RUNNING COLA IS AFRICA 1967/68
A computer graphic, No. 3 in the Metamorphoses Series by Masao Komura (product designer) data by Makoto Ohtake (architectural designer) programme by Koji Fujino (systems engineer)

RETURN TO SQUARE 1967/68
A computer graphic, No. 1 in the Metamorphoses Series by the Computer Techniques Group from Japan. Idea by Masao Komura (product designer) programme by Kunio Yamazaki (aeronautical engineer)

MAUGHANOMATIC
computer generated mobile pattern by Maughan S. Mason (Saratoga, California)

HUMAN FIGURE
Boeing computer graphics

THE SNAIL 1967
A computer graphic by Kerry Strand (California Computer Products, Anaheim)

RANDOM WAR 1967
Idea and programme by Charles Csuri and James Shaffer (Ohio State University)

3D CHECKERBOARD PATTERN
by Donald K. Robbins (Sandia Corporation, Albuquerque)

A computer algorithm converts a running man into a bottle of cola, which in turn is converted into the map of Africa. Programmed in Fortran IV on IBM 7090 and drawn on Calcomp 963 plotter.

A square is transformed into a profile of a woman and then back into a square, programmed according to an arithmetic series.

Programmed in Fortran IV on IBM 7090 and drawn on Calcomp 963 plotter.

works with an analogue computer in association with an X/Y plotter. This drawing was produced in red ink with a reservoir pen. Mason’s images often resemble op art and many consist of moiré patterns.

The figure is used to determine human capabilities in cockpit configurations, and for studies of cockpit instrument location and arrangement for easier uses of controls.

This drawing is a rear view sequence. Due to the inability of the programme to eliminate hidden lines, the figure appears to be transparent. This figure is seated looking away from you, with arm movement to the right and body movement to the left.

It is a seven-system figure. Each movable part is in a system—the head and neck, the torso, the left upper arm, left upper arm, right lower arm, right lower arm. The aim is to have a 51 system where the complete figure can be manipulated.

The equipment used was Kayopunch, IBM/reader, IBM/printer, IBM/reader, computer, Gerber plotter.

Random War is an imaginary war, with few variables—but it is a short step to a real situation if one introduces more variables into the programme. One could introduce military intelligence reports with an estimate of the enemy’s capabilities and the tactics they may employ. The computer can handle information about terrain, types and number of weapons, physical conditions of troops and so forth. The battle can be simulated on the computer, and computer generated film could give a visual display of the contest. Further decisions could be made before the real battle begins. Once the real battle starts (one hopes that computer simulation would make such a step unnecessary) the computer could predict the outcome and its consequences many hours before the real battle ends. The military computer could process one per cent of each of the variables and predict the outcome, much in the same way that national television computers have predicted the final results of political elections.

Random War—Red/black. Motif Edition No. ME/02/6

One of the traditional problems in calculus is the so-called bugs problem. The problem can be stated as follows: If four bugs are placed on the corners of a square and crawl towards each other, what path will they follow? If, in addition, a drawing is made of their line of vision, the picture moves on a spiral course. Once the basic subroutines are programmed for a digital computer, the parameters can be varied, thereby producing images based on the same fundamental pattern. This subroutine can be manipulated as in the checkerboard pattern which is a replica of the basic pattern. A further progression shows the checkerboard as a three-dimensional entity, with a shape distorted by perspective transformation.

3D Checkerboard Pattern—Blue. Motif Edition No. ME/03/7

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