

2000-X Meeting

Meeting with: E. Coffin

(later with E.G. Saw + J. Gibson)

Dec 11, '58

I/O Prices

SWIFT Tapes:

where we consider: Character \equiv Frames

250 KC Transport
 150 KC Transport
 250 KC Control
 150 KC "
 15 KC T+d

Level Planning Design Objectives	0-Level Pricing
\$900 - 650 ^B	800-1000.
800 - 600	790-990.
8000 - 6000	1300-1500
6500 - 4800	1300-1500
500 - 300	800-1000

Typical System { HSTC HSTO LSTO+TC
 1 + 10 + 4

actually there will probably not be 250 & 150 but a single 187.5 rate
 (for 1/2" tape 13 channels, 2200 bits per inch, 100" per sec
 still won't work at present

729 II \$700.

729 II \$1100.

-TAU \$500.

(not separable item on present machines)

Card Reader:

(for 20 machine)

STRETCH 1000 cpm

\$3500. \rightarrow \$2400 for double market.

plus adapter.

Card Punch \$3300.
250 cpm
(7070 stars)

Chain Printer \$1750, design obsolete (1500 + 250 attachment)
(48 char) \$2400, — present number.
600 lpm

Disks:

Disk Control Unit \$13,000 - \$16,000
High Speed Disk Unit \$4,000
Parallel 2 units of 22 platters each

Serial Unit. (4 million
words?
6M?
8M?) \$6,000, 3 units of 22 platters each.

Data Transmission:

\$200, per mo. for card terminal equipment
(not incl phone line cost)
\$3 per mile per month, leased line.

Paper Tapes: 500 cpm reader, announced.

Compare

High speed Disk & SWIFT

Soft Tape 4X capacity of 729 capacity 2400' ft
729 Acc ~~833,533~~ (6 bit characters)

729 83K words

SWIFT 252 K words

(1) So ~~2~~ SWIFTS \approx 1 HS Disk capacity.

729 (200 bits per inch)

729 III (556 Bits per inch)

62.5 KC

(160 μ s per stretch wd)

6) 5,760,000 characters
160,000 words (704)

(576,000 SWR words on 729)
1.5M STR 729 III

2,292,000 STR words SWIFT

(2) SPEED:

32 μ s/word SWIFT

4 μ s/word HS Disk

Factor of 8 in speed.

"Binary Serial File"

Bit rate 7 μ s/bit on disk: \sim 140 μ s per word.

Disk files: Advanced (Dec.)

Binary Serial

A.S. Binary

stretch work

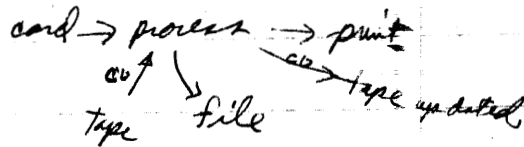
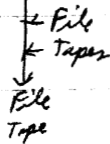
	Capacity	cost	speed	No devices/CU
729	0.5 M	\$1.1 K tape (1.5)? CU	160 μ s/wd	10
SWIFT	2 M	\$1.1 K (4)?	32 μ s/wd	24
Serial Disk	8 M ?	\$3.5 K ? (5) ?	140 μ s/wd	32
H.S. Disk	4 M ?	4 (10) ?	4 μ s/wd	32

Typical jobs:

card to tape

tape to printer

processing



(14)

Typical Systems

	units	CU	cost
729	6	3	\$18.1 K
SWIFT	6	3	\$18.6 K
Serial Disk	2	1	\$12. K
H.S. Disk	2	1	\$18. K

729 \approx SWIFT

Serial or H.S.

~~16.9~~
12.6

Examples:

- 6 SWIFT + Serial \$30 K
- 729 + serial \$23. K
- SWIFT + HS \$36. K

ii Typical Tape + Disk cost \sim 30 K

others:

Card Reader	\$2.4 K
Printer	2. K
Card Punch	3. K
	<u>7.4</u>

Typical I/O \sim 40. K
 Typical Mem 2 \$32 K
all non-CPU \sim 70. K

multiplier
+

Similar for Typical 7090:

?? { 1 DSU @ \$3.5K 7.1K
 2 TCU @ \$4.8K 5.1K
 (7 x .7 + 7 x 1.1) → 14 Tapes @ 1.1 12.6K
 1 cd Rdr. (400 rpm) @ .8 .8
 1 Printer (150 lpm) 1.2
 \$ 26.6 K

CPU \$10K
 32K mem \$20K
 CPU power supply 1.1K
 741 power supply 1.6
 power distrib 1.3
 \$ 34.0

Peripheral T → Ready

T-Pch
 1 T-Pr 150 rpm
 1 T-Pr 500

See below
 +1 + 2 + .8 = 3.9 ~~3.5~~
 +1 + 2 + .775 = 3.85 1.6
 +1 + 2 + 1.2 = 4.3 4.5
 +1 + 2 + 1.4 = 4.5 4.9
~~\$ 16.65~~
 \$ 14.5

26.6
 14.5
 \$ ~~41.1~~ K
 \$ 41.1 K

\$ 70.

Typical 705 III (Total ~50K)

(T-Pr)
 70A 1.9
 760 2.5
 727 .55
 4.95
 (T-Rd)
 714 1.5
 759 .9
 729 1.1
 3.5
 (T-Ph)
 722 .75
 758 .30
 727 .55
 1.6

CPU \$15K }
 Power 1.5 } 17.6
 Console 1.1 }
 2 TRC's @ \$3.K \$6.
 18 12-11-16 Tapes (1/3 HS + 2/3 cheap) \$ 14.4 K
 0 or 1 drum @ \$2.8K \$ 1.4
 1 cd reader 714 online 1.5 K
 (pr. or punches not on line) \$ 23.3 K

1 TCU \$ 2.1K
 8 tapes LS 4.4K
 1/2 drum 1.4
 1 rd. 1.5
 \$ 9.3

Peripheral:

2 720 printers 500 lpm @ 4.95 9.9 K
 1 punch 1.6
 1 reader 3.5
 \$ 15.0 K
 23.3
 \$ 38.3 K

2 150 lpm. @ 4.55 \$ 9.6 K
 1 punch 1.6 K
 \$ 11.2 K
 7.3
 \$ 20.5 K

650
 12
 1300
 650
 7800
 6600
 19400

550
 8
 4400

17.6
 38.3
 \$ 55.9 Total

20.5
 17.6
 Total \$ 38.1

So \$70, K peripheral & non-CPU
present STRETCH CPU \$70, K
"Relax" ~~cutting~~ to \$40K a possibility? probably not that far.