

AD 69 4646

DIGITAL COMPUTER NEWSLETTER

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OFFICE OF NAVAL RESEARCH • MATHEMATICAL SCIENCES DIVISION

Vol. 17, No. 4

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October 1968

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Approved by
The Under Secretary of the Navy
25 September 1968

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NAVSOP-645

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UNIVAC 1830 Military Computer

*UNIVAC Division
Sperry Rand Corporation
New York 19, New York*

The first UNIVAC 1830, a new microelectronic military computer, has been delivered to the Naval Air Development Center (NADC) Johnsville, Pennsylvania, by the Sperry Rand Corporation's UNIVAC Defense Systems Division.

Also labeled the CP-823/U (a Department of Defense designator), the computer was developed under a contract with NADC and the U. S. Navy Bureau of Weapons. It will serve as the nucleus of the Navy's A-NEW Program, an improved airborne Anti-Submarine Warfare Tactical Command and Control System. Once integrated with other components of the system in an airborne environment, the miniaturized computer will be required to perform a multi-

plicity of functions, a decided improvement in accuracy and efficiency over present manual methods.

The 1830 is a militarized general purpose digital computer intended for manned tactical data systems operating in extreme environments where small size and high performance are critical requirements. Constructed of silicon microelectronic circuits, it features a choice of either magnetic thin-film or core memory.

Because the 1830 is fully compatible with other UNIVAC military computers, existing operationally proven programs can be used without modification. Input/Output compatibility is

also incorporated in the 1830, allowing use of the complete line of UNIVAC military peripheral equipments.

In addition to Anti-Submarine Warfare use, the UNIVAC 1830 is expected to find wide application in such areas as airborne command and control, fire control, battlefield command and control, missile command, control and launch, radar data processing, and shipboard systems.

The 1830 delivered to NADC has both a magnetic thin-film and a ferrite core memory, which in combination provide a total storage capacity of 32,768 words of 30-bit length. The memory cycle time is four microseconds. Modular design allows a range of total memory size

from 4096 words through 32,768 words in 4096 word increments.

Input/Output is provided through four input and four output channels available at the central processor. Each channel may be connected to a 4-channel multiplexer, allowing a total channel capacity of 16 input and 16 output channels which run asynchronously with the program under buffer control. Data can be transferred at the rate of 3,750,000 bits per second in 30-bit parallel words.

Modularity and maintainability have been emphasized by packaging the central processor, the memory, the I/O, and the power supply as individual units; this also allows flexibility in selecting a memory size and the number of I/O channels to closely match job requirements.