

Date: Fri, 17 Jul 1998 15:45:25 -0500
From: codap (Hand)
To: jjw
Subject: Final Unisys shutdown (forwarded)
Cc: jfast

FORWARDED FROM: Buchhorn, Janice
From: Myer, J. Elbert

Subject: End of the line
Date: 1998-07-17 10:52

The era of "mainframe" computing in support of manpower and personnel research began circa 1958 with installation of an IBM 650 digital computer system in Building 9016 at Lackland AFB. That system had 2,000 (10 digit) words of magnetic drum memory, six tape drives, a RAM 305 (one arm with 2 R/W heads) disk system and a 407 accounting machine as the system printer. Programs were written in SOAP 2A (assembly language) and loaded from punched cards or magnetic tape.

[One application system was called FARCE, "Factor, Analysis, Regression, Etc.," commonly used for doing correlations and regressions; it's innovative, rewritable tape storage and automatic checkpoints enabled very large correlation matrixes to be computed, one row (or a partial row) at a time. With the possible exception of 60 words of Immediate Access Storage (IAS); this system was totally electron tube technology. An occasional operator duty was to kick the RAM file whenever the arm got "hung up."]

In 1963, the IBM 650 was replaced by an IBM 7040-- six tape drives, a disk file (with one arm, one head per track), a line printer, and 16K (36-bit) words of magnetic core storage, later upgraded to 32K. General purpose data field distribution, TRICOR, Overlap, and Group programs were developed on this system. Except for background spooled print, the system was single task, batch processing. There was no networking capability; the system was discrete-transistor technology.

The first UNIVAC system, a dual processor 1108, was installed at Lackland in September, 1973 to replace the IBM 7040, with an estimated 32X increase in compute power and interactive, as well as batch, capability; it was moved to Building 578 at Brooks in April, 1977. The 1108 had a planned addition of a third processor; however, it was more cost effective to acquire a used Sperry 1100/81 system from the Treasury Department in April, 1981. [This coincides approximately with the birth of the PC.] Since that time, every peripheral subsystem has been upgraded and a second CPU plus an additional million words of main memory plus cache memory were added.

Utilization of the 1100/82 system mostly kept pace with the upgrades through the AFHRL era, although the system's age and inflexibility resulted in acquiring more adaptable platforms to implement some applications (e.g., RDT&E of ISS & AOTS on the VAX 8650). The original 1108 was mostly transistor technology; the 1100/81 is mostly integrated circuit technology.

The "mainframe era" ends at 1500, July 20, 1998 when the Unisys 1100 will be powered down for the last time. All the historical data bases and selected research study files have been archived to CD ROM. The master file processing will be continued on a much smaller, but more capable, IBM RISC 6000 system.

Some people have expressed interest in observing the event on Monday. It will take about 5 minutes to:

- 1) "\$!" to terminate 1100 Operating System from running.
- 2) Shut down peripherals (by the master power controller switch)
- 3) Turn off DC power on the central complex (Transition Unit last)
- 4) Shut down the 400 Hz motor generator

There is no ceremony planned. If you want to watch, be there at 1500.

J. Elbert Myer