame-grabbers and video boards)
- \* Support of the VLab-TimeBaseCorrection (Videotaperecoder-Mode)
- \* English and German version of EGS-TV
- \* Extensive documentation in Amiga-guide format

The following functions are only usable in the registered version:

- \* Saving of grabs in different file formats (currently IFF-ILBM compressed and uncompressed, PPM (P5 and P6), QRT, Targa, DEEP, YUV (only with vlab.library; incl. Y-format for greyscale grabs), Raw VLab and Jpeg (Professional version only))
  - \* Transfer of grabs to the clipboard
  - \* Saving and loading of complete video sequences in a special EGS-TV YUV-like file format including a random access harddisk sequence format (Professional version only) and time code information.
  - \* Automatic export of all frames of a sequence in one of the above file formats as single picture files.
-

- \* Saving and loading of settings (preferences) with all important parameters and EGS-TV settings to adapt to different video sources or to be used as start-up configuration.

- \* Automatic transfer of grabs to other programs (picture export)

Fast direct transfer to PicoPainter and (EGS-)ImageFX;

Automatic transfer to TVPaint;

ARexx controlled file transfer is user configurable; upto 9 such transfer functions can be included in the export menu automatically.

## 1.13 Important requirements for EGS-TV

General requirements

Requirements for VLab users

Requirements for IV24 users

## 1.14 General requirements

- 1) EGS-TV needs a lot of memory as video and image processing software, as it needs 32Bits per pixel at least for conversion buffers. The EGS system alone also needs a lot of memory. At least 6MBytes of FAST-RAM are recommended. It should be possible to run EGS-TV with less memory, but many restrictions might appear then. Especially for RAM-sequences and for concurrent usage with other programs much memory is needed.
- 2) EGS-TV needs at least version 2.04 of the Amiga Operating System. For harddisk recording and editing OS3.0/3.1 is recommended as this allows harddisk partition block sizes of more than 512Bytes, which allows much faster seek access (up to factor 10!). A block size of 2kBytes is recommended for partitions that will be used for hard disk recording.
- 3) EGS-TV needs EGS-System 6.0 or higher installed correctly. It can be used with most graphic boards and even with Amigas without a graphic board, as long as EGS is available for this configuration.
- 4) EGS-TV normally runs fastest on 24-Bit screens.

Dithering makes the EGS system often much slower on screens with lower color depths. Especially without a graphic board the necessary chunky to planar conversion for the Amiga Chips makes EGS even more slower.

The demo version tries to use a screen like the default screen with 24Bit depths, if possible. Otherwise it will directly use the default screen.

If you want to have many preview windows open, be sure not to switch on the EGS-Feature "Force Simple To Smart" for the screen depths (24Bit) you intend to use. This will save a lot of memory and will probably speed up

the monitor. As on the other hand screen updates of fullframes which are to be deinterlaced can become real slow this way, there is an option in the menu of the control window, which allows you to select the refresh mode separately for half frames (incl. HiRes) and full frames. This is set by default to SmartRefresh for full frames. You can switch this off, if you want to save some memory. All grabbed frames are currently only stored as YUV-Pictures in EGS-TV and are recalculated for every refresh (this saves a lot of memory).

## 1.15 Requirements for VLab users

Supported VLab models:

- \* classical VLab (2 inputs)
- \* classical parallelport VLab
- \* Y/C-VLab (3 inputs)
- \* Y/C-Parallelport-VLab

The VLab-Motion can currently not be supported due to lack of support by the manufacturer.

To use a VLab with EGS-TV the "vlab.library" is needed. As this is not needed by the original VLab software, it can be that you have to copy this library manually from your original VLab disk to the LIBS: directory.

EGS-TV requires at least version 6 of the vlab.library; it can be that you need a higher library version to use specific VLab hardware versions. It is recommended to use at least version 8.2 of the vlab.library.

Important:

With Y/C-VLabs vlab.library 7.3 seems to lead to massive problems (crashes, freezes of EGS-TV, ...). I really recommend not to use Y/C-VLabs with this library version. A new option in EGS-TV (since version 3.4) might also reduce the problems.

Ask your dealer or Macrosystem to get the latest library.

Please note that even in vlab.library version 8 the filter functions do not work. I have implemented the filter-function gadgets in EGS-TV and they call the corresponding functions in VLab-library but upto version 8 these will do nothing. I hope that later versions of vlab.library will have this bug corrected.

## 1.16 Requirements for IV24 users

To use an IV24 the "fye.library" is needed. To make it possible for EGS-TV to access the IV24, the IV24 must not be occupied by other software. Especially you can not use the IV24 as "EGS graphic board"; the parallel usage of the IV24 as graphic board and framegrabber is impossible! This does also mean that you do not need an EGS system for your IV24. You need an EGS system configured for another graphic board or for

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native Amiga screen modes, so that the IV24 is free to be used as a framegrabber.

## 1.17 Installing EGS-TV

Installing the demo version

Installing the full (registered) or professional version

Configuring the full (registered) or professional version

Important notes:

### 1) Framegrabber support

If you want to use EGS-TV together with a framegrabber, you might need to install special libraries. See the important requirements for more information about this.

### 2) Trouble on program start

If you have trouble running EGS-TV, please retry to run it from a shell (with at least 25000 Bytes of stack). If the program returns immediatly with no message from the shell window it means:

- 1) Not enough memory to load EGS-TV
- or 2) dos.library 37 or later can not be opened.

Otherwise you will get a message in the shell, that another library, EGS-Screen or Window can not be opened. If the basic things can be opened, you might still get a requester on the EGS-Screen, that some library, a font or a message port can not be opened. If you have an incompatible framegrabber hardware, you can press "OK" to use EGS-TV as stand alone program.

Please make sure to have all the required libraries installed. If you think that EGS-TV reports a missing object without reason, please check if there is enough free memory left. Missing memory can prevent the access to any object and lead to such reports.

## 1.18 Installing the demo version

There is no installation required. You can run EGS-TV Demo by simply typing EGSTV in a shell (please make sure that the stack has at least 25000 bytes) or by double clicking on the EGSTV-Icon.

The demo version starts on a cloned EGS-Default screen with 24Bit color depth (other depths is configurable) if possible. Otherwise (or if the default screen has the right depths) it will start on the default screen. This allows even the demo version to be run together with other programs on the default screen.

If you want to use another screen depth (e.g. 16Bit) without changing the EGS-Default-Depth, you can do this by creating a file "egstv.config".

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You can specify the desired screen depth in the first two columns of the first line in this text file. You have to specify this as a two digit number.

All other possibilities of this file are limited to the registered version (although the defined menu entrys in this file will appear in the transfer menu even in the demo version).

## 1.19 Installing the full (registered) or professional version

Even here no installation is required. You can start EGS-TV directly from disk or copy the EGS-TV drawer to your harddrive. But probably you want to adapt EGS-TV to your personal needs first, which can be done by different configuration processes.

Information for harddisk recording (Professional version only):

During tests of harddisk sequence editing I found that DOS-backward-seek-accesses are sometimes 10(!) times slower than forward accesses, if only 512Byte blocks are used on the partition. This can make harddisk sequence operations really slow. I really recommend to format a partition for harddisk recording with a blocksize of at least 2kByte. This can probably only be done with OS3.0/3.1. Depending on your harddrive, other blocksizes may be better.

Important:

All configuration files and the libraries (which make EGS-TV a full or professional version) can remain in the program directory. But please follow my advice: If you have installed an automatic compressing file system (packer) on your harddrive partition, you should remove the libraries from this directory and place them in your (hopefully) uncompressed libs:-directory on your system partition. This has to be done because some packing file systems have big trouble when reading packed libraries!

The egstv.library is your personal key to the full version. This may not be distributed or used on more than one computer simultaneously. It can even not be used more than one time simultaneously on one computer. This would also not make any sense, because hardware conflicts would be possible with framegrabbers.

The hhsjpeg.library is only needed in the professional version. If it is missing, no JPeg saving/exporting is possible. The JPeg subroutines (which are based on the portable C-Code of the "Independent JPeg Group") have been separated from the rest for technical reasons. Other programs from me might use this library as well in the future.

## 1.20 Configuring the registered version

There exist two different types of configuring methods for EGS-TV:

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On the one hand there is the file "egstv.config", which influences the starting screenmode as well as the configurable ARExx transfer menu entries. This file has to be created/edited with a text editor. If this file is missing, the full version of EGS-TV just starts with the same screen mode as the demo version would do.

On the other hand there are setting files (xxx.cnf), which you can create from EGS-TV with "Save setting". If you save such a setting file with the name "default.cnf", it will be loaded on the next program start automatically and all your current settings will then be used.

## 1.21 Important notes for problems or in case of trouble

Problems with VLab framegrabbers

Problems while using EGS-TV concurrently with other programs

## 1.22 Problems with VLab framegrabbers

### 1) Y/C-VLab general

Unfortunately sometimes trouble appears when using Y/C-VLabs under high CPU loads with the vlab.library. A new option (since EGS-TV 3.4) can be used to select a high task priority during the VLab grab functions. This option replaces the older option for isolated VLab calls and should have the same positive effect, without introducing the drawbacks.

This option is preselected automatically if a Y/C-VLab is present.

### 2) Y/C-VLab and vlab.library 7.3

This combination is very unsafe due to reports of some users. If you have this configuration and trouble like crashes or freezes of EGS-TV, I recommend to use another version of vlab.library, if the option described in 1) does not solve the problems.

A warning requester is included since EGS-TV 3.3; you can switch this off with a menu setting (save this as default.cnf).

### 3) Synchronisation problems

Similar symptoms (freezing of EGS-TV) can be caused by VLab synchronisation problems. If this happens on your system you can normally escape from this situation by switching your video hardware to another channel or on and off. Unstable video tape recorder signals are another typical source of trouble. You should really switch on the Time Base Correction for such signals.

## 1.23 Problems with other programs

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Unfortunately the usage of several programs can lead to unexpected complications, which can not be tracked easily to one of this programs. I have tested EGS-TV with such programs, which I have access to (the support of commercial developers could be much better; I can esp. not test any programs which are not usable on the Piccolo).

I have found a severe bug in the EGS system of the Piccolo while using several programs. This bug seems to occur only on Piccolo and Rainbow graphic boards (but it might occur on other systems too).

The error happens often in the following situation:

- 1) There is at least one Amiga screen open
- 2) There are at least two EGS screens open on the graphics card
- 3) One of the EGS screens is closed in such a way, that the Amiga screen appears on top after closing.

I could detect with the "mungwall"-tool, that in this constellation a longword is overwritten in foreign memory. This can have very different consequences (e.g. crashes). I reported this bug to the manufacturer and hope that it is removed soon.

But as my experience lets me fear that this bug will remain valid for a long time and esp. EGS-TV users want to use several EGS programs, I created a little tool called "HHsEGSPatch". This avoids the erroneous situations as far as I know. If you want to use this patch, please read the separate documentation for this patch.

