


Notes taken on Visit to San Jose, June

1
 Steve - Mgr. ^{Mrs. Sec. Hammars}
 J.M. Taylor
 Trigg ^{Noyce?}
 Single element head,
 some "volatile" storage,
 if heads moved,
 - only one access per

ADF 100 files 75ke
 control unit ^{rate}
 - full comb. about half
 are OK 42 arms.
 no. of arms 66 disks
 serial. - binary address

2
 ADF one amplifier in
 serial. -
 84 files -
 Ralph Golub. STRECH.
 40 heads are selected
 at a time

 165 mins STR
 ADF 35 mins
 40 read/write comp. STR
 1 " " " ADF

3
 22 disks - 21 sets of arms.
 odd tracks.
 even "
 extra spaces
 \$20 ea.

66 disks.
 132 files.
 256 tracks STR
 250 " ADF
 + some CE tracks.

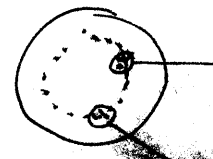
4
 500 b/inch inside track ADF
 450 b/inch STR
 ADF "Z bar" frame
 STR older design

STR best tested only.
 External sync line - belt
 ADF internal motor + pulley
 Can slow down speed
 Echo check - disk ^{Boemghausen} Benikman?
 slide into - narrow read head

5
 reasons for echo check:
 - eliminates readback after write
 (have no ecc or code for
 serial.) -
 Echo check
 301 4 cards per write file
 (120 to 150 cards total)

ADF prod test (level test
 July 15)
 formal test October
 date announcement with 7070
 still under discussion
 2nd STR mobile March '60

6
 local product test will
 do difficult tests - contig, etc.
 Show probs:
 1. head probe tolerance
 2. elec. ampl. tolerance.
 3. intangibles - vibration, etc.
 single probe head - r & w
 fast amplifier - fast read
 bit time.
 to get down to less than
 one bit time.

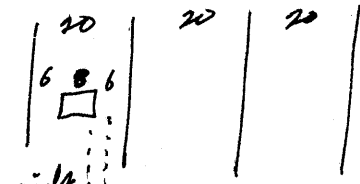

 into read.
 2nd mechanism
 can read.

present plan 7

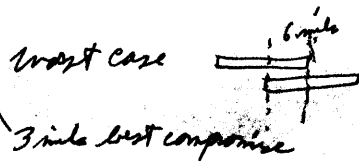
width of track 70 mils

20 thousands centers

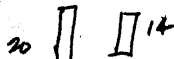
8 mils read probe.



3 mils → can be displaced 3 mils



new plan 8



same red/white

is ± 1.5 mils repeating tolerance.

cannot use replacing heads & recording data - a. 2. rd head.

- circuitry - would be more -

Disk Control Unit: contains circuitry.

WR



show prob mechanical tolerance, - largest single factor (1 bit) if one used - don't have this mechanical skew.

- electronic amplifiers each has different delay, 1.2 μs delay

3 1/2 man months.

double data can go to 1 adv. file gate - cut size in half.

W. Kinler - same cdo.

10

in 2 or 3 weeks they will know amount of skew 2-3 bits? will be more than 1.

- in one month -

at present time people are staterated on ADF -

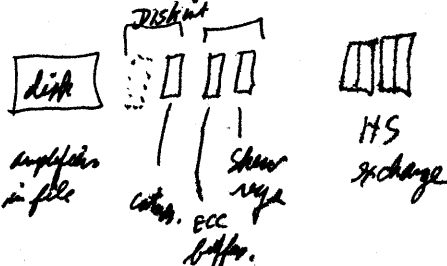
- Time rather than money, \$30M

End of May - file #2 destroyed

1. many disks
2. Commercial announcement 10 files in 1961 - ? some removable
3. 3 Str in '60

11

4. necessary funds will be made available for STR #2 + skew elim.



John K...?

delay not possible -

Bob Martin from plant will be going back -

no longer can build prototypes after this. mid '60

7090 partial system start early '60

12

SHARE - proto type

will not be prod. ready

1st q 1961 first factory info Pat Burke in touch.

