

The Database of Cost References by Group—PDF#10

Prepared by Heuston Consulting, Inc., July 2009

Coldwarweaponsystemcosts.com

Computers*

CO1 – USAF Computers

Cost – at an estimated Fiscal 1971 cost of \$199.6 million.

Discussion -- \$175,700 each

Of these, 647 are leased at an additional cost of \$78.7 million annually (\$121,000 each)

Total includes computers in the Space Track System.

Source – Aviation Week, May 25, 1970, p 15.

Recorded – July 2, 1970.

CO2 – Course Line Computer, CLC-60,

Cost -- \$3,000

Discussion – Narco Avionics, provides VFR area navigation capabilities.

Source – American Aviation, June 9, 1969, p 25.

Recorded – September 30, 1967.

CO3 – Burroughs Corp., D830 Computer System

Cost -- \$25 million

Discussion – TWA has purchased

Which will provide for automatic passenger reservations and management information.

The center of the system will be in Rockleigh, NJ. It will be linked directly to 2,000 reservation agents sets throughout the country. It is scheduled for full operation in mid-1968.

The new TWA system will have a television style cathode ray tube display at each agent's set, which will give an instantaneous picture of transactions with the Burroughs nodular computer.

Source – Aviation Week, January 3, 1966, p 30.

Recorded – January 25, 1966.

CO4 –Everyman Computers

Cost -- \$1,200 each

Discussion – Twenty programmers working for five years under a \$10 million contract could produce the software needed for a computer system as easy to use as a slide rule. T. B. Steel, Jr. of System Development Corp., offered this answer at the Fall Joint Computer Conference to Rex Rice of Fairchild Semiconductor who suggested that advances in microelectronics would cut the price of a central processor equivalent of an IBM 7094 to \$1,200 by 1970. Total cost of desk size computer using this processor would be about \$23,450 said Rice, provided it was sold in quantity.

Source – Missiles & Rockets, December 20, 1965, p 63.
 Recorded – January 26, 1966.

co5 – Electronic Computers

Cost – as follows

Discussion –

IM System	Cost to Purchase (1) \$x1000
7090	3,632
7080	2,653
7070	967
1410	711
1402 (2)	415
1401 (3)	411
1401 (4)	188

(1) Includes Maintenance for 1 shift,

(2) Card and tape system, operation as off-line equipment to a larger system.

(3) Card and tape system.

(4) Card system.

Source – Aerospace Management, October 1963, p 38, “Computers ...Buy or Sell

Recorded – January 30, 1964.

co6 – Research Computers

Cost – as follows

Discussion –

Type	No. in Use	Rental (per machine)	Purchase (per machine)
IBM 7094	1	\$1,080,000 (3)	\$2,798,000
IBM 7090	15	\$213,000-1,600,000 (4)	\$2,251,000
IBM 7070	1	\$441,000	\$606,250
IBM 1401	22	\$69,600-130,000 (5)	\$146,600
IBM 1620	2	\$50,000	\$74,050
MH 800	1	\$604,000	\$410,400
IBM 610	2	\$14,220	\$143,550
IBM 704	1	\$125,000	\$926,200
IBM 650	2	\$61,000-250,000	\$182,010
IBM 1410	1	\$2,520,000	(6)

(1) Includes maintenance and repair costs, which may vary from as high as \$264,000 per year for the 7094 to as little as \$26,304 per year per basic unit for the 7090.\

(2) Cost includes basic, but not peripheral equipment. Peripheral equipment usually cost substantially more to rent and the rental is dependent in each instance on the type of work being done and the amount of peripheral equipment required for the task. NASA estimates the cost of each 7090, both basic and peripheral equipment at approximately \$4,000,000.