This patch even works around another bug, which leads to memory loss when windows with certain gadgets are opened. I integrated this function into EGS-TV internally but with this patch you can avoid this memory loss with all programs, which makes this patch program useful even for owners of those graphics boards which might not have the first problem.

## 1.24 The fontsensitive user interface of EGS-TV

EGS-TV has a fontsensitive user interface, which means that the fonts which are used in windows and buttons of EGS-TV can be selected with the EGS font preferences program "eFonts". You can change the size and appearance of the EGS-TV control windows by selecting several fonts. The EGS system distinguishes between 3 usage classes:

- 1) The Screen-Text-Font

This is used by EGS-TV only for the EGS-TV screen title bar.

- 2) The Window-Text-Font

This is used by EGS-TV for title bars, menus and user interface buttons in windows. The size of this font has great influence on

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the size of the control windows.

### 3) The System-Text-Font

This is used by EGS-TV for all editable gadgets (e.g. number gadgets). The size of this font has influence on the control windows sizes too. This font must not be proportional. You should select a font size similar to the window font, so that the user interface appears well balanced.

Examples:

For 800x600 screens I recommend the following fonts:

for 1) Helvetica 15  
for 2) Helvetica 13  
for 3) Courier 15

For 640x480 screens I recommend the following fonts:

for 1) Helvetica 13  
for 2) Helvetica 11  
for 3) Courier 13

You can find these fonts on all original workbenches. You can certainly choose other fonts (and sizes), if you like.

## 1.25 Using EGS-TV

Starting EGS-TV

Opening the control window

Using the monitor (only for realtime framegrabbers)

Setting hardware parameters

Color control

Grabbing frames

Sequence processing

Import function for pictures (including picture load function)

Setting Grab-Parameters

Deinterlacing (only for VLab users)

Saving pictures (only for registered users)

Transferring pictures to other programs (only for registered users)

The Blue-Screen-System (Chroma Keying)

EGS-TV Info-Requesters

Selecting a screenmode (only for registered users)

Loading/Saving Settings (only for registered users)

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How to exit EGS-TV

## 1.26 Starting EGS-TV

EGS-TV can be started directly from workbench or from a shell (25000 Bytes of Stack are necessary). On default it will try to use the default screen in 24Bit color depths. If this is not possible, the default screen will be used in its normal color depths.

The main control window will then appear automatically. If a suitable realtime framegrabber is connected, the monitor window will be opened as well with the running video signal.

If the start-up procedure fails, please check the important requirements and read the notes for installation.

For a maximum speed I recommend to use a 24Bit screen, as EGS loses a lot of time while dithering in lower screen depths.

EGS-TV uses the power supply frequency to decide, if PAL or NTSC should be selected as default video norm. The modus can be changed with the PAL button at any time.

The main control window can be opened with the right mouse button in the monitor window if it is closed. Instead of opening a menu the control window will appear. This can be closed if you don't need it any more.

For the full and professional version the start-up procedure can be changed with different configuration methods.

## 1.27 The Control Window

Many global control features of EGS-TV are grouped in the control window. If this is not open, you can open it by pressing the right mouse button in the active monitor window. One of these windows will always be open. If you close both the control and the monitor window, EGS-TV will quit.

You can close the control window with its close gadget. Please note that all Preview-Windows will be closed, if the control window is closed. To prevent sequence windows from unintended closing you can select a security requester in the control menu to appear before closing sequences.

Many of the gadgets in the control window have keyboard shortcuts, which are underlined.

In the menu of the control window you can configure many settings and open Info-Requesters or activate load functions.

Some special functions (as the Blue-Screen-System and Sequence-Recording) have their own control window. Such windows can be opened with buttons in the main control window. All these windows can be opened simultaneously and used independent of each other.

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## 1.28 EGS-TV Monitor

The monitor window of EGS-TV currently always works in LoRes (upto 360\*310 in PAL-Mode) or VeryLoRes (upto 180\*155 in PAL-Mode).

The size of the monitor window can be selected directly through the Min/Max-Gadgets in the title bar of the monitor window, similar to the HiRes and full frame preview windows. The size is also saved in the "default.cnf".

There are three monitor states:

- 1) Off (Monitor window closed)
- 2) Hold (Monitor is showing a picture and updates it when you click on it)
- 3) Running (Monitor is permanently grabbing new pictures; this might decrease the speed performance of other applications significantly)

The monitor window function can only be used with realtime framegrabbers:

Monitor function for the IV24

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The IV24 supports hardware downscaling so that the small monitor window size will increase the refresh rate very significantly. The IV24 monitor window always appears in full 24Bit RGB quality; the monitor modes have no influence on the IV24 monitor.

For speed reasons the color intensity has no influence on the IV24 monitor function, but it is used for preview windows and exported pictures.

Monitor function for VLab framegrabbers

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Unfortunately the vlab.library does not support a real monitor feature so that I had to simulate this by normal grabs using my own optimized color conversion routines. A real monitor function with hardware scaling in the library would speed up the monitor function significantly (as can be seen in the original VLab software).

You can currently use the following color modes with the VLab monitor:

- 1) Greyscales (theoretical 256, but I think that VLab generates less)
- 2) Quick color (about 16000 colors)
- 3) High color (about 64000 colors)

The color modes are compatible with the original VLab color conversion methods but use my own fast algorithms for reduced colors. If you don't like the strong colors of VLab, you can change the color strength to something less than 100%. This will effect the monitor as well as all preview windows (new grabs or updated windows). Once selected, a lower color strength will not effect the speed of monitoring or grabbing, as it is integrated in my algorithms.

Please note that all monitor modes run fastest on 24 Bit screens (at least on my configuration. EGS loses a lot of time when trying to dither images on lower screen depths.

## 1.29 Setting hardware parameters

Setting the Video-Norm

Time Base correction for Video Tape Recorders (only for VLab)

VLab-Input channel

Selecting the monitor/grab-area (also for picture import necessary!)

VLab filter functions (only for VLab)

## 1.30 Setting the Video-Norm

In the upper right area of the main control window the video norm switch is located. It is preselected due to your power supply frequency.

It has influence on the maximum picture height (for half frames this is currently 310 for PAL and 260 for NTSC; full frames can be twice as high).

With VLab framegrabbers this switch also has influence on the video hardware. If the wrong mode is selected while using a VLab, the picture will only appear in greyscale and distorted by shapes.

While the NTSC-mode is selected, the hue-color-correction-value can be changed in the gadget to the left of the switch. The default value is 0, the maximum value is 255. On PAL-mode this gadget is disabled, as it has no influence in this mode. Currently the Hue gadget is only useful for VLab users.

## 1.31 Time Base Correction for Video tape recorders (only for VLab)

When you try to monitor (or grab from) an input channel with a running Video tape, you often get problems with unsteady synchronisation from the VTR. This results in distorted pictures. Select the Time Base Correction of your VLab with the Video-Gadget to solve this problems; you should then get stable pictures from your VTR.

## 1.32 Input Channels

EGS-TV currently supports 6 input channels. These may be distributed over several framegrabbers. The Channels which are not available can not be selected (gadgets are blocked).

If you select an input channel with no valid video signal, your monitor window will only display a message. If you try to grab from such an input, a requester will appear.

For VLab framegrabbers the inputs are used starting from 1; for the IV24 the input number 6 is used.

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### 1.33 Selecting the monitor/grab-area

On default there is a typical TV-Area defined. This can be reselected by the default button.

To watch the full signal (including overscan and blanks) press the Full Size button.

Pressing the "Select" button allows you to select a smaller area on the monitor with the mouse. Go to the top left position in the monitor window and press and hold the left mouse button. Then move it to the lower right position and release the button. The mouse pointer will change during this process. If possible, the new area is selected. To cancel this area selection at any time, press the right mouse button.

The actual offsets and sizes can be seen and changed numerically directly below the action buttons. Please note that increasing the offsets may require to decrease the size first, if otherwise the area would be partially off the maximum area.

All coordinates in these gadgets are measured for LoRes pictures. HiRes-pictures have twice the width, full frames additionally have twice the height.

### 1.34 VLab filter functions (only for VLab)

Important note:

The VLab hardware has some integrated filters to reduce noise and to improve sharpness. Unfortunately the version 8 of vlab.library has a documented bug, which makes it ignore all filter settings. This does not affect the original VLab-software as it does not use the library. All other applications, which have to use the library, can't access these features.

I have provided all the filter gadgets in the hope that a new version of the library will appear and solve the problems. If you change any of these gadgets, the correct library-function will be called. If you already have a newer version of the library, these functions might work.

Sharpness filter:

The top filter gadget lets you select the strength of the sharpness filter. This also affects the noise filter. You have to turn on the sharpness filter to turn the noise filter on.

The middle gadget lets you select the frequency of the filter. The lower this frequency is, the stronger will be the effect of sharpening details, but fine details may be lost. Higher frequencies allow more details to pass the filter.

Noise filter:

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This only works in conjunction with the sharpness filter. You can select different strength to reduce noise. This might filter out small details of the picture too, so use it with care.

## 1.35 Color control

Some framegrabbers produce very strong colors. You will often like to reduce this colors. To make this as easy as possible, I have integrated two color control gadgets in the control window.

The left one allows numerical input of the color strength (0%-100%), the right one is a slider gadget with the same range.

The color strength you select effects all previews which are opened or refreshed after your change the strength (in quick or high color mode) and most of the picture save and export functions. The speed of the EGS-TV monitor and previews is not reduced; only changing the strength or the color mode will take a short time. For VLab this period will be shorter, if the internal color conversion is selected (in the VLab specific settings menu); this also makes transfer and save functions faster, but might produce slightly other colors than the original VLab-conversion.

The color intensity has influence on the monitor window with VLab framegrabbers. In conjunction with an IV24 the color intensity has no influence on the monitor window.

If enough users register EGS-TV I will probably implement further control features...

In NTSC-Mode there is another color control possible with the Hue-gadget next to the PAL-Gadget. This is a VLab hardware feature and is not usable in PAL-Mode.

## 1.36 Grabbing frames

This is a main feature of EGS-TV. While you could use EGS-TV to just monitor a video input (maybe if your TV is broken), you normally want to grab frames (or sequences) and use them in some way.

EGS-TV allows you to grab an unlimited number of pictures (limited only by your memory) and shows them all simultaneously in separate preview windows. You can change the appearance of the preview windows (Grabbing parameters). Functions for editing and saving are available as menu entries in a menu local to the preview window.

The left three grab buttons create a new window and grab a picture as LoRes, HiRes or fullframe (HiRes Interlaced). The Regrab-Gadget allows you to grab a new frame for the last opened preview window (in the same grab size). This is useful if you find that a grabbed frame is not worth keeping and has the same effect as closing the preview window and then grabbing a new frame again.

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You can close any of the preview windows with it's close button. If you want to grab a new frame into any of the open preview windows, you can activate it and select the ReGrab-Feature from it's menu.

If you want to get rid of all of your preview windows, you can select the Close All-Button. Closing the control window has the same effect (but make sure that the monitor window is open, otherwise EGS-TV will quit).

