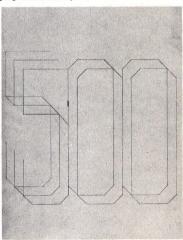
COMPUTER GRAPHICS AT FORTUNE

Responsible for his magazine's famous computer-produced cover, art director Walter Allner constantly seeks new ways to apply technology to design

- 1. Allner's initial sketch for what turned out to be the first computer-designed national magazine cover.
- 2. This was the sketch Allner showed to programmers Sanford Libman and Jon Price.



Walter Allner, art director of Fortune magazine, contends he would never make a good art director for a gourmet or fashion magazine: "I am far too fascinated and intrigued by science and technology." Trained at the Bauhaus-Dessau, Allner has always been interested in the relationship between science and art and/or design, and Fortune, which deals with industry, technology, structure and design, allows him a full field for the kind of creative expression he likes best.

Allner's interest in science, coupled with a venturesome spirit, has led him into exciting new design fields: He was the first man to print a computer-designed cover for a national magazine; and he plans to use the computer and laser beam analysis in solving future Fortune graphic problems.

"From the beginning of my work in graphics, I have been asking what modern technology could do for editorial layout and design, and for years I have been trying to use it with maximum effectiveness."

Allner finds that many designers show a certain timidity in approaching advanced technology for design solutions. "Many artists and designers may be hesitant to make too close contact with scientists and engineers. They feel their ideas might be turned down as unimportant to the scientific enterprise. However, I am not a bit embarrassed about taking my design problems to scientists. I am as sincere about my work as they are about theirs, so why should we not talk about it? Why should we not compare our problems? We have an important thing in common: Curiosity!"

Allner's inquisitive approach led to his first experiment with "computerized" covers. In 1964, his cover for Fortune's annual directory of the 500 largest U.S. industrial corporations had showed the windows on 21 floors of the Time-Life building lighted to spell out "500." After that, he realized he could not get a much "bigger" cover design. "People began asking me what extravaganza I would create for the '65 issue, how big it would be. This question was

asked again and again, and my immediate reaction was, 'How small can it be? How different?'"

Allner had been following reports about a course given at M.I.T. by Professor Robert Preusser called "Art for Engineers." Out of a purely practical problem—how to say "500" in a new way—Allner set off for Cambridge to see if technology could surprise the second-guessers on the Fortune staff.

"When I explained my problem to Preusser, he pointed out two young graduate students, Sanford Libman and Jon Price—combined ages 43!—who had worked with the problems of art and electronics. I went to them thinking they might find my project too complicated—a problem quite difficult to solve.

"I told them I wanted the number 500 to print in red, in white and in blue, each impression close to its neighbor but stepped down from it at a forty-five degree angle. Fine, said the young scientists. I wanted randomly arranged arrows pointing up; after all, this is a growth economy. No problem, they thought. What colors did I want for the arrows? Red and blue. How many red, how many blue? No problem there, either. It was as simple as that."

The two students worked forty-eight hours writing and testing their program. "Since their computer was busy during the day," Allner explains, "and since prime computer time is expen-



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sive, we worked from 12 at night to 4 in the morning to get the cover design."

The program, written to Allner's specification, was punched on an eight-channel paper tape for a PDP-1 computer. The computer then generated the design on an oscilloscope plugged into its output. Photographing the flashes on the face of the scope proved more difficult than getting the design programmed. But Price, using blue and red filters and a time exposure, managed to capture the pattern.

Reaction to Allner's experiment was immediate and unanimous. "It was fabulous," he says. "People would remark how difficult it must have been. Somebody from abroad suggested sending someone over to learn how it was done. He was incredulous when I told him it could all be explained over the telephone."

"I don't think I am going to do another computer cover," Allner asserts.
"But I am certainly going to have computers do other things for me." As an example of the possibilities, he holds up an outline of the State of New Jersey drawn by a computer.

"For the cover of Fortune, the computer produced a decorative design, but it obviously can and will do far more. With the computer, facts can be woven into the design. For instance, we ran an article in Fortune called 'Where the Brains Are,' which was illustrated with a map showing the geographic distribution of the top-level U.S. scientific population. Although we used traditional methods to make our map, the computer could not only have drawn the outlines of the states, but also added the differing densities of the scientific population in each."

Allner will use the computer as long as it can produce new, fresh answers to his design problems. He is also interested in holography—the recording of light in three dimensions by laser beams (this process may eventually lead to three-dimensional color television). Allner carefully studies the reports from research laboratories of a number of U.S. corporations for new applications of technology to art. He

even talks about the possibility of a layout machine!

Not long after Allner's computer cover appeared, he was asked to speak at an art director's conference. "They wanted to know," he says with a smile, "if the computer would make the art director obsolete. Well, I don't look at the computer as a monster or an enemy. I use it as a tool. It does its job." And he adds with a wink, "It hasn't made me obsolete."

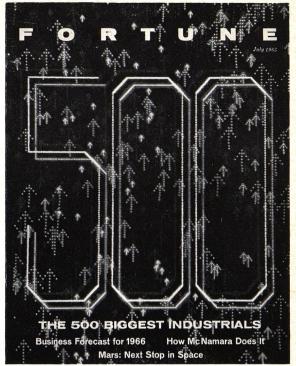
—John Lahr

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3. Program for cover.



4. Designing the cover: Walter Allner (in shirtsleeves), Sanford Libman (seated), Jon Price—and the PDP-1 computer. 5. The cover as printed, July 1965.



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