

rate of transmission

$$t_I = N_I r$$

$$t_O = N_O r$$

$$t_c = n_c \left(\frac{a}{\text{No. ops/word}} \right) \left(\frac{S_{HW}}{\text{speed of calc.}} \right)$$

~~...~~

(on t_I limit)
 we want $(t_I + t_O) \leq t_c$
 to keep calc from waiting on I/O

$$(N_I + N_O) r \leq n_c a S$$

$$\frac{r}{S} \leq \frac{n_c a}{N_I + N_O} \left(\frac{n_c}{N_I} \right) a$$

x
y
p
p
p
e
...

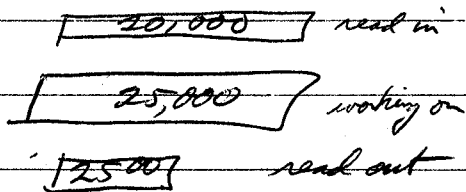
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Hydro: $\frac{n_c}{N_I} \doteq \frac{7}{10}$ $a \doteq 30$ so $\frac{r}{S} \leq 21$

Prison: $\frac{n_c}{N_I} \doteq \frac{1}{8}$ $a = 24$ $\frac{r}{S} \leq 6$

$50 \times 50 \times 70 \text{ mesh} = 50,000 \text{ pts.}$

$\textcircled{1} 8 \text{ values/pt} = 1,600,000 \text{ wds.}$

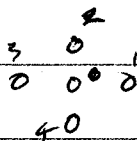
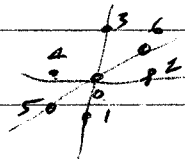
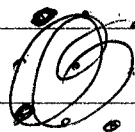


800 iterations

$\frac{25,000}{8} = 3125 \text{ pts in mem at once}$

$\phi' = \phi + w \left[\sum_{i=1}^n C_i \phi_i + S - \phi \right]$

14 moz.



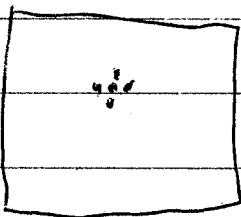
100 wds
4 shifts
1 store

1 CLA
4 adds
1 shift
1 store

5 moz. read in
1 stored
6

1 CLA 1
2 add 2
3 add 3
4 add 4
5 shift ②
6 sub 0
7 Store)

1 Preload & add
2 add
3 add
4 shift (or mag)
5 sub & post



eg. $100 \text{ pts} \times 1 = 100 \text{ wds read in calc } 500 \text{ opns read out } 100 \text{ wds}$

$\frac{100 \text{ wds/pt} \times 500}{500} = 5 \text{ (op times)}$
real time into time