In the title bars of the preview windows you can find information about the size, the grabmode (LoRes, HiRes, fullframe, color or greyscale), the color intensity and the deinterlace-status (fullframes only).

Grabs can be deinterlaced automatically or manually.  
This is currently only working when the "vlab.library" is present.

You can also transform a picture preview window into a RAM-sequence window.

Important note:

The picture source selection of the sequence control window also has influence on single grabs. If you e.g. select ImageFX as source, pictures are not grabbed but imported from ImageFX (see Import functions for pictures).

## 1.37 Sequence processing

Desktop-Video with EGS-TV

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EGS-TV can maintain any number of video sequences in memory. In the classical EGS-TV version all frames are kept in memory. The professional version offers all functions (recording, editing, playback) for harddisk sequences as well. In addition the professional version offers full timing control (Time Code for each frame). Theese are also displayed in the other versions, but can be changed or used only in the professional version.

Each sequence has its own preview window, which contains information about the current and total number of frames in the title bar. A sequence preview window also has a special sequence window with useful control functions.

A separate control window can be used to easily access most sequence functions. It is opened with a button in the main control window.

The sequence control window

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The sequence control window is the control panel for sequence editing. It is used to control the last activated sequence (to activate another sequence, just click into the corresponding preview window).

Global parameters

Creating a new sequence

Loading and opening a sequence / sequence types (full version only)

Transforming a single picture into a sequence

Saving and exporting sequences (full version only)

Locating frames / search playback modes  
Editing functions  
Time-Code support (Professional version only)  
Special external button interface

Realtime playback (Professional version only)

Information displays for sequences

Important notes for RAM sequences  
Important notes for harddisk sequences (Professional version only)

## 1.38 Global parameters

### 1) Frame size

You can select half frame, HiRes and full frame as frame size for sequences. Sequences of full frames are not recommended due to the possible differences between to combined halfframes.

The fastest sequence type for VLab framegrabbers is RAM-HiRes (using greyscale will make this even faster). LoRes sequences are slower due to the necessary downscaling. For harddisk sequences the lower amount of data will be more relevant so that LoRes sequences are normally the fastest for harddisk recording.

### 2) Picture source (this parameter is used also for single pictures!)

The frame source can be selected direct below of the frame size gadget. Normally "Grab" is preselected, which selects a realtime framegrabber as picture source. The signal, which can be seen on the monitor window, will be used. Depending on your framegrabber, you can select between different channels (inputs). Some framegrabbers with several inputs can even combine two signals with the realtime blue screen keying.

As alternative to the realtime framegrabber grab, you can select one of several import functions, which are normally used for single frame picture imports. If no EGS-TV compatible realtime framegrabber is found on start-up, ImageFX is preselected as source.

### 3) maximum number of frames

The recording methods are divided into Two different categories: New recordings (incl. insert and assemble edit) and overwrite recordings (incl. the combine function). The first category will create a new sequence or add new frames to a sequence; the second category only changes the picture date of some frames in a sequence.

If 0 is selected as maximum number of frames in one category, the recording will only stop if the memory/disk is full, an error occurs, the stop button is pressed or the end of the sequence is reached while overwriting/combining.

If an import function is selected as picture source, the picture will

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only be imported one time, regardless of the selected number; an exception from this is the combine function, as it makes use to combine the same import picture (e.g. a video title on a blue background) with several frames of a sequence as a new foreground.

#### 4) Frame delay and playback mode (Professional version only)

The frame delay is used for recording and alternatively for realtime playback too. For recording it is used to specify the time which should be waited between two frames. If it is lower then technically needed (depends on your hardware and parameter selection), the maximum possible speed is used. The frame delay must be specified in milliseconds. If you e.g. want to record two frames per second, specify 500 as frame delay.

For realtime playback the frame delay is only used, if "fixed speed" is selected as playback mode. If "as recorded" is selected, the recorded time code will be used, which allows sequences to be played with varying frame duration. Through manual selection of very long time codes you could even create a "slide show" with EGS-TV...

For the combining-function with a new foreground signal the same rules are applied as for playback. If you have selected "fixed speed", a fixed frame delay will be used to grab the foreground signal (the time code of the sequence will be unchanged). If "as recorded" is selected, the foreground signal will be recorded in the speed of the time code of the background frames.

## 1.39 Creating a new sequence

The recording of a new sequence can be started with the "RAM" and "Disk" buttons. "RAM" creates a RAM sequence, "Disk" starts the harddisk recording (professional version only). For harddisk recording you must specify a filename. If a file already exists with the specified name a warning is emitted, as it would be deleted for the new sequence. As file name extension ".seq" is recommended for EGS-TV sequences. To make high frame rates possible, the grabbed pictures are not displayed during recording. All other EGS-TV windows are blocked during recording. The sequence recording will be stopped, if the memory or disk is full, if the selected maximum number of frames is reached (on default 0 is selected, which means any number of frames) or the stop button is pressed. All other buttons in the sequence control window are blocked during recording.

The Professional version allows the specification of the recording speed with the frame delay gadget; if this is selected as 0 or smaller than possible, the recording will be done as fast as possible. This also happens in the other versions.

During sequence recording a time code is also recorded, which marks the really needed frame time for every frame.

If an import source is selected, only the first frame of the sequence is created.

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The usual grab parameters (area, grab mode color or greyscale) are also valid for sequence recording.

## 1.40 Loading and opening a sequence / sequence types

EGS-TV sequences can be saved in a special YUV-like file format. This format can be read again with EGS-TV. Two variants of this format exist currently. The sequential version can be loaded as complete sequence (RAM sequences). The random access variant (Professional version only) can only be opened as disk sequence.

Load and Open functions can be activated in the global project menu or with buttons in the sequence control window.

While loading or opening, the sequence control window appears. The load can be aborted by the stop button. The load function is aborted automatically if it runs out of memory or the file format is wrong. Frames which have already been loaded will be kept; opening disk sequences will fail, if some frames can't be scanned or the opening is aborted. During opening the timecodes are read and the order of the frames is checked. The memory amount for each frame is very low (about 40Bytes RAM).

Sequential (RAM-)sequences can be opened as disk sequence as well. As long as no insert, append or delete is performed, the structure of the sequential RAM sequence will be unchanged on disk. Otherwise (after a warning requester) the sequence will be transformed to a random access disk sequence.

A status line in the sequence control window shows the type of the current sequence. Modified disk sequences can be updated to disk with the Update button, but update is automatically performed before closing the window.

If you want to apply time codes to old (2.9 version) sequences, you should first load them as RAM sequence to memory, and then save them again, before using them as disk sequences. Otherwise the disk sequence will not have the necessary space for the time code.

## 1.41 Transforming a single picture into a sequence

There is the possibility to transform a picture preview window into a RAM sequence window with the "Picture->Sequence" menu entry. This can be useful to use the Blue Screen Keying Combine function for a single picture, as this can only be applied to a sequence. Such a one frame sequence can also be the starting point to create a longer sequence (append/insert).

## 1.42 Saving and exporting sequences

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### 1) Disk sequences (Professional version only)

For harddisk sequences no save function is available, as these are always kept on harddisk. Due to timing reasons, the location table is not updated to disk after every change, but it will be automatically updated to disk, before the window is closed. You can update the location table to disk manually with the Update button or an update menu entry.

Warning: If EGS-TV is aborted abnormally (Reset, Crash, Power failure) disk sequences can get unusable if their location table is not up to date! I recommend to press the Update button after long edit operations.

### 2) RAM sequences

The usual save functions can be used to save the current frame. A special sequence save function (which is located in the project menu of sequence preview windows) saves the whole sequence in an EGS-TV YUV-like sequence format. A separate player program "egstvplayer" for this format is available. You can use the sequence save function for a picture grab too. The picture is then automatically converted to a one-frame-sequence.

### 3) Exporting sequences (RAM and Disk sequences)

To export all frames of a sequence as single picture files, export functions exist in the preview window menu for each of the supported file formats. These functions show all frames one after the other and save them in the desired format. This procedure can take a long time. You can abort it with the stop button in the sequence control window, after the current frame has been saved. Exporting is useful if you want to use sequences in other programs (like animation packages), as these will probably not support the internal EGS-TV sequence format.

Instead of a full filename, the export functions ask you for a base file name. This must not contain a % character. This base is normally extended automatically in the form .0001 and so on for the current frame number. You can change this numbering format by providing a %-control-sequence in the base name. To get the standard format, you could use .%04ld as end of your base name. The number 4 specifies the number of digits to be used, while the leading 0 marks, that leading 0s should be generated. The other characters (%ld) must not be changed, otherwise unexpected results may occur!

## 1.43 Locating frames / search playback modes

The gadgets in the playback area can be used for:

- 1) Locating the first frame
  - 2) Starting a backward search playback (playback with maximum speed)  
(also available on the keyboard with the < key)
  - 3) Single step backwards (also available on the keyboard with the - key)
  - 4) Stop button for search modes, playback, recording or loading
  - 5) Single step forwards (also available on the keyboard with the + key)
  - 6) Starting a forward search playback (playback with maximum speed)  
(also available on the keyboard with the > key)
-

## 7) Locating the last frame

To locate any frame in your sequence you can use the frame number gadget in the upper right area of the sequence control window. It is not only used as a frame number display but also as an input gadget. This allows fast access to all frames of a sequence.

The search playback functions can be used in parallel for several sequences and even in parallel with the monitor function. To obtain the highest possible speed, you should hold or switch off the monitor.

The functions 1) to 7) are also available as menu entries in local menus in sequence preview windows.

## 1.44 Editing functions

The record/edit area offers basic editing functions:

### 1) Insert

This allows you to insert new frames from the selected frame source into your current sequence. The frames will be inserted after the currently visible frame!

### 2) Append

This allows you to append new frames at the end of the sequence. This has the same effect as locating the last frame and inserting afterwards.

### 3) Replace

This allows you to overwrite frames of a sequence with new pictures. The replace function will stop at the end of the sequence. If you only want to replace one single frame, you can use the "ReGrab" function from the preview window menu.

### 4) Combine

This is a very powerfull function. It combines the sequence replace function with the Blue Screen Keying system. Opposite to the realtime blue screen, which is only available for some framegrabbers with several inputs, this function can be used with all framegrabbers and even with import picture sources. The existing frames are used as background; the selected frame source is used as new foreground. All areas in the foreground picture, where the selected chroma color appears, will let the original background picture shine through unchanged.

An example usage of the import combining would be video title generation. You create a video title on a blue background with any image processing program and combine it with some frames of your sequence; this is the easy way to create a video title in your sequence...

The realtime playback mode (Professional version only) has influence on the combine function: If you select "fixed speed", the foreground

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signal will be grabbed with the selected constant frame rate. The time codes of the sequence will remain unchanged. If you select "as recorded", the timecode of the background pictures will be used to control the recording speed of the foreground pictures as well.

#### 5) Delete frame

The current frame will be deleted. If the sequence contains only one frame, the sequence window will be closed with this operation.

