DOCUMENTATION

Identification

Artist:	Gerz, Jochen
Title:	Rüfen bis zur Erschöpfung
engl. Title:	Calling to the Point of Exhaustion
Year:	1972
Duration:	00:19:45
Colour / Audio:	B/W / mono
Language:	None
Production format:	1/4 inch Akai (not available).
Digitised format:	U-matic SONY KCS-20BRS
Data files:	20_Gerzfinal.mov/ 23,23 GB

Short description

The work shows a landscape and a man standing in the middle of the image, screaming "hello" out loud. He continues screaming, and gets increasingly tired until he looses his strength. At the end of the piece Gerz's face occupies the whole screen and he says: "Titel: Rufen bis zur Erschöpfung, Autor: Jochen Gerz, Dauer: 20 minuten, Ort: Blanc-Mesnil bei Paris, Band: Video Akai VC 5, Kamera und Ton: Jan Hermann, Edition Howeg, Zürich". (For details see the timeline at the end of this document).

Background

This was Gerz's first work on video, and shows a performance by the artist filmed in Blanc-Mesnil, near Paris, on 7.03.1972 (in the documentation of the Centre Pompidou the date 07.02.1972 is referred, but in the credits Gerz says 07.03.1972). The artist repeated the performance in 1973, at Saarbrücken, for the German ZDF broadcasting company. Later a recording was made with 1/2 open-reel tape from a monitor, at Centre Pompidou, Paris. The original tape has since been lost and the copy where the monitor is clearly visible is currently the only available version of the work. The work has been shown in this form.

Technical Realisation

The piece was originally filmed on Akai 1/4-inch open-reel tape, with a camera standing 60 meters away from Jochen Gerz. The cameraman was Jan Herman.

Editing

There are no edits in the video, except for the final "Signature".

Image 1- Final "Signature", with Jochen Gerz reading out the credits

Available versions

The video has been consistently migrated at "Centre Pompidou" and "Video les Beaux Jours", and therefore it can be found as open-reel, U-matic, Betacam SP and Digital Betacam. The content is the same for all tapes.

Digitisation

This work was digitised both at the "Laboratory for antiquated video systems", in ZKM-Centre for Art and Media technology, Karlsruhe, and at the Sony Recording Media Restoration Centre, in Dax. The restored file was the one produced in Dax, and therefore that is the documented digitisation (see end of the document for the digitization in ZKM- Laboratory for antiquated video systems). The digitisation at Dax was done in 10bit 4:2:2, in order to compare the difference between the 8-bit and 10-bit quality. From the visual inspection, as expected, there was no visible difference in image quality between the two bit depths. The difference might arise after the digital treatments but due to problems with the digital files this comparison cannot be made.
 There were small differences in the way that some of the smaller video errors appeared, but for the bigger problems there was no visible difference. The difference in the presence and appearance of the smaller errors seems to be related with the playing devices, and some of the errors in the Dax version don't appear in the ZKM version and vice-versa. (See the end of the document for comparison images)

The following text was sent by Mr. Denis Mahe, from the restoration department:

"The player used was a modified SONY VO9800P. Real time tape cleaning and video heads cleaning system were added on this machine. External SONY BVT-800PS TBC was used for DO (Drop-out) compensation.
- Checking of the form and level of the RF (Radio frequency) signal and optimization of the adjustments of the players thanks to an analogical Hitachi oscilloscope (tracking and tape path adjustment). A permanent control was carried out during playback, and any anomaly was noted according to the corresponding TC.
- Optimisation of the composite video signal resulting from these machines according to the video standards.

 Output composite signal from the BVT was input in a Snell&Wilcox IQDMSDL (multi standard decoder

with synchronizer) and converted in SDI.
Snell&Wilcox IQDNRS card took care of denoise of the video signal.
It was BY-PASS on your application except on "JOCHEN F" file.
Analogue audio was sent to a Behringer digital processor for conversion and delay adjustment. Digital
AES output went in AES input of the digital Betacam DVW-M 2000P
SDI was sent to the Digital Betacam recorder.
SDI with embedded audio was sent to an AJA card for the file creation: AVI – 10bits – 4.2.2 –
uncompressed."

The final file was an AVI uncompressed 10bit 4:2:2.

Besides the digital file Sony also provided a Digital Betacam with the digitised file. Problems were
found upon opening of the file in our Mac computers. It could not be cleared if these problems had
their source in the AVI File or in the different Operating Systems. To prevent any further problems we
opted to use the material from the digital betacam copy for the restoration process.