- (3) Estimated rental of machine, since this computer is being purchased.
However, peripheral equipment is being rented at an additional cost of \$453,600/year. All other computers in the table are rented machines.
- (4) 7090: 1 at \$273,000; 2 at \$625,000; 1 at \$809,000; 1 at \$950,000; 1 at \$1,018,000; 2 at \$1,498,000, and 7 at \$1,600,000.
- (5) 1401: 8 at \$69,000; 3 at \$78,000; 3 at \$84,000; 3 at \$90,000; 4 at \$94,000; 1 at \$130,000.
- (6) Cost undetermined, experimental machine.
- Source – House Hearing Committee on Science & Astronautics, 87th Congress, 2nd Session, HR 10100, Par 1, p 187.
Recorded – November 11, 1963.

co7 – Computers

Cost – as follows, minimum system cost – purchase price

Discussion –

IBM-7094 -- \$2,508,900

IBM-7090 -- \$2,251,500

IBM-7070 -- \$697,250

IBM-1401 -- \$146,600

IBM-1620 -- \$74,050

MH-800 -- \$410,400

IBM-610 -- \$143,550

IBM-704 -- \$926,200

IBM-650 -- \$182,400

IBM-1410 -- \$322,850

Basic computer costs and the prices could vary considerably

Source – House Hearings before Committee on Science and Astronautics, 87th Congress, 2nd Session, HR 10100, Part 1, NASA, 1963, p 223.

Recorded – November 13, 1963.

co8 – Computer Rental – Administrative Operations -- NASA

Cost -- \$15 million in 1962 to \$39 million in 1964.

Discussion – Mr. Wyatt -- \$35 million of \$39 million is for the rental of electronic computers.

Total of 118 computer systems, 86 leased from various companies, 32 purchased, 27%

Mr. Young – If you are going to keep the piece of gear or equipment long enough, normally around 4 to 6 years, it pays to purchase the piece of equipment rather than to lease.

Source – House Appropriations Committee Hearings, 88th Congress, Part 3, p 305

Recorded – October 30, 1963.

co9 – Computer Rental – Electronic Center – NASA

Cost -- \$250 million

Discussion –

Source -- House Appropriations Committee Hearings, 88th Congress, Part 3, p 290

Recorded – October 30, 1963.

CO10 – Digital Computer – Scientific/Engineering Digital Computer

Cost -- \$360,000

Discussion – Scientific Data Systems

SDS 9300

(8 K memory, I/O, four tape stations, high speed printer, card reader, and punch)

SDS 9300 -- \$177,500 with 8, 192 words of memory, Control Console, 6-bit Time Multiplexed Communications Channel, and Input/Output Typewriter.

Memory cycle 1.75 mu sec.

Source – Aviation Week, November 23, 1964, p 20

Recorded – December 28, 1964.

CO11 – Standardized Airborne Digital Computer

Cost -- \$40,000 in quantities of 100 is sought

Discussion – weigh less than 40 lbs

System Engineering Group at Wright Patterson AFB

Similar to effort for spacecraft computers conducted by USAF Space Systems Div

Air Formed group to study feasibility of standardized airborne digital computer for each of several categories of aircraft and missions, including cargo-transport, tactical avionics, command and control, data reconnaissance, and flight control.

Source – Aviation Week, December 7, 1964, p 59.

Recorded – January 5, 1965.

CO12 – Data Processing, D-825 Data Processing System for BUIC

Cost -- \$12.6 million for 17 additional systems.

Discussion – USAF's Backup Interceptor Control (BUIC)

This extension raises total contract price to \$37 million for total of 34 systems.

Burroughs Corp.,

Source – Aviation Week, October 21, 1963, p 99.

Recorded – January 28, 1964.

CO13 – Microcircuit Computer

Cost – for under \$35,000 per unit

Discussion – Sperry

Mark XIV

32 lbs, offers 21 bit word length

4,096 word memory core

MTBF, 6,000 hrs.

Source – Aviation Week, November 1, 1965, p 44

Recorded – November 26, 1965.

- *Editorial Footnote – Our current search of the Web produced lots of textual history about computer from the very early days, but a miniscule amount of cost data, some purchase prices per unit, and hardly any research and development costs or production costs. Those interested in plain text history, try simple*

searches on” computer” keywords on almost any big search engine. We will appreciate receiving any donations of solid monetary cost data or leads to where we can find better data.