The functions 1) and 3) to 5) are also available as menu entries in sequence preview windows.

## 1.45 Time-Code support (Professional version only)

All versions automatically create time code information for all frames, which are used as base for the realtime position counter. In the professional version you can also manually change the time codes. To input a new time code the frame delay gadget is used. The "Set"-button copies the selected frame delay to the frame duration of the current frame.

This e.g. allows you to create a slide show, by setting an individually selected long frame delay for every frame.

## 1.46 Special external button interface

Since version 3.4a an external interface with the mouse/joystickport 1 is supported for simple sequence control functions. To use this function you need at least OS3.1 (esp. the lowlevel.library version 40 or higher).

If this interface should be used, a flag has to be set in the global settings menu. If this flag is set, the device will be polled upto 50 times per second.

The following functions are supported:

1) normal button (left mouse button; fire button)

Insert frames

2) additional button (right mouse button)

Delete frame

3) Left

Previous frame

4) Right

Next frame

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5) Down

Overwrite frames

6) Up

Combine frames (with blue screen keying)

For single frame editing you should select 1 as max. frame number. All functions are repeated automatically if the button is pressed for a longer time.

## 1.47 Realtime playback (Professional version only)

The simple playback functions are used as search playback; they play the sequence in the highest possible speed. To get a precise realtime playback, the professional version offers several functions. These block all other operations; during a realtime playback, no other program functions can be used. The Stop button can be used to abort the realtime playback.

Two different playback modes are available:

1) fixed speed

This allows playback with a fixed, selectable speed. The frame delay has to be selected in milli seconds. If the frame delay is selected lower as possible, the playback will be as fast as possible.

2) as recorded

The time codes of the sequence are used. This allows playback of sequences with a variable frame duration. In an extreme case you could use this as slide show, by setting really long time codes for each frame.

## 1.48 Information displays for sequences

The sequence control window offers a status line which gives you information about the sequence type of the current sequence:

1) pure RAM sequence

2) RAM sequence as Disk sequence (Professional version only)

A sequential RAM sequence has been opened as disk sequence. Playback- and Replace/Combine-functions can be applied without changing this status.

Inserting/Appending or deleting frames will transform such a sequence permanently into a non sequential disk sequence.

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- 3) unchanged disk sequence (Professional version only)
- 4) modified disk sequence (Professional version only)

Frames have been added to or removed from a disk sequence. For speed reasons the location table is not updated automatically after such operations. This is done automatically when the window is closed, but it can be done manually with the update button.

The sequence control window also offers detailed position and time code information:

1) Frame

This field shows the current frame number. It is not only a display, but also an input gadget, which can be used to jump to any frame in a sequence.

2) Length: Total number of frames in the current sequence

3) Position:

Position (due to the Time-Codes) in the current sequence. This is a kind of realtime position counter, if the sequence has time codes.

4) Total: Total duration of the sequence in hours/minutes/seconds

5) Frame time:

This field shows the duration (Time Code) of the current frame. The Set-button next to this field allows professional users to set a new frame duration, which is copied from the frame delay gadget.

The output of the frame number and total number of frames is also done in the title bar of the sequence preview windows.

## 1.49 Important notes for RAM sequences

Should you run out of memory while grabbing, you should delete some frames or close some windows after that situation immediately. Otherwise the memory is filled up so much, that the EGS system can come into severe trouble (because depending on your configuration it needs lots of memory even for moving windows etc.). EGS-TV itself tries to leave 300000 Bytes of memory unused, but if other programs run in parallel with EGS-TV, they could just allocate this security space.

## 1.50 Important notes for harddisk sequences (Professional version only)

DOS-Seek access:

Tests have shown that DOS backward seek accesses are sometimes upto 10(!)

times slower than forward seek accesses on partitions with 512Byte block size. This can have extreme effects on harddisk sequence functions. It is really recommended, to format a harddisk partition for harddisk sequences with a block size of at least 2kByte. This is probably only possible since OS3.0/3.1. Depending on your harddrive, other block sizes may be even better.

DOS-Error requesters:

The DOS-Error requesters which could appear on the Workbench screen in earlier versions, are suppressed since version 3.4a. Instead an EGS-TV requester will appear to inform you.

If you run out of disk space while harddisk recording, and such a requester appears, you should delete some frames after that, to leave room for the location table. Otherwise you run into the danger that there will be no room to create this table, which can make your sequence unusable.

## 1.51 Importing pictures

Please note: The import functions will be enhanced massively in the future!

You can currently import pictures from (EGS-)ImageFX by a fast direct transfer or grab a picture from an EGS Bitmap in memory (this allows "imports" from programs as PicoPainter or SpectraPaint). A load function exists for pictures in Jpeg format (Professional only). All these functions can be used in conjunction with video sequences as well.

Some handy scanners can be selected as import source too.

Please read the general notes included below, which are valid for all import functions!

The sequence control window has a globally effective video source button. If this is selected as "Grab", all picture and sequence functions are used with the frame grabber, as before. You have currently the following choices:

### 1) Grab

This is the classical selection for the use of EGS-TV with framegrabbers. Depending on the type of the framegrabber you can select more parameters in the main control window (e.g. input channel).

### 2) ImageFX

This import function can be used with ImageFX and EGS-ImageFX. All grabbing functions (except the monitor function) will then import from ImageFX. The main picture buffer of this program will be read and converted to EGS-TVs YUV format. A picture of the size selected in EGS-TV (grab area) will be created; the size of the picture of ImageFX is currently not relevant, but should be the same; otherwise part of the picture will get lost or be black.

### 3) Next EGS-BitMap

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This import function searches all used memory areas of the computer for 24Bit EGS BitMap structures in the size of the area selected in EGS-TV. The next found BitMap will be read. This should allow "direct import" from all typical EGS programs (e.g. PicoPainter and SpectraPaint). Programs which have not been designed for EGS (sa TVPaint, ImageFX) will not have such BitMaps. Use the ImageFX-Import for this program.

If you want to import a 640x480 picture from an EGS program, choose a grab area of 320x240 in EGS-TV and grab as full frame (double wide and height). Many programs use several additional BitMaps for things like UNDO-buffers, brushes or stencils. It can happen that you do not get the desired picture with your first grab, but another picture. Repeating the grabbing will search for the next picture.

#### 4) Repeat BitMap

Once you have found the "right" BitMap with "Next EGS-BitMap", you can switch to "Repeat BitMap", to get this BitMap several times (maybe slightly modified).

#### 5) Load Picture (currently only for Professional version)

This selection allows the loading of JPeg pictures e.g. for use in sequences (other file formats are planned for the future). All grab functions (even for single pictures) will serve as load function. It is even possible to combine loaded pictures with Blue Screen Keying with a sequence.

The selected area in EGS-TV is also used for this function. As pictures are normally integrated into sequences, this should not be a problem. Only for the creation of new sequences, the area size has to be selected manually (see notes for Bitmap import).

JPeg pictures can be scaled down by factor 2, 4 or 8 on loading optionally. The option can be selected in the file format settings menu. Pictures will then be redurced to fit into the window (if possible). Otherwise only part of the picture will be loaded. If the picture is smaller than the window, the remaining area will be black.

#### 6) Handyscanner vertical and

#### 7) Handyscanner horizontal

This function is designed to scan pictures with some handy scanners. Currently only 16 and 256 greyscale scans are supported (1Bit-B/W-Scans can be done but are currently not maintained in EGS-TV). 16 greyscale scans are converted to 256 greyscales. The scanning area is determined by the area gadgets as usual; the selected size is doubled if you scan as "full frame". Scanner specific size limitations might prevent big full frame scans; in case of trouble a requester will appear. Scans can be cancelled with the left mouse button. During scanning the picture will already appear in realtime and upto 256 greyscales in the correct orientation in the preview window.

You can even create or extend greyscale sequences with scanned pictures. This also makes the usage of the Blue Screen Keying possible (in this case used with Luma keying), if you select the Chroma color so that

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the picture will be replaced from (or upto) some brightness.

#### General Notes

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All import functions convert color pictures into the EGS-TV internal YUV-like format, so that pictures can be combined with VLab grabs in sequences. The sequence recording functions are only applied one time while an import source is selected, except for the "Combine"-function. This combines the Import picture with the selected number of frames, which is useful to apply a video title (on a blue background) to several frames of a sequence in one go.

#### Important!

The import functions use the normal grab size parameters of the area gadgets (the offsets are ignored). To import higher resolutions, import as full frames, which doubles the height and wide. If you import HiRes- or full frame color pictures, a 4:1:1-YUV-conversion is done; for LoRes-pictures a 2:1:1-YUV-conversion is used. This is done to be compatible with VLab pictures in sequences. This will also save a lot of memory compared to full RGB pictures.

In future it might become possible to import in full RGB as an alternative, to create full color sequences, which would then not be mixable with VLab pictures.

## 1.52 Grabbing Parameters

You can grab frames in color or greyscale mode. A cycle gadget lets you select the desired mode.

The two cycle gadgets below the grabmode gadget allow you to change the appearance of the preview windows. You can select greyscale or different color modes. Frames which are grabbed in greyscale are certainly only showed in greyscales independent of the preview color mode.

Please note that preview windows appear in high color mode (instead of quick color) if the monitor is running in high color mode.

Changing the preview color mode effects all new grabs and preview windows which are redrawn. Please note that changing the color intensity also effects all grabs which are redrawn or grabbed after the change.

The bottom cycle gadget lets you select the initial preview window size. If you select full size, HiRes and fullframe grabs are shown in big windows. If you select small size, all grabs are shown in LoRes windows.

You can change the window size of HiRes and fullframe grabs at any time with the minimum and maximum gadgets in the title bar of the preview windows.

You can select different Deinterlace-Parameters and an automatic Deinterlacing for full frames (only usable with a vlab.library).

The refresh mode can be choosen separately for full frame windows and half frame windows (incl. HiRes) with flags in the control menu. If you set such a flag, corresponding windows are opened with smart refresh, which means that their grabs don't have to be recalculated if invisible parts become visible. This speeds up esp. the refresh of windows with deinterlaced pictures, but it does need more memory if windows overlap. If you switch a flag off, the corresponding windows are opened as simple refresh windows (as long as you don't use the ForceSimpleToSmart-Option from EGS for your screen depth) and have to be recalculated from the YUV-Buffers on each refresh.

There is a Redraw-Entry in the preview windows menu to force redrawing (e.g. to use a new color intensity).

### 1.53 Deinterlacing images (only for VLab users)

When you grab fullframes (and view them in full size) you will often find unpleasent effects of moving objects. This is a result of the video technic which uses two interleaved half frames to produce a fullframe. This means that all even lines in a full image belong to another frame than the odd lines. The only way to get rid of this effect is reducing the resolution in areas of movement. This process is called deinterlacing.

Unlike the original VLab software, you can select different deinterlace modes in EGS-TV (Even, Odd or Mix) and different strength. In most cases you should use Even or Odd (depending on the half frame you want to keep in areas of movement) and the default strength (default button pushed down). But as an Undo-Feature is integrated, you can try different settings on your image.

