

XXXIII. COMPUTER RESEARCH*

Academic and Research Staff

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RESEARCH OBJECTIVES

The purpose of this group, which is operated jointly by the Research Laboratory of Electronics, the Electronic Systems Laboratory, and the Department of Electrical Engineering, M.I.T., is fourfold:

1. To provide a flexible and readily accessible computation facility oriented toward the Laboratory's research goals.
2. To provide an educational facility where students may learn the principles of automatic computation, and undergraduate and graduate thesis projects may be carried out.
3. To develop computation techniques, especially methods that make program design and construction more convenient, and allow easier communication with the machine.
4. To investigate new principles for organizing multiprogrammed computer systems.

The Computer Research Group operates two general-purpose machines. The TX-0 computer was built by Lincoln Laboratory, M.I.T., as an experimental machine, and was turned over to the Department of Electrical Engineering in 1958. The Digital Equipment Corporation donated one of their PDP-1 machines in 1961. The PDP-1 has become the central processor of a time-shared multiuser system¹ implemented by the group. Our activities have included modifications to the two computer systems to improve their performance, as well as the programming of translators, editors, debugging programs, and executive routines suited to the on-line nature of the use of the two systems.

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