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MANFRED MOHR COMPUTER GRAPHICS

Accepting that creative work is an algorithm which represents a human behavior in a given situation, it is natural to ask: how is such an algorithm built up, and which precise mathematical laws could be extracted for later use in different circumstances? If one is now curious enough to look for his own aesthetical parameters, he is ready to engage in an interesting line of research. These considerations led me to use the computer as a **PARTNER** in my work.

The first step in that direction was an extended analysis of my own paintings and drawings from the last ten years. It resulted in a surprisingly large amount of regularities, determined of course by my particular aesthetical sense, through which I was able to establish a number of basic elements that amounted to a rudimentary syntax. After representing these basic constructions

through a mathematical formalism, and setting them up in an abstract combinatorial framework, I was in a position to realise all possible representations of my algorithms.

Since the most important point in applying a computer to solve aesthetical problems is the **MATERIALGERECHTE** use of this instrument, the research therefore should assume that old techniques of drawing and imagination are not to be imposed on the machine (although this would be possible), but should develop a priori a vocabulary which integrates the computer into the aesthetical system.

Computer graphics in general are conditioned by four basic premises:

1. A **PRECISE** idea of an aesthetical problem.
2. The need to break this idea into parts which could be reassembled as a program.

3. A steady control of the computing process to take full advantage of the **MACHINE — HUMAN** dialogue.

4. The need for the logic of the events to become perceptible.

The logic built into a program makes it possible to create a nearly infinite number of new situations. This is very important since the creation of a form is limited a priori by its author's characteristics, of which he may be conscious or unconscious. It means that the exploration of a new idea leads sooner or later to a repetition which can be avoided by resorting to a computer once the basic parameters have been formulated. As it is possible to conceive the logic of a construction but not all its consequences it is nearly an imperative to rely on a computer to show this large variety of possibilities; a proce-

dure which may lead to different and perhaps more interesting answers, lying of course outside of normal behavior but not outside of the imposed logic.

At this point a new problem appears: how to choose what is to be kept and what is to be rejected?

My aesthetic criteria were determined by a decision not to create single forms but sets of forms. The basic parameters are the relationships between the forms and no aesthetic value is associated to particular forms. Within this context it is possible to ignore the former "good" and "bad", and aesthetic decisions can be based on WERTFREIE** procedures, where the totality represents a "quality of a quantity". The fundamental consequence of this attitude is, that after a period of tests, modifica-

tions of the logic, and parameter exchanges, all possible results of a program have to be rigorously accepted as final answers.

Computer graphics is a young and new way of aesthetic communication; it integrates human thinking, mechanical handling, logic, new possibilities of drawing, and incorruptible precision of drawing — a new DUKTUS!***

The concentration which is necessary to establish a logic (writing a program — that means to give a definition of all instructions that have to be done in the machine) will reflect itself in the result as a clear construction which could be understood by everybody and there will be less and less mystical barriers behind which the artist can hide himself.

Manfred Mohr

* MATERIALGERECHT, German for: working or using a material only in the way which is basic to the material.

** WERTFREI, German for: decisions, where the knowledge is neither based nor conditioned by any values.

*** DUKTUS, Lat., German for: "handwriting". Individual peculiarity of the drawing material.

Signed, limited edition three-color silkscreens of the work of Manfred Mohr and other computer artists are available from: Gilles Gheerbrant, 3355 Queen Mary, Montreal 247, Quebec, Canada.