The Mix-Mode mixes both halfframes in areas of movements; this is only useful in special situations of fast movement where you want to keep a motion-effect in your picture.

The strength of deinterlacing can be set between 20% and 100%, if the default button is not pushed down.

Changing any of theese parameters does not effect images which are already grabbed. If you want to try new parameters on such an image, just select the Deinterlace-Entry in the menu of it's preview window (you don't need to select Undo first to remove a previous deinterlace).

Selecting Undo in the menu of a preview window cancels the deinterlacing effects. This also works with pictures which got deinterlaced automatically.

If you want to get all grabbed fullframes deinterlaced automatically, you can select the Auto-Gadget.

Please note that you have to watch the preview-window in full size to see the deinterlace effect.

### 1.54 Saving pictures (registered users only)

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In the full version you can save pictures as file or to clipboard. You can also transfer them directly to other applications. Select the preview window of a picture to use any of these functions, which can be found in the preview windows menu bar.

Please note that the currently selected color intensity as well as the selected deinterlacemode of the picture are normally used before the picture is saved. An exception from this are the YUV and VLab formats, where no color processing is done.

Since version 3.1 VLab users can select an internal conversion as alternative to the vlab.library conversion. This runs much faster, but it might produce slightly different results. When using EGS-TV without VLab, the internal conversion is used always. The conversion method can be selected in the VLab specific settings menu.

Currently the following file types can be created (the clipboard can only store IFF-ILBM-Pictures):

1) IFF-ILBM 24 or 8 (compressed and uncompressed)

This format is quite slow due to the necessary ChunkyToPlanar-conversion. The compression method is quite fast, but does not compress video pictures very good. You can turn on or off compression separately for saving files and for saving to clipboard. You find two corresponding flags in the menu of the control window.

New since version 3.3 is the 8Bit format for greyscale pictures. If you prefer to save greyscale pictures in 24Bit format (which generates files of triple size) you can select this in the settings menu.

2) PPM (P5 and P6) (this is an uncompressed format)

This format can be saved extremely fast due to it's RGB-structure. There is no saving-conversion necessary for EGS-TV (besides the YUV to RGB-Conversion, the color correction and the deinterlacing, which are necessary for any type of transfer except YUV). For greyscale pictures the P5 format is used optional. In this format only the Y-information is stored, so that files of greyscale pictures have only a third of the length. Because some programs don't support P5, there is a flag in the control menu to enforce the use of the RGB-P6 format even for greyscale pictures.

3) YUV (this is an uncompressed format) (only for VLab users)

This format can currently only be used when vlab.library is present.

This format produces shorter files because not every pixel has its own color information. It is very useful for greyscale grabs, as then only the Y-Format is produced (similar to PPM-P5). This format can also be saved very fast because no YUV-To-RGB-Conversion is necessary. This implies that no color correction is done when saving with this format (but deinterlacing will be applied).

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Please note that some applications have trouble loading YUV pictures (some colors are decoded wrong) and that some applications can not even read YUV greyscale pictures (Y-Format). If you have trouble reading YUV pictures generated by EGS-TV with other programs, first try to load YUV pictures generated by the original VLab-software with these programs or try to load the pictures with the VLab-software, before you report an error to me.

4) QRT (this is an uncompressed format)

This format (which is used e.g. by the PD raytracer POV) can be saved nearly as fast as the PPM format.

5) Targa

This format can be saved fast too. Currently no compression is supported and the picture is saved in Top-Down-Mode.

6) DEEP

This format (which can also be generated by the original VLab software), is a fast IFF variant with RGB storage for the pixels. Currently no compression is used while saving. This format is especially used by TV-Paint and TV-Paint Junior.

7) EGS-TV sequence format

This format has been designed to save whole sequences. It can be used to save a picture, which is then converted to a one-frame sequence. An internal YUV-like representation is saved with this file format. It can be saved extremely fast. This format can also be loaded again by EGS-TV (the load function is located in the global control window's project menu). A separate player program is also available. Maybe other programs support this format in the future too.

8) JPeg (JFIF for color and greyscale pictures)

This file format is only supported in the professional version of EGS-TV. It is a picture format with variable, very high compression ratio, but it is lossy. This means that a picture saved as JPeg will not be exactly the same after loading, but the loss in quality is nearly invisible especially in digitised pictures. You can choose the quality between 0% and 100% (but even with 100% JPeg is not lossless). The normally usable range is between 25% and 95%. The typical compression ratio lies between 5 and over 30. The compression is very CPU intensive; a fast CPU (68030 or 68040) is recommended. Especially with slow disk medias, saving and loading can then even be faster than with one of the other formats, but some memory is also needed for the complex conversions. Besides the quality you can also choose a smoothing factor (0%-100%). This should normally be switched off (0%); only for very noisy video signals smoothing is recommended. There is also the possibility to optimise the JPeg file and make it a bit smaller without further quality loss, but this option needs a lot of memory during saving. Another option allows to save color pictures as greyscale JPegs. All these options can be selected in a requester appearing before saving as JPeg. During the JPeg saving with compression a progress information

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is displayed in the requester. If optimisation is selected, several passes are needed. You can abort the save operation with the Cancel button. During sequence export this will also cancel the whole export.

The Jpeg-JFIF file format supports color and greyscale pictures. Unfortunately some programs can't read real greyscale JPegs properly. Because of this there is a setting, which can be deselected to prevent real greyscale JPegs from being generated. You should use this only if you have trouble reading the greyscale JPegs because the color JPegs are bigger for greyscale pictures and there will be some color noise after loading.

The Jpeg functions of the professional version are based on the portable C source code of the independent Jpeg Group (This software is based in part on the work of the independent Jpeg Group).

#### 9) VLab raw data format (usable without vlab.library as well!)

This format stores the raw VLab data which is also used by the original VLab software for frames during sequence recording. It can be saved slightly faster than YUV because no conversion is needed. Neither color correction nor deinterlacing is applied to the picture! This format could be used for sequence exporting to get series of frames which are fully compatible to the original VLab sequence recording. For use with EGS-TV the EGS-TV sequence format is much more useful, as it supports insert, assemble and delete editing operations.

For saving as file a standard EGS file requester will appear.

During saving the mouse pointer will change. While the working symbol (tooth wheels on default) is shown, EGS-TV is making it's internal YUV/RGB-conversions, color correction or deinterlacing. While the disk-symbol is shown, the saving process is going on (including conversions necessary for the actual file format). This second period will be shortest with PPM format, while the first period will be shortest with VLab raw format.

The same file formats (except the sequence format 7) are also available in export functions, which can be used to save all frames of a sequence in the specific picture format. While exporting as Jpeg, the options requester will appear only once at the beginning.

## 1.55 EGS file requester

The standard EGS file requester is used for requesting any file in EGS-TV. The using of this requester should be explained in your EGS manuals.

Unfortunately this requester has bugs (at least in EGS version 6.2). If you activate a string gadget (e.g. for entering a file name), the functionality of all other gadgets is disturbed.

Clicking any of the bottom gadgets or clicking anywhere in a free region of the requester will finish the requester as if OK had been selected! This is worst when you press the CANCEL-Button,

because you get the opposite effect of what you intended.

Unfortunately I can not change this behaviour, as it is internal to the file requester and has nothing to do with EGS-TV. I hope that this bug is corrected in future EGS versions.

## 1.56 Transferring pictures (registered users only)

In the full version you can transfer pictures automatically to other applications. Select the preview window of a picture to use any of these functions, which can be found in the transfer sub menu of the preview window.

Please note that the currently selected color intensity as well as the selected deinterlacemode (VLab only) of the picture are used before the picture is transferred.

Besides the predefined entries in the transfer menu you can add up to 9 custom defined entries. These entries must be specified with a text editor in the file "egstv.config". This gives you the possibility to contact any application with ARexx support.

If your favorite graphics package does not support ARexx, write a letter to the programmers/distributors of that package stating your wishes.

The predefined transfer functions currently use fast direct transfers or ARexx controlled file transfer. It would be nice to have more fast direct transfers, but I am dependent on the support of the producers and users of other software products here.

Integrated transfer functions:

- \* PicoPainter and BigPainter (fast direct transfer)

Here the picture is copied directly from BitMap to BitMap; besides the necessary YUV-to-RGB-conversion (and sometimes DeInterlacing) practically no time (and no additional memory) is needed for the transfer. The direct transfer can be performed to a picture window or to the brush of PicoPainter or BigPainter.

- \* ImageFX and EGS-ImageFX (fast direct transfer)

New since version 3.0 is the fast ImageFX and ImageFX-EGS direct transfer. This replaces the older ARexx controlled ImageFX-EGS file transfer and is upto 3 or 4 times faster than that.

- \* TV-Paint (ARexx controlled file transfer)

## 1.57 Configuring EGS-TV with egstv.config

You can create a text file with the name "egstv.config", which is automatically read on program start. This file is even read in the

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demo version, but only the color depth of the screen can be used there.

The file must be a standard ASCII file and can be created or edited with any text editor which uses \$0A (LineFeed) to mark the end of lines, which is the standard on the Amiga.

The exact format of this file has to be kept, otherwise it won't be understood properly by EGS-TV. All lines are read from the first column upto the end of line or to the first semicolon. Up to the first semicolon even spaces may not appear at the wrong position! After the semicolon you can add a comment of any length.

The whole file must be shorter than 10000 characters, otherwise it is not read.

#### 1) Starting screen mode and color depth

The first line may contain a color depth and a screenmode which are to be used on program start. In the demo version only the color depth is read. The color depth must be specified in exactly two digits in the first two columns of the file. EGS supports at least the depth 01,02,03,04,08,16,24. Depending on your driver, additional depth may be available (e.g. 05 on Amiga driver) or missing.

The screenmode name must be written in exactly the same form as it appears in the screenmode requester (including spaces). At the end of the name the semicolon or end of line must follow immediatly.

If the specified screen can not be opened on program start, the default screen is cloned with the desired color depth (24 Bit if no valid depth is given) or the default screen is used directly (only in the registered version), if the given depth is identical to that of the default screen.

To start EGS-TV on the default screen automatically, you should just specify the depth of the default screen in the first two columns (and no screen mode name).

#### 2) Transfer menu definitions

If you use foreign programs with ARexx ports which are not (yet) integrated in EGS-TV, you can configure your own connection. You can define a maximum of 9 such transfer functions. For each function you have to use exactly 4 lines in the configuration file, starting from the second line (as the first is reserved for the screenmode),

There are two variants to use transfer functions. On the one hand you can send an ARexx command to an application, on the other hand you can invoke a whole ARexx script.

In any case the picture file which is created (even in Clipboard) will automatically be deleted after the transfer to save memory.

The 9 possible definition blocks must each have the following

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format:

1st line: Menu entry name with keyboard shortcut in first column.