Another problem we found arose from the conversion between AVI and QuickTime. It could be clearly
seen that through this conversions pixelation occurred, visible in the details in images 8 and 9.

Concept for the restoration

The duration of the final restored version should be the same as the duration of the master used for
the digitisation. The final sequence, in which a close up of Gerz's face can be seen should be kept,
although it hasn't been usually shown before.
The other important point was to understand if the copying off the monitor, from the Akai to the open-
reel format had been part of the production process or just a way of migrating between formats.
According to Jochen Gerz [1]this was just the way to migrate the work, and therefore the disturbances
produced must not be kept. This led to the correction of the field order problems that were due to the
copying from the monitor. The errors that could not be corrected should be kept and not edited out.
There was also the question to whether the drop-outs originating from the Akai tape, which could be
identified by their particular look, should be kept. Again, because the transference was not part of the
production process, it was decided we should remove them, together with the other drop-outs.

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[1] In a conversation with the artist on 18.11.2005

Digital restoration

To assess the work done in the project, as well as to learn from what is being done in the broadcasting field the restoration of this work was outsourced to Studio Hamburg, a big audiovisual media centre with a department dedicated to restoration of film and video and also working with the Diamant software.

Image 1 - Comparison between the unrestored and restored versions.

The video was sent as a Digital Betacam to Studio Hamburg, due to problems in the digital file received from Sony.

The file was imported into Diamant and the field-spit module was used, to safeguard the line structure of the frames. Afterwards the dirt module was used in automatic modus, for white and black dirt. In this generation the "flicker" module was also used, to attenuate brightness variations.
In the following generation both the "dirt" and "interpolate" modules were used manually to remove the errors that couldn't be handled automatically.
The next step was to merge back the two fields. On the 4th generation the frames with wrong field order were interpolated and finally the restored file was cashed in the upper and lower borders, to hide the white noise. In this particular case it is acceptable to cache the borders, given that they correspond to the black area of the monitor, and have no content.

The main visible difference between both treatment methods is the use of the "dirt" module instead of the "drop-out" module.

The final step was inserting the credits, using Final Cut Pro, stating that the artwork had been restored for the project 40yearsvideoart.de and who had digitised and restored it. The restored file was recorded as Digital Betacam for archiving purposes. The restored and unrestored 8-bit QuickTime uncompressed files are also being kept at the ZKM-Mediathek, in LTO tapes.

Images

Image 2- Digitisation at the Sony Restoration Centre in Dax

Image 3 - Digitisation at ZKM -" Laboratory for antiquated video systems"

Image 4 - Digitisation at the Sony Restoration Centre in Dax

Image 5 - Digitisation at ZKM -"Laboratory for antiquated video systems"

Timeline

#	Image	From h:min:sec	To h:min:sec	Total h:min:sec	Observations
1	Test bar	00:00:00	00:00:04	00:00:04	
2	Gerz starts screaming	00:00:04	00:00:05	00:00:01	
3	Image collapses	00:00:05	00:00:09	00:00:04	
4	Gerz waves at the camera	00:01:54	00:02:12	00:00:18	
5	Image slides up	00:17:04	00:17:06	00:00:02	
6	Image slides down	00:18:14	00:18:16	00:00:02	
7	Image slides down and back again	00:18:25	00:18:36	00:00:12	
8	Face of Jochen Gerz	00:18:51			
9	Image slides down and collapses	00:19:06	00:19:38	00:00:32	
10	Black	00:19:38	00:19:47	00:00:09	
11	Credits	00:19:47	00:19:56	00:00:09	

Restoration Form

Artist:	**Jochen Gerz**
Title:	**Rüfen bis zur Erschöpfung**

Sequence: Complete		
Work Step:	**Tool:**	**Parameters:**
Original	Field split,	Local motion = advance + Ref-Frame
	Dirt module Automatic + Flicker	Black/White
R01	Dirt module Manual	
R02	Dirt Module Manual + Interpolate Manual on cuts an lines with defects	
R03	Field split	Merge field
R04	Interpolate Frame when the field order did not match. Ca. 25 % of all frames	
R05	The bottom lines were cashed, due to permanent white lines.	

Digitisation Form (at ZKM- Laboratory for antiquated video systems)

Digitisation		Type	Source	File size	Stored in
Information Support	1	U-matic tape	Centre Pompidou/ Video "Les Beaux Jours"		
Technical information		via device	Card	Norm	Adjustments
		U-matic BVU-820P	AJA IO-Box

Through a Firewire-connection (IEEE 1394A) | Composite Pal, 8 bit uncompressed | |
		TBC Sony BVT-500P			