2 M C Radon Access File

Jack Parker - 900 rpm

20 heads 20 surf.

small removable file

will go to 10

0.5 sec max access time

15" per sec 2" per sec.

less than \$200 per mo. go

13
100 tracks 20 miles
cable goes to 128 --

Muller's Character file

7 msec max access now
5 msec later.

50 heads later 10 tracks

binary 16 tracks each
- new servo. 32 heads
or (8 tracks 64 heads?)
will try both later

"Red Bay" 14

Don Johnson VLCM project

10 bins 100 pps.

"Walnut" mid 60

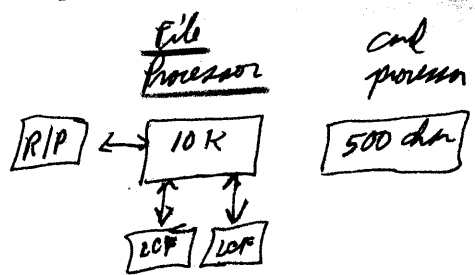
36 tracks 20 miles

70 info tracks

{ 25 to inch heads
50 to 2 tracks

Bob Porter

afternoon Mr. Nelson



~\$2500.

\$1600 for RP, 10K + LCF only



Mr. Glen Nelson: processor

1480. Trs. in processor.

complement of ops.

- op. suppression similar
to 604 (- over units of
addresses)

Notes: B
A
8
4
2
1 101101 ← bit pattern

can change suppression
by setting bit patterns, analog.

10char. (OP) P M N From To
XXX XXX
ADD 6 8
- length from 4 to 8.

Expt
RAAD 3 68- -
00XXXXXX000

21 op codes total.

Large machine: File Processor
12 char. 64 characters
each indexible

{ programs on card processor
will run on File processor

Op	P	M	N	F	T
	mode			XXXX	XXXX

Max size field 19 characters.

20 ns core cycle

7.4 msec for
10 char x 10 char = 20 prod

- can do (A*B)+C → C

- "change addr" goes at
3 times mem cycle rate

Sign B bit over char.

Indexing - addr → IAR

- F
- T
- PC
- IAR
- FR
- TR

8 mem
cycles
to index
160 pps.

load XAR → used for storage

19
Ot & Replace zeros by -
000XXX...

• zero etc as stored in
address given by T & replaced
by characters specified.

More - characters
Strip Input Char - places
Text & Strip CTR instructions
unless

RPL logic Posture Drive Logic.
3100 - 3200 diodes
as 1650 Trs.
Recall a

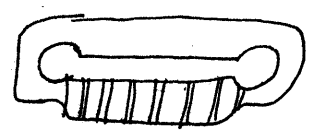
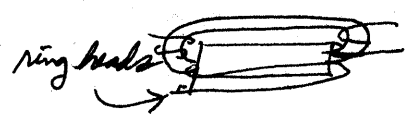
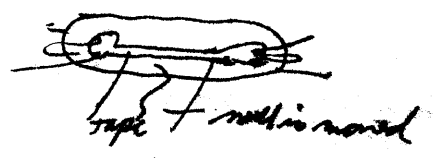
20
small sci computer ~ \$2500.
- file processor plus additions
- paper tape input, Jan '60
- March '60 announced?

present Ramec
card equip.
coupled into sci. processor.
Sci. calc. only with paper
tape can be beat by competitors.
50% faster than CADET

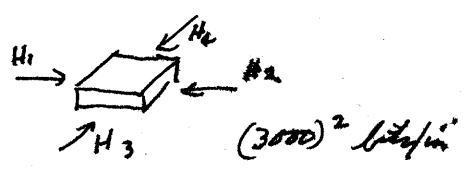
- Same paper tape as CADET
- do 20 K characters use zone bits.

at the ²¹ Basic Level
Basic Tech Denise Tech.
Dr. Bennett Dr. Martin

- 1. {Electrolumina.
Photo-cathodes - logic.
- 2. Mag. sensing equip. (non-mechanical)
- 3. Read only memory.
- 4. Kalvar films, etc.



has been used for writing.
instruction changes.



Al Schryant: 609