Please don't use shortcut letters which are already used in one of the Preview menus. If you want to be sure, that your choice is not used in later EGS-TV versions, please use only the digits 1 to 9 as shortcuts. I have reserved these numbers for this purpose. If you don't want any shortcut for your entry, use a space in the first column.

The menu entry name may not be empty.

2nd line: File name with file type in first column.

If you don't specify a file here (empty line), the picture will be saved to clipboard. In the clipboard only IFF-ILBMs can be stored. If those are to be compressed can be selected with a flag in the control menu.

If you want to create a file explicitly, you can currently choose one of the following types:

- 0 = IFF-ILBM uncompressed
- 1 = IFF-ILBM compressed
- 2 = PPM
- 3 = YUV (only available with the vlab.library)
- 4 = QRT
- 5 = Targa
- 6 = DEEP
- 7 = EGS-TV internal sequence format
- 8 = Jpeg (available only in the professional version)
- 9 = VLab raw data format

More information about the different formats can be found in the chapter "Saving".

Compressing IFFs takes only a minimal amount of time but does not lead to good compression ratios.

If possible you should use PPM, QRT, Targa or DEEP, as these are much faster (no laborious Chunky/Planar conversion necessary). Even loading will normally be much faster with your foreign application. If your external application does not support any of these formats, write a letter to the manufacturer stating your wishes...

Alternatively you could use the YUV format, which can be saved very fast too. But please note that no color correction is applied when saving with this format and that some foreign programs have problems with reading YUV (esp. with greyscale pictures). The VLab raw format is only supported by very few programs (esp. by the original VLab software). No deinterlacing is applied in VLab raw format.

Jpeg is not recommended as transfer format, because it is lossy.

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It should be used merely for archiving purposes.

3rd line: ARexx port name

Specify the name of your applications ARexx port here if you want to send a single command to it, or nothing (or REXX) if you want to start an ARexx script.

4th line: Command (with parameters) or script name

Specify here the command for the application (normally to load your named file or to load from clipboard) including the necessary parameters or the name of your script file.

To use a script file, this has to be located in the REXX:-path and might have the optional file name extension ".rex".

An example file is given between the lines:

```
-----
16PICOa:NEC 1024x768i; This is the starting screen mode (with 16Bit color depth)
1My custom transfer; Specify your menu entry name here with shortcut
2ram:egstv.ppm; Specify the file type and name here
PPaint; Specify the application port here
LOAD ram:egstv.export; Specify the ARexx command here
2My special script; Example to activate a scrip
; The picture is saved in the clipboard here
; The script start command is send to "REXX"
GoodScript; Your GoodScript should be located in the REXX:-path
-----
```

This GoodScript could for example send commands to several applications so that your picture would be transfered in one process to several programs.

You could also include commands to modify your picture in an intermediate step by another application.

Another idea would be to send commands to an application to load your picture as a brush...

## 1.58 The Blue-Screen-System (Chroma Keying)

Welcome in the world of the Blue Screen

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The blue screen system is a commonly used technic in the television production to partially mix pictures, with the goal, to add any foreground (e.g. a news correspondent) to any background (e.g. a landscape video). Both video signals can be running Video sources. To decide, which parts of the foreground picture are to be replaced by the background, a color range has to be selected. For technical reasons a dark blue is normally selected as chroma color in professional studios, as this color must not appear in the desired foreground objects. In our example, the news correspondent must not wear a blue jacket, otherwise the background would shine through it... This is, where the blue screen system got it's name from. In the

more general version this technic is known as Chroma keying (or similair as Luma keying). All this is possible with EGS-TV.

Using the Blue Screen in EGS-TV

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In EGS-TV you can select any color as chroma keying color to adapt to your personal "studio" environment. You can also select the sensitivity of the chroma color, to decide how exact the color must match.

If you select a very small acceptable color range, you can keep the restrictions of the foreground picture very low, which is important, if the foreground objects should be very colorful. On the other hand, the background (e.g. blue wall) must then be very evenly colored and even the light should be smooth, so that the background will not shine through partially.

Especially in private "studios" such a background can only be found very difficult; this is why you can also specify a very wide range of acceptable background color. With this even unbalanced illuminated and unsmooth backgrounds are accepted, but on the other hand similair colored spots in the foreground object can become to holes this way.

The blue-screen functions are grouped in a separate control window. This can be opened by pressing the Blue-Screen button in the main control window.

Blue Screen as technic to combine new foregrounds with sequences

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For this function the Combine button is available in the sequence control window. This combines an existing sequence of background frames with a new foreground signal. This can be repeated any number of times, so that it is possible to apply many layers of new foreground signals with a background sequence. This can be used to bring a person several times into the same picture (as his own double).

For this technic only the Chroma keying color sensitivity has to be specified. The other parameters (Blue screen channel and switching delay) should be deactivated (the blue screen channel should be selected as "Off").

This technic can be used with all framegrabbers and even with imported pictures. This makes it possible to add video titles to a sequence; create a title on a blue background with an image processing program and "combine" this title with several frames, which lets the title appear in your sequence for some time.

If you want to apply this function to a single picture, convert it with the function "Picture->Sequence" in a single frame sequence and then use the combine function.

Blue Screen as realtime effect for several video signals (VLab only)

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This method needs several video inputs concurrently, which can be combined. This is currently only possible with VLab framegrabbers. To use this, select the channel for the background picture in the

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main control window; the foreground channel is selected in the Blue Screen control window.

This blue screen effect has influence on all functions (including monitor window and sequence grabs).

The following parameters have to be selected for the realtime effect:

- 1) Blue-Screen channel
- 2) Chroma Keying color parameters
- 3) Switching delay

The Blue-Screen window is closed automatically when the main control window is closed and can also be closed manually with it's own closing gadget at any time. Please note that the Realtime-Blue-Screen function remains active even if the window is closed, as long as a blue screen channel is selected.

## 1.59 The Blue-Screen channel (VLab only)

The realtime Blue-Screen functions for the first time use the possibility, to grab from several video sources quasi concurrently on the VLab. With the input channel selector of the main control window you select the desired video source for the background (e.g. a video of a landscape). In the Blue-Screen window you find another channel selector. If this is in the Off-position, the realtime Blue-Screen functions are deactivated. To activate this effect you have to select a channel for the foreground video (normally your video camera) with this channel selector. The Blue-Screen effect needs two different video sources. If both channels are selected identically, the effect is not activated.

The selected grabbing area is used (as all other parameters) for both video sources. If one of the video sources is a VCR, you have to select the TimeBaseCorrection. The video signal of the Blue-Screen channel has to be a color signal. The background signal can also be a monochrome signal. In this case both signals are mixed to a greyscale picture.

## 1.60 Chroma Keying color parameters of the Blue Screen System

The Blue-Screen is configured to a typical blue background color with moderate acceptable color range on default. You can change this in many ways.

For all of the three RGB components you can select a sensitivity parameter between 0% and 100% numerically or with a slider. Important for the meaning of these values are the mode gadgets on the right of the sliders. If you choose "minimal" here, this means that the color component must have at least the selected brightness. Similair "maximal" specifies that the component may not have more than this brightness.

For perfect Blue-Screen-Backgrounds these settings would be

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flexible enough. You could e.g. select minimal 85% for blue and maximal 15% for red and green to accept a typical blue screen.

For uneven illuminated backgrounds (e.g. complex blue sceneries build with blue objects, which are used in studios for special effects) relative color modes are useful. You can specify for any of the components, that this may not be higher than a selected percentage of one of the other two components. You could e.g. specify that red may not be higher than 30% of blue to accept the color for chroma keying.

Changes in the sliders and mode gadgets are not immediately used in the blue screen effect. To apply changes to the effect you have to press the button "New Chroma Keying parameters". The parameters are then transformed to an internal format, which then is used. The button is disabled, when the parameters are up to date. After changing one of the parameters, the button is enabled again, so that you can see at any time, if the selected parameters are used.

## 1.61 Switching delay for the Blue-Screen (VLab only)

Unfortunately sometimes synchronisation problems appear, if video inputs are switched too fast on the VLab, depending on the configuration and the video signal quality, as two independent video signals are not synchronous. The VLab hardware then needs a specific time, to adapt to the new signal, before a correct grab is possible. Unfortunately the right delay time can not be detected by software. You have to experiment a bit manually, to find the minimal needed switching delay times. You can select these separately for the switching from the background to foreground signal and vice versa (in units of 1/50 second, which means half frames). The delay time for switching from background to foreground signal must normally be bigger as no internal calculations are made between grabbing. On the other change there is time needed for the RGB conversion, combining and displaying, which means that the delay time can be smaller.

If you select bigger delay times (maximal 50 frames per switching, totally 2 seconds), the frame rate will decrease drastically. The delay time can be used by other programs.

If the pictures jump up and down or stay in a wrong vertical position, the switching times are not selected high enough. Depending on the frame which is wrong (fore- or background), you have to increase the corresponding delay time.

## 1.62 EGS-TV Info-Requesters

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The Info-Menu-Entry pops up the usual info requester. In the full version this includes your registration name and number, in the demo version you will find some information for registering. The demo version will also show this requester automatically on startup.

VLab users only:

The VLab-Info-Menu-Entry pops up a requester containing some hardware information which is read from your vlab.library. Please report the numbers shown there in bug reports regarding compatibility problems.

For other framegrabbers currently no info requester is available.

## 1.63 Selecting a screenmode (registered users only)

You can select a screenmode in the full version of EGS-TV with the screenmode gadget. Please note that all preview windows are closed (and their contents lost) during this process. You can select any screen (even native Amiga screens), if you have the right EGS driver. For speed reasons, you should prefer 24 Bit screens.

You can also select the default screen. This is the system conform way to run several applications on one EGS screen.

If you don't want to use the default screen or you have another EGS application, which can not use the default screen, you can try the Jump Screen gadget. Please note that this is not system conform. EGS-TV will visit other EGS-screens when you press this button. This might lead to unexpected behaviour. Use this option at your own risk and don't close the foreign screen before you have removed EGS-TV from it's screen! I had no problems with this function, as long as I obeyed to this rule.

The demo version can not change the screen while it is running. It can either run on the default screen or on a cloned default screen with the configured screen depth (default 24Bit).

## 1.64 Loading/Saving settings (registered users only)

The full version allows you to select a setting from different settings (for your different video sources/purposes) and to save the actual setting under any name. I recommend to use the file extension ".cnf" for your settings so that you don't lose track and get confused. The selection of the file name is done with the EGS file requester.

