

ERG

Eventstructure Research Group

Javastraat 126

1094 HP Amsterdam

Tel; 020-927855

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ART AND TECHNOLOGY -

some notes on our position at the present time.

Preamble:

We are again in a time of revolutionary technological developments. Numerous new products and processes are heralding this fact - the computer and microprocessor, cheaper more sophisticated video recording and playback systems, the video projector, the video disc, Viewdata, access to computer facilities via the telephone, lasers, holography, fibre optics, liquid crystals, etc, etc.

At the heart of this new technology is the development of the fast digital processor, whose application in our lives will probably have a greater social impact than the invention of the automobile or the telephone.

It doesn't take a cynic to recognize that the most powerful driving force behind these developments is industry's fascination with technological progress for its own sake coupled with a hunger for new sources of profit (not to mention the military priorities).

In this equation the wo/man in the street is never able to get a clear understanding of what this new technology is about or what its real possibilities are (e.g. the present confusion about the 'chip'). He becomes merely the consumer victim of a relentless stream of new products that arrive in the shops.

In this situation it becomes the responsibility of the creative community - the artists, designers, writers, poets, musicians, filmmakers, playwrights, social and cultural analysts, etc. - to decipher the humanitarian benefits of this new technology, to give meaningful form to its applications, and to inspire the direction of its evolution.

Also one can see whole new fields of creative endeavour coming into being as a result of this technological revolution, for example video art and computer graphics.

Therefor it is so necessary that links are forged on the appropriate levels between the creative community and the technological industries and its products. Without the feedback of such an on-going relationship we have indeed good reason to fear the approach of a '1984' world.

It is with these considerations in mind that E.R.G., as a group of artists working in the new technological medium, is seeking support to expand the scope of its activities.

Our work in the field of the new technology can be indicated by some of the projects we have realised over the last few years:

1. Laser

With the support of the English music group Genesis, we have been working with lasers to create a new form of environmental light-show that could be used on stage. In 1974 we developed one of the first laser light-shows, for Genesis's world tour, and made a unique laser projection device that could scan the laser beam through 360° in the X axis and 160° in the Y axis, thereby creating an almost total field of projection (c/f the narrow projection angle of commercially available scanners). We also designed and built the analog synthesizer that controls the scanning system.

This laser projector was expanded and refined for the three successive Genesis tours, and since mid '79 we have been showing it in Holland - at the Stichting de Appel, at the Paradiso in Amsterdam and at the Midsummer Night Festival in Eindhoven.

2. Audio-visuals

- a) The DIADRAMA, Rotterdam 1974 - a full length theatrical work using approx. 2500 slides projected onto three large screens arranged in a semi-circle. The six projectors were automatically controlled from the sound track tape.
- b) For the Genesis concert tour 'The Lamb lies down on Broadway', 1975 - a three screen slide show that illustrated each of the songs using a specially designed six projector dissolve system that was operated live in sync. with the performance.
- c) VIEWPOINT, Paris Biennale 1975 - a unique projection system using semi-transparent mirrors and the 3M's 'reflex' projection screen enabled animated slide sequences to be collaged together with a view of the fully lit gallery environment.
- d) For the Amsterdam Electric Circus and Tom de Graaf, 1976 - a three screen slide story for children that was interactive both with Tom's performance and the audience.
- e) A number of other theatrical and sculptural works utilising audio-visuals - such as the Corpocinema, the Movie-movie, Tearfall and Nagalm.

3. Video

- a) Experiments with 3D recording of laser projections using red/green separation.
- b) Since 1976, four years working for the SESAMSTRAAT childrens' television program as producer and director of about 1/3rd of the locally made items. Very interested in the development of 'chroma-key' techniques, we introduced and pioneered the use of the 'Scene-Sync' (coupled background) system in Holland, and extended its versatility in a number of ways (e.g. the use of panoramic photographs). On the basis of this experience we designed and developed prototypes of a computerised image coupling system using slide projection, that considerably expands the possibilities of chroma-key recording.

4. Computers

In 1978 we purchased a microprocessor, and we have used it as a control instrument in other works such as the laser scanners and slide projection. For Sesamstraat we developed a 'slate-board' program for titling, timing, scripting, filing and retrieval of recorded items.

But our main focus of work with this computer has been in the area of 3D graphics and the digital generation and manipulation of images, with the goal of a full colour computer animation system.

5. Other

- a) In Amsterdam Noord 1979 - a kinetic neon light sculpture whose patterns change in relation to the changing wind speed via a microprocessor control.
 - b) For a swimming pool in Vekzen 1979 - a kinetic air/water sculpture that is interactive with people walking past it by means of infra-red switching.
 - c) For the Genesis concert tour 1978 - six mirrors (each 3m . X 3m.), hung above the stage in gymbal mounts and rotateable in both X and Y axes by means of servo-motors. Controlled by a microprocessor with programmable presets, the movements of the mirrors directed the paths of follow-spot light beams across the stage.
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Our present focus of activity is an outgrowth of these projects, and the brief descriptions following include some foreseeable applications:

1. Laser and other collimated light sources, fibre optics, liquid crystals.

- a) Development of various X/Y/Z and rotational scanning systems - high speed scanning that would be capable of video image resolution - slower wide angle scanning for environmental effects.
- b) Digital control of the above.
- c) Use of luminous pigments and liquid crystal for projection screens that would be capable of displaying images generated by a light beam that is scanned or printed over its surface.

Applications: a) For further evolution of the laser light-show projector - as a work in itself, as an accompaniment to music, and for use in theatre, ballet and architecture.

b) For large scale projection and display of text, still images, graphic animation, video, etc.

2. Audio.visuals

Development of new digitally controlled slide projection systems, including 3D projection.

Applications: For audio visual performances and theatre.

3. Video

a) A complete re-evaluation of chroma-key techniques - experiments with other materials, other light sources and other electronics to make chroma-key much more effective than it is at present.

b) The manufacture of our design for a panoramic slide dissolve and animation system that would be computer coupled (pan, tilt, zoom, crab) to live action recording, for use with chroma-key, and as a post-production facility.

Applications: A new system for working with chroma-key and creating special effects that would be very versatile and economical, and would give filmmakers many new technical and visual possibilities.

For the production of television programs, and for filmmakers and video artists in general.

4. Computer

- a) Extending its capabilities to control other systems (such as the above)
- b) Extending its capabilities for filing and retrieval of information.

- c) Development of new means of interaction between the computer and the user.
- d) Development of a versatile 2D and 3D colour graphics system.

Applications: Interfaced to video and chroma-key recording. As a medium for visual artists, filmmakers, designers, architects, etc, and for the creation of visual material for the video disc and Viewdata.

5. Other

The notion for a controlled flow of air and fluid such that from a raster of air pockets in a fluid medium an image or text can be constructed and animated.

Applications: Large image and information display.

Projects we are working on in 1980

1. Proposal for a light sculpture for the Stedelijk Museum A'dam. (2% regeling)
2. Proposal for a light sculpture in Eindhoven (competition).
3. Design of an art work/re-development of the Oude Turfmarkt site in Amsterdam (commission from the Gemeente Amsterdam).
4. The design and artistic direction of a large video installation at the Midsummer Night Festival in Eindhoven, and utilising a large screen Eidophor video projector.
5. A computer/video sculpture for the scholengemeenschap QUIRIJN in Tilburg (1% regeling) that would explore the possibilities of educational computer games and video graphics. The sculpture would be interactively operated by students of the school

And...

The organisation of a structure or situation (perhaps a stichting) whereby the latest technological products and processes would become directly available for experiment and application by visual artists in Holland.