

Talking Zephyr

In theory, at least, the fabulous electronic brain machines have been credited with power to predict weather, compute salary payments, replace minor executives, and produce synthetic "emotions." In fact, only one of the large computing machines—ENIAC—has ever been completed (NEWSWEEK, Feb. 18, 1946).

Last January the Bureau of Standards, which is charged with coordinating all work on the computing machines, decided to put a small, streamlined model into production and finish it in a hurry. Last week the bureau revealed that its laboratory at the University of California's Institute of Numerical Analysis is five months along with construction of a new "brain" and will have it completed in three to six months.

The machine, designed to fill one corner of the average-sized office, is about one-third the size of the slower, more cumbersome ENIAC, weighs 1/2 tons, compared with ENIAC's 20 tons, and has a much more versatile and complex "memory." Christened the "Zephyr," the new "brain" combines the fast cathode-ray tubes with the slower magnetic drum, which allows the storing of complicated routine items. This combination makes the machine more flexible than ENIAC and greatly cuts down on the time needed to feed it new problems.

Electronic Dictionary: Besides its ability to perform complex mathematical problems, the Zephyr will be able to translate some 60,000 words into at least three foreign languages. When a foreign word is fed into the machine as an electromathematical symbol on a tape or card, the Zephyr will tap its "memory" and, if it finds that symbol on record, will automatically give forth the equivalent English word.

The translation will be stiff and literal, with no provision for syntax, but it is expected to prove of value in translating foreign technical papers in which scientific vocabulary is more important than smooth sentence structure. Ultimately, the Zephyr may also be used to translate books.

The real use of the machine, however, is to help the West Coast aircraft industry with new, complicated research problems, particularly for supersonic aircraft. The Zephyr occasionally gets out of hand and rattles forth meaningless answers. Then Dr. H. D. Huskey, supervisor of the "brain" has to give it an electronic jolt and start feeding it the problem again. Despite its fractious behavior, Huskey and his dozen mathematicians and electronic engineers are loud in their praise of the Zephyr. "Of course, the machine differs from man in that it is really only a slave that faithfully does just what you tell it to do," he said. "But



Dr. Huskey: Slave supervisor

by locating where an airplane was an hour ago, it can predict where it will be an hour from now. That may be some sort of thinking. I don't care how deeply the Zephyr thinks, so long as it doesn't develop ambition and initiative."