When loading a setting, all hardware parameters and some corresponding EGS-TV settings are retrieved from the file. This includes for example:

- \* the selected area
  - \* the input channel
  - \* the filter modi (VLab only)
-

- \* the PAL/NTSC mode and the hue value
- \* the color or greyscale grab mode
- \* the time base correction mode (VLab only)
- \* the color intensity
- \* the deinterlace parameters (VLab only)
- \* the Blue Screen channel (VLab only)
- \* the Blue Screen chroma color parameters

A special position is held by the file "default.cnf". You can create this file exactly as all other setting files, but it is loaded on every program start automatically and some additional parameters are retrieved from this file then, e.g.:

- \* the actual monitor mode (VLab only)
- \* the status of the monitor window (only if the control window flag is set in the control menu)
- \* the size of the monitor window (LoRes or VeryLoRes)
- \* the preview color mode and size
- \* the refresh modes for preview windows
- \* the position of the monitor and control windows
- \* the IFF-ILBM compression modes and other file format flags
- \* the Blue Screen switching time parameters (VLab only)
- \* the maximum number of frames to be recorded
- \* the flag for security requesters on closing of sequence windows
- \* the frame size for sequence recordings
- \* JPEG save parameters (Professional only)
- \* Sequence timing settings (Professional only)

If you want to get the control window opened automatically on program start you have to set the control window flag in the control menu and save this as your "default.cnf". In this case the monitor status will be kept.

The configuration files are implemented in an upward compatible way, so that you can use your old configurations in extended versions of EGS-TV in the future (unsaved parameters in the configuration file will then just not be changed on loading and a warning will be emitted).

## 1.65 How to exit EGS-TV

Although EGS-TV is a very nice program, there might come the moment where you want to exit it (especially as it needs lots of memory).

You can exit EGS-TV with the Quit-Button or by closing both the monitor and the control window (previews are closed automatically with the control window). A requester will warn you before EGS-TV is quit.

The third method to quit EGS-TV is to send a Ctrl-C-Signal to the task.

Please don't forget to close EGS-TV before another program if you are visiting the other programs screen (this is not necessary for the EGS-Default-Screen). Otherwise you might get massive problems.

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## 1.66 How to register to get the full version

If you have currently only the demo version of EGS-TV and like it, please obtain the full version directly from me by registering. I have put a lot of effort in this software to make it as useful and bugfree as possible and implemented already many improvements which were inspired by users. Only a large base of registered users makes it possible for me to continue developing.

A registration form is included in the demo version, which you should print with 12CPI (select font ELITE in printer preferences) and a left margin of 8 characters.

To register from outside of europe for the professional version, send 30\$ (US dollar) as cheque or in bank notes together with the registration form (which is part of this distribution) to the following address:

Helmut Hoffmann  
Rubensstrasse 4  
  
D-41063 Mönchengladbach  
  
Germany

If you only need the classical version, you only need to pay 20\$ (US dollar).

Users from european countries other than germany can send money (cheque or bank notes) in one of the following currencies:

For the professional version:      For the classical version:

- |                               |                               |
|-------------------------------|-------------------------------|
| 1) 40DM                       | 1) 25DM                       |
| 2) 40SFr (Swiss Franken)      | 2) 30SFr (Swiss Franken)      |
| 3) 50hfl (Dutch Gulden)       | 3) 35hfl (Dutch Gulden)       |
| 4) 300ÖS (Austrian Schilling) | 4) 200ÖS (Austrian Schilling) |
| 5) 20£ (British pound)        | 5) 13£ (British pound)        |

German users pay 40DM for the professional version or 25DM for the classical version by either transferring the money to my banc account or sending it as cheque or in bank notes like other european users.

When transferring to my account you have to send in your registration form by mail as well. Please write your name and address in the "Verwendungszweck"-field together with the word "EGS-TV".

My Banc Account:

KontoNr 5740147 (Helmut Hoffmann)  
Stadtsparkasse Mönchengladbach BLZ 310 500 00

Please don't transfer money to my account from outside germany, as it would cost extremely high charges. I can not accept this.

My EMail-Address is (currently): [hhoff@pool.informatik.rwth-aachen.de](mailto:hhoff@pool.informatik.rwth-aachen.de)

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Please note that in the summer months I will only come to my EMail-account very irregularly. If you want to register or have suggestions and don't get answer by EMail, please mail them by ordinary mails to my address above.

If you have any questions or suggestions regarding ESG-TV, please write by EMail if you want to get a quick answer (but see above) or send IRC (international reply coupons) with your letter.

If you want to use EGS-TV in a company/institute on several machines simultaneously you have to register for several licences. You need to fill only one registration form. State the number of registrations you want to get and pay for each licence. If you order at least 4 licences you only need to pay 75% per licence.

## 1.67 What do I get when I register?

After registering by sending the money and the registration form I will send you the latest full version on disk. Please allow some weeks to deliver. In most cases it won't take very long. You also get a printed reference chart as introduction and to overview the features.

You can contact me by EMail (or ordinary mail) to report bugs or suggest features you would like to see in later versions. A software-improvement form is supplied with this program for easy reports.

If the respond is great there will be further enhancements. I especially hope to increase the number of programs EGS-TV can cooperate with.

As registered user you can use later appearing public demo versions as full version. You get a key file, which may not be distributed. In some cases you might need a new key file, to be able to use all new features. In this case a special requester will inform you that you need a newer keyfile to use a feature. Please order an update disk in that case, if you need this feature.

Alternatively you can order Update-Disks at any time, if you prefer this way of getting newer versions.

For major expansions (as from EGS-TV to EGS-TV-Professional) you have to order an Upgrade from me, as then a new, expanded keyfile is needed. With an old keyfile you can also use the new versions, but some functions are then unusable.

## 1.68 How to get updates and upgrades?

Upgrades \*\*\* Professional upgrade \*\*\*  
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Upgrades are only necessary for large extensions, as from the classical EGS-TV to the Professional version.

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The EGS-TV-Professional upgrade currently costs 15US\$ from outside of europe (20DM, 20SFr or 10GB£ from inside of europe).

Updates  
=====

From time to time there will appear new public versions of EGS-TV.

Registered users get a key file on their disk (the egstv.library) which makes it normally possible, to use new public versions as full versions. This keyfile may not be distributed. Sometimes a new keyfile is needed for technical reasons to use some new features. Please order an update disk in that case, if you need these features.

Because new demo versions might not appear everywhere regularly, you can order update disks. This should be done similar to the registration, but you only need to send the money (or cheque) for the update fee and your registration number. If you wish to get updates for specific versions of EGS-TV, you can state your wishes on your update order, otherwise you get the next update(s) with reasonable improvements.

The update fee from outside of europe is currently 12US\$ for one update and 18US\$ for two updates (from inside of europe send 12DM, 10SFr or 6GB£ for one and 20DM, 20SFr or 10GB£ for two updates).

## 1.69 About the author

I am currently a student of computer science at the  
Rheinisch Westfälische Technische Hochschule Aachen  
in germany.

I am using and programming Amiga computers since more than six years now.

I wrote this program to get better use of my VLab-frame-grabber, experience the limits of the EGS-environment and experiment with interesting algorithms as for the Blue Screen effect.

You can reach me by EMail via Internet while I study in Aachen:

hhoff@pool.informatik.rwth-aachen.de

There are some holiday periods in the year, when I don't come to my EMail-account for some weeks.

My postal address is

Helmut Hoffmann  
Rubensstrasse 4

D-41063 Mönchengladbach

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Germany

This is valid through all the year.

## 1.70 Hard- and Software used while developing EGS-TV

Most parts of this program are written in pure Assembler (using the german assembler O.M.A. 2.0). This is, why EGS-TV is so compact...

Only the Jpeg functions of the Professional version have been written in C (based on the portable C source of the Independent Jpeg Group; This software is based in part on the work of the independent Jpeg Group) and compiled with the german MaxonC++ system.

My development system is:

Amiga 3000/030/25MHz / 18 Megabytes RAM

OS version 3.1

EGS System 7.0 (yes, this does really exist)

Classical VLab with vlab.library version 8.2

4MByte Piccolo SD 64 (64Bit) graphics board (running in Zorro III-mode)

Reisware scanner interface

Cameron Type 14 handy scanner

This program was tested with enforcer and mungwall running.

Transfer functions and file formats have been tested with PicoPainter, BigPainter, EGS-ImageFX, TV-Paint-Junior EGS and others.

The reference card has been created with PageStream.

## 1.71 Special Thanks

I want to thank all persons who already registered during the development process of EGS-TV / EGS-TV Professional and had to wait a longer time for their full version and all persons who made suggestions for improvements.

I especially thank Alexander Pratsch for providing me with BigPainter, the successor of PicoPainter. I tested the ARexx transfer functions of EGS-TV with BigPainter.

I also want to thank Mr. Woodall from NOVA-Design for his support at the implementation of the direct transfer interface between EGS-TV and ImageFX (EGS) by providing me with EGS-ImageFX.

I could not perform any further transfer tests as I did not get any support of other developers and some EGS programs (as SpectraPaint) are currently not available for the Piccolo at all.

My special thanks go to the Ingenieurbüro Helfrich and Jan-Claas Dirks

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for their great support.

I also want to thank Mr. Gualino for his testing of the IV24 functions in EGS-TV.

I also want to thank the "Independent JPEG Group" for providing the portable C source code for JPeg compression. The JPeg functions in the professional version are based on this code (This software is based in part on the work of the independent JPeg Group).

## 1.72 Information about other useful EGS programs

If you want to digitize lots of pictures (esp. in JPeg format) with EGS-TV, you should take a look at

EGSPhotoAlbum,

the picture management and presentation software for EGS. With this program you get an easy overview of all your pictures. Features: full automatic preview pages to turn and select as in a real photo album, presentation of selected pictures in full size by mouse click, transfer to other programs, creation of preview files ...

EGSPhotoAlbum is Shareware (Registrtrion fee 18US\$); Demo versions should be available at all places where you can find EGS-TV.

## 1.73 Version history

- \* version 1.0a (german and english) 13.6.94  
first PreReleaseDemo for selected interested persons  
(documentation only in english)
  - \* version 1.0b (english) 17.6.94  
PreReleaseDemo for selected interested persons
  - \* version 1.0n (english) 17.6.94  
PreReleaseDemo for NTSC users  
Introduction of the Hue gadget
  - \* version 2.0 (english) 1.7.94  
Strongly improved PreReleaseDemo for selected interested persons  
Introduction of the grab functions with multiple preview windows,  
color intensity choice, deinterlace function  
Redesign of the user interface
  - \* version 2.1 (incl. 2.1d and 2.1n) (german and english) 6.7.94  
first freely distributable demo version; has first been made public  
available on AmiNet and on orion.etsu.edu  
Introduction of the control menu with refresh setting for full frames  
Redesign of the documentation  
Introduction of the german documentation
-



Full version:

Introduction of the keyfile system with the "egstv.library"

Introduction of the screenmode requester

\* version 2.2 (incl. 2.2d and 2.2n) (german and english) 11.7.94

second freely distributable demo version

Internal changes to workaround an EGS bug

Introduction of busy mousepointers for lengthy operations

Full version:

Introduction of the jump screen function

\* Version 2.3 (german) 15.7.94

first version with all functions for registered users

Improvement of Deinterlace function esp. with greyscales

New functions for full version:

Introduction of save functions (IFF24 and PPM format (P6))

Introduction of transfer functions

Introduction of egstv.config incl. user configurable transfer functions via ARexx

Introduction of the setting database and the default.cnf

Extension of the documentation

\* Version 2.4 (german and english) 18.7.94

first english version with all functions for registered users

Introduction of the alternative, small monitor window size

Internal enhancements

Inclusion of HHsEGSPatch in the package to avoid EGS errors

Full version:

Default screen can now be selected for program start

Bug with greyscale monitor in default.cnf on program start fixed

Bug with input masks in control window on program start with default.cnf fixed

\* Version 2.5 (german and english) 26.7.94

During the area selection with the mouse a flexible frame is now drawn

Refresh mode for halfframes (including HiRes) can now be selected too

Bug with unsure Menu-Flag-Set recognition removed

Unnecessary window refreshes are now better avoided

Shortcuts from control menu flags have been removed as they are only used very rarely and often flags could have been changed unintentionally when shortcuts were used with control window active instead of a preview window

Introduction of a "menu leave-out bar" for the control menu

Full version:

Introduction of the YUV-Save-Format (incl. Y-Format)

Aspect ratio for NTSC pictures (11:13) is now saved correctly in IFF files

Aspect ratio for HiRes pictures is now saved correctly in IFF files

Pad byte is not counted any more in packed bitmap chunks of IFF files

\* Version 2.6 (german and english) 27.7.94

Control window is now opened automatically, if not configured otherwise

Full version:

Introduction of the fast direct transfer to PicoPainter (as picture or brush)

\* Version 2.7 (german and english) 2.8.94

First stage of the introduction of the ultimate Desktop Video for sequences in RAM

(can deal with unlimited number of sequences of unlimited length, only

limited by memory...) with functions as Record, Delete, SingleStep forward and backward, Playback (forward and reverse), Delete Single Frame, Record Single Frame, ...

