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and

Wolf Research and Development Corporation
462 Boylston Street
Boston, Mass.

CAMBRIDGE, MASS. ---"Whirlwind I", one of the most important digital computers ever constructed, started leaving its long-time home at the Massachusetts Institute of Technology this morning for a future career under new management.

The pioneer "electronic brain", among the largest and most complex ever constructed, will be moved in sections from M. I. T.'s Barta Building on Massachusetts Avenue, Cambridge, to a U.S. Navy warehouse in Boston's south end.

Sometime in the future--probably the next two years or so--the thousands of tubes and diodes and the miles of wiring of Whirlwind will be hooked up and the machine that has contributed so much to computer technology will go to work again--this time for the Wolf Research and Development Corporation of Boston.

William M. Wolf, president of the Boston corporation, believes that the historic machine can be utilized to advantage in a number of ways. He has expended several thousand dollars in undertaking the moving costs for Whirlwind to back up this belief. As soon as possible, Wolf will construct a new building for housing the computer, have it moved in, reassembled, and start operations again to utilize its abilities to perform high-speed calculations in a fraction of a second.

Early this morning, the red-brick Barta building on Massachusetts Avenue was teeming with activity. On one side of the building along an alley, a large hole had been made.

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Whirl-
wind I
moved

Whirlwind Move--2

Through this hole was to come the first large sections of racks containing the tubes and other components of the computer. The racks--some of them nearly 40 feet in length--were to be hoisted through the hole onto a flat-bed trailer, and then make the journey of several miles through Boston to the storage building behind First Naval District headquarters in the South End.

Tomorrow--if plans go according to schedule--another group of racks will be hoisted aboard a flat-bed truck and taken along the same route. Additional materials, already disconnected and carefully crated, will be moved within the next week or so until nothing of Whirlwind remains on the M.I.T. property.

Wolf, who once worked at M.I.T.'s Digital Computer Laboratory, heads a firm that is only four years old. Most of his staff are young graduates of M.I.T. and Harvard, several of whom obtained experience on Whirlwind while working for advanced degrees. The firm is at work on a number of government contracts involving the use of computers, including responsibility for data processing at the recently opened National Space Surveillance Control Center at Hanscom Field, Bedford.

"We expect to devote a large percentage of the computer time to work on military contracts," Wolf said. "We are confident that when Whirlwind is reassembled it will become a useful R and D tool. For example, it is well suited for processing radar data on a large scale in meteorological studies, which may eventually mean more accurate weather forecasting. It also can be used in processing data for many wide-spread, large scale undertakings, either military or commercial in nature."

Whirlwind officially ceased operations at midnight on May 29, 1959. Officials at M.I.T.'s Lincoln Laboratory who had been using the computer had other more modern data processing machines available, and Whirlwind was expensive to operate.

Although it was declared "obsolete", when it ceased operations Whirlwind I still was capable of processing as many as 16 numbers at the rate of 20,000 times a second, and

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Whirlwind move--3

had an amazing record of reliability. At one stage in its operation it served round the clock for six consecutive weeks and presented more than 100 billion answers without an error. It is for these reasons--plus some of the special equipment that was used in early air defense tests--that Wolf believes he can use the computer for practical applications in coming years.

Preparations for the move of the complex, sensitive device which has occupied four rooms at the Barta Building has been a major task. Albert V. Shortell, Jr., of Belmont, a vice president of the Wolf Research and Development Corporation, has been in charge of operations, assisted by Vincent S. Michienzi, Burlington, also a member of the WRDC.

"To prepare Whirlwind for the move, it was necessary to disconnect, label and log 50,000 separate wires." Shortell said. "We are maintaining these records and will refer to them when the time comes for reassembling the computer. And, I might add, these wires were from the larger units only."

There are fifteen rows of racks being moved. By careful study, members of the Wolf Corporation decided that it would be possible to avoid the disassembly of the racks. Had this been necessary, the number of components to be checked would have been much greater. There are an estimated 150,000 components per rack.

Ten students from Northeastern University aided in the task of checking and logging the wiring. They were members of Northeastern's cooperative plan in which most of the students are business majors with little or no experience in electronics. Shortell praised their work highly.

Some of the smaller items that are part of Whirlwind I already have been moved to the Naval warehouse, and other components are now at the Boylston street offices of the Wolf Corporation. The main segments remained at M.I.T.'s Barta Building until this morning, and the main transporting job will be during the next week or 10 days.

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Whirlwind move--4

A rigging crew from A.A. Litchfield and Sons, Inc., a Boston firm, is responsible for the moving operation. They have been at work since the end of March in crating and preparing components for the move. Tomorrow they will face their most critical task, when five racks are to be placed on a special flat-bed trailer 40 feet long. With extra space measured in inches, and with the use of two 80 foot cranes required, the job is expected to take most of the day.

In moving from the Barta Building, where it was in operation for more than eight years, M.I.T.'s Whirlwind I computer leaves a site that only future historians will be able to correctly evaluate as to importance. At the Barta Building, not only were important technological advances in computer use made, (the first use of magnetic core "memories" is one) but some of the most vital developments in air defense of the North American continent also were accomplished. For several years during the mid-1950's the Barta Building was one of the most sensitive security spots in the nation. Here, information from some 15 radar stations located from Maine to Connecticut was fed into the computer and utilized at a prototype control center manned by members of the United States Air Force. This was the "Cape Cod" System, forerunner of the current SAGE system for air defense now in operation throughout most of the nation.

Although old and relatively slow, and a "non-conformist" when compared with more modern computers, Whirlwind I is still one of the most accurate ever constructed. When operating, it could solve in 15 minutes a problem that would take several experts as long as 15 years to solve by manual methods. Using the magnetic core memory, it could process as many as 250 million bits of information in a single hour. It was extremely reliable, and it was the first large-scale, high speed digital computer to go into operation in the United States--the pioneer device that helped open an entirely new field for science and technology.