Introduction of a project menu in the control window

and replacement of the VLab-Info-Button by a VLab-Info menu entry

Reduction of regrab events in held (frozen) monitor window

Full version:

Introduction of the P5 file format for greyscale pics (PPM 8Bit)

As this format can not be read properly by all programs, there is the option to save greyscales alternatively as P6 (24Bit) like before

Introduction of the QRT file format (is also used with POV Raytracer)

Introduction of the Targa file format (currently uncompressed, TopDown)

Introduction of the DEEP file format

Change of the TVPaint-Transfer function to use the DEEP format

Save and transfer functions can be used for single frames of sequences

\* Version 2.8 (german and english) 16.8.94

Introduction of the realtime Blue-Screen-System with freely configurable chroma color and possibility to use for monitoring, grabs and sequences.

Second stage of the introduction of the ultimate Desktop Video for sequences in RAM with new edit functions for inserting, appending or overwriting sequences in sequences. This can be combined with the Blue-Screen-System to combine new foregrounds into an existing sequence.

Comfortable control panel for sequences in VCR style.

Frame position after sequence grabbing is now the current position

New function to transform a picture window into a sequence window

Internal changes in memory handling

Introduction of a configurable security request to prevent sequence windows from being closed unintentionally.

\* Version 2.9 (german) 27.8.94

Internal changes and adaptations

Full version (partially extensions of the keyfile):

Improvement of error handling for save functions

Introduction of a save function for complete sequences in a special YUV-like EGS-TV sequence format

Introduction of a load function for sequences in EGS-TV sequence format

\* Version 2.9a (german and english) 30.8.94

Correction of a wrong menu entry in sequence windows (combine instead of overwrite)

Correction of insert and assemble recording, to avoid mixed greyscale and color parts in a sequence, which could lead to problems.

Full version:

Introduction of an export function for sequences, which saves all frames of a sequence automatically as single pictures in any file format.

\* Version 2.9b (german and english) 31.8.94

Correction of sequence appending and inserting: if a maximum number of frames for recording had been selected, only one frame fewer was recorded.

\* Version 2.9c (german and english) 6.9.94

Internal changes.

Inclusion of EGSTVPlayer 1.0, a separate player program for egstv-sequences (first version only with greyscale viewing).

Professional version:

Some changes for JPeg saving and exporting.

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- \* Version 2.9d (german and english) 8.9.94  
Changes of terminology, esp. in the english version and in the documentation.  
EGSTVPlayer 1.1 (now with 21Bit color viewing direct from harddisk)
  - \* Version 3.0 / professional (german) 29.9.94  
Resetting of some vlab.library parameters at the program end to allow other programs to use the library, which do not set these parameters.  
Usage of the current grab area offsets when grabbing / changing frames of a sequence if area size is identical.  
Introduction of Time-Code recording (frame duration) in sequences  
Introduction of realtime position and length display for sequences  
Introduction of a status display for sequence types  
First stage of the introduction of an import function: This allows to import pictures in greyscales from ImageFX or ImageFX-EGS by a fast direct port. Pictures can be inserted, assembled or otherwise combined with sequences.  
Full version:  
Introduction of a fast direct transfer to ImageFX as replacement for the old ImageFX-EGS-Transfer by ARexx; direct transfer is about 3 to 4 times faster  
Introduction of the "VLab" raw file format (compatible to the original VLab frame format for sequence recording) for pictures and sequence export.  
Professional version:  
Introduction of the Jpeg file format for color and greyscale pictures including parameter selection for quality, smoothing, optimisation and creation of greyscale Jpegs  
Introduction of a new settings flag for Jpeg greyscale file type (because some programs can't read real greyscale Jpeg files properly)  
Third stage of the introduction of the ultimate Desktop-Video, now including harddisk sequence editing with functions as "Record", "Insert", "Assemble", "Remove frames", "Overwrite", "Combine with Blue Screen", "Playback forwards and backwards", "Single step viewing".  
Even RAM sequences can be shown from hard disk. Applying "Insert", "Assemble" or "Delete" to such "temporary" disk sequences will transform them permanently to harddisk sequences (random access sequences).  
Introduction of realtime recording and playback functions with fixable frame duration or variable playback (play as recorded). In combination with the manual set time code function this can use sequences as slide shows with individual showing duration for every frame!
  - \* Version 3.0a / Professional (german and english) 30.9.94  
Fix of a memory management bug introduced in version 3.0  
Extension of the ImageFX import function for color pictures; these are automatically converted to the EGS-TV internal raw YUV format, which allows them to be included in sequences with VLab pictures. This makes new technics as video titles possible by exporting and importing to ImageFX.
  - \* Version 3.1 / Professional (german and english) 03.10.94  
\*\*\* First VLab independent version of EGS-VT \*\*\*  
Introduction of an internal full color conversion. This can be selected as alternative conversion by VLab users and is used automatically if no vlab.library is present.  
Default video mode (PAL or NTSC) is now selected due to the power frequency. This makes the former EGSTVNTSC version obsolete. In the full version the mode can be configured and saved as before.  
Changing of import while combining: Instead of only 1 frame, now the se-
-

lected number of frames will be combined. This is e.g. useful to combine a drawn video title with several frames of a sequence in one go with the blue screen keying!

New EGS-BitMap direct import functions: These functions can be used to grab any EGS-BitMap direct from memory. This makes a "direct import" possible even from programs, which don't have a transfer interface. At least with PicoPainter, BigPainter and SpectraPaint this should work (I could not try it with SpectraPaint).

Reducing of demo version limitations: demo requester now appears only very seldomly. The demo version now automatically uses the EGS Default screen, if it is 24Bit or the depths which is selected in the egstv.config file.

Work around an EGS bug while opening windows of odd height on screens with less than 16Bit depths.

Introduction of a new forbid/permit-option for isolated VLab calls. This can possibly prevent some trouble while using VLab.

\* Version 3.2 / Professional (german and english) 06.10.94

\*\*\* First inofficial version with IV24-Framegrabber support \*\*\*

Introduction of the IV24 support; the IV24 can be used as framegrabber if the fye.library is present. It is possible to use V Labs and IV24 together with EGS-TV. The IV24 is connected with input number 6 of EGS-TV. The monitor function is implemented in full RGB-(24Bit)-quality; the monitor mode (color/greyscale) has no effect on the IV24.

The preview windows can be shown in the different modi. Even sequence recording is possible with the IV24. Only the realtime blue screen keying can not be used (as only one IV24 input exists). But it is possible to use the blue screen keying to combine a new foreground signal with an existing background sequence.

Fixing of a bug (introduced in Version 3.0) with the horizontal offset in LoRes- and HiRes- sequence recording; it was only half as wide as it should have been.

Introduction of a frame jump function (important for very long sequences).

The frame number info field in the sequence control window can now be used as a frame number input gadget as well. If you enter a valid frame number, the frame will be located and shown.

Changing of some default preferences for non-VLab and IV24 use.

\* Version 3.3 / Professional (german and english) 11.10.94

\*\*\* First version with Handyscanner support \*\*\*

Introduction of a Handyscanner support for 16 and 256 greyscale handyscanners from Cameron/Reisware; scans are possible horizontal or vertical; the scanned picture appears in realtime during scanning in the correct orientation and 256 greyscales! Currently only 16 and 256 greyscale scans are accepted.

Reorganisation of some menus for more clarity.

Introduction of a warning for unsure VLab/Library constellations; this can be suppressed by a configurable setting in the settings menu.

Rewrite of the documentation in large parts.

Full version:

Introduction of an 8Bit IFF file format for greyscale pictures

Introduction of a menu setting to select the 8Bit IFF for greyscale pictures (this makes 24Bit saving possible for greyscale too)

\* Version 3.4 / Professional (german and english) 25.10.94

Replacement of the forbid/permit option for isolated VLab calls by a more useful option for high task priority during grabbing. This option

should solve certain problems, which appeared with Y/C-VLabs during high CPU loads, without making the mouse handling difficult (as the old option did). This option is automatically preselected for Y/C-VLabs. Changing of Time Code generation for imported pictures; instead of the import time now the preselected (Professional only) time will be applied. Moving of the "internal color conversion" settings menu entry to the VLab specific settings menu (as it is only selectable by VLab users)

Professional version:

Introduction of a load function for pictures in JPeg format (with the usual frame source button in the sequence control window); this function can be used to load a single picture or create/extend/change a sequence or even to combine the loaded picture with a sequence. During loading the picture can be scaled down automatically in some ratios.

Currently only JPeg pictures can be loaded; other file formats for loading are planned for the future.

Introduction of a setting to select automatic down scaling for JPeg loading. Fixing of a bug, which lead to time delays during the multiple import of a picture for combining with sequences.

\* Version 3.4a / Professional (german and english) 31.10.94

Suppression of DOS error requesters which could appear on the Workbench screen. Instead of theese, now only EGS-TV requesters will appear in case of DOS errors.

Workaround an EGS bug which can lead to erroneous info requesters if more than 20 lines of text are used. This could happen with the 3.4 demo requester. Now the number of lines in the demo info requester has been reduced to 20 ← again.

Introduction of an optional usable button interface for simple sequence control functions. Such a (joystick like) device can only be used with OS3.1 or higher and must be connected to port 1.

\* Version 3.5 / Professional (german and english) 07.11.94

\*\*\* First official IV24 version \*\*\*

Correction of a color decoding bug with IV24 framegrabbers

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