



Tues Aug 20, 1957

Brooks	X Mark Wells
Layton	X Karl Wallack
Johnston	X Bill Wood
Cooke	X Clark
Dave Woods	X
Wootton	
Voorhees	
Kohlsberg	
Sweeney	
Dunnell	
Griffith	

Palm Disc - desire to have presented commercial
problems - so as to increase breadth of L.A. outlook

Dunnell - inclined - no time.

① Factors affecting choice of sample prob

- a) typical & important
- b) 1-8 hrs on Stretch
- c) Easily described
- d) Possible to declassify (or water down)
- e) well understood - numerically
- f) numerical data be available or obtainable

Lazarus - there is no sample prob which is typical. A stat approach must be taken across all probs to get the proper breadth & feeling for the "typical" case.
It is virtually impossible for any one person to suggest alternate ways to do a prob because of the perturbations on other part of the same problem complex. The complex is much too large.

Voorhees - Table of Sample Coding of small parts of prob

Described assumption - LASH writing.

No strong feelings abt this proposal - it is for tentative coding only.
V field of Index Reg should line up with LD part of mantissa

Tues PM

Worlton - SNG - assumed no indexing on SA. always used indirect addr on SA to get indexing.

The equations probably will ^{not} be altered easily (it is felt) in a manner which would ^{not} alter the relative emphasis of the arith operations & control.

Lazarus - SNG is a subroutine embedded in other codes. The matrix of which is ^{very} large complex, and cannot be easily extrapolated from the 704 to the Stretch machine.

It was reported that the largest SNG problem run on the 704 was: J+1=5, I=60, G=25, # iterations unknown, running time = 2 hrs
SNG is a very general code, and therefore probably will remain with us for a long time.

Number size - used halfword on 701 with some trouble
exp underflow gives trouble on 704.

The rate of convergence is controlled by physics - not math - Some experimental work could be done on Stretch to improve conv, but probably not much

15 bit mantissa ok for this prob

Output - usually always as input to another prob

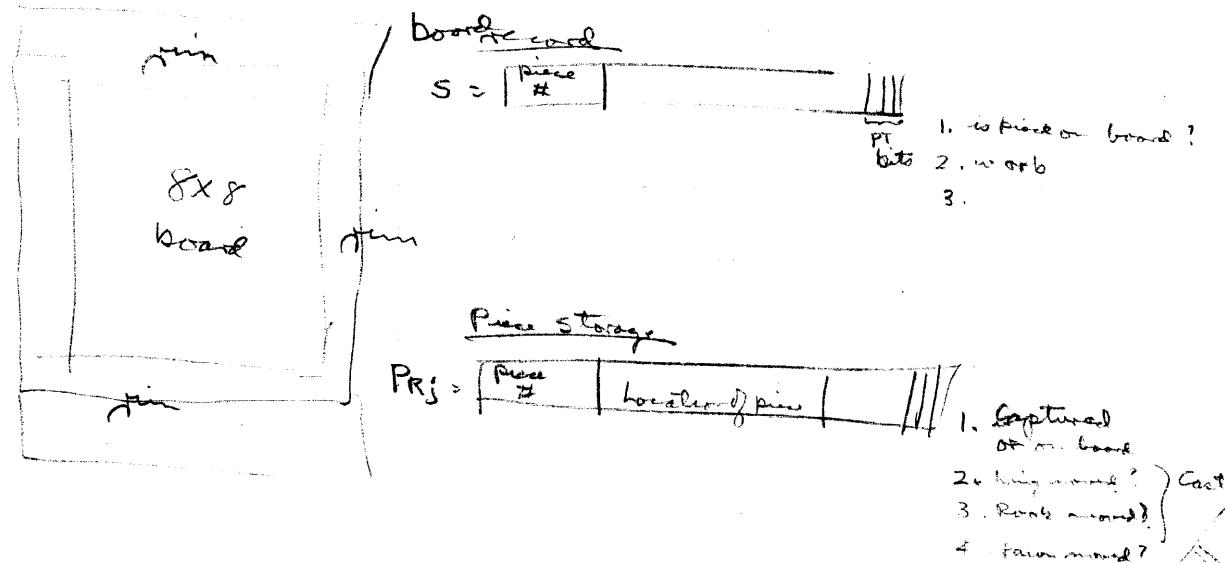
Curves occasionally

Discussion of possibility of presenting examples of control

Sweeney - SNG - control calc of $h(g) + \delta_{gf} \rightarrow S_i(g)$
(Collapsed matrix of cross sections)

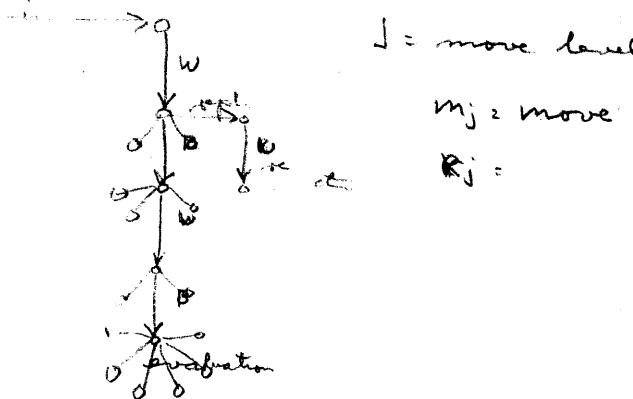
Mark Wells - Chess - 8x8 - pure logic

Predictions of all possible continuations of k moves ($\frac{1}{2}$ wks, $\frac{1}{2}$ blocks)



Each piece is taken as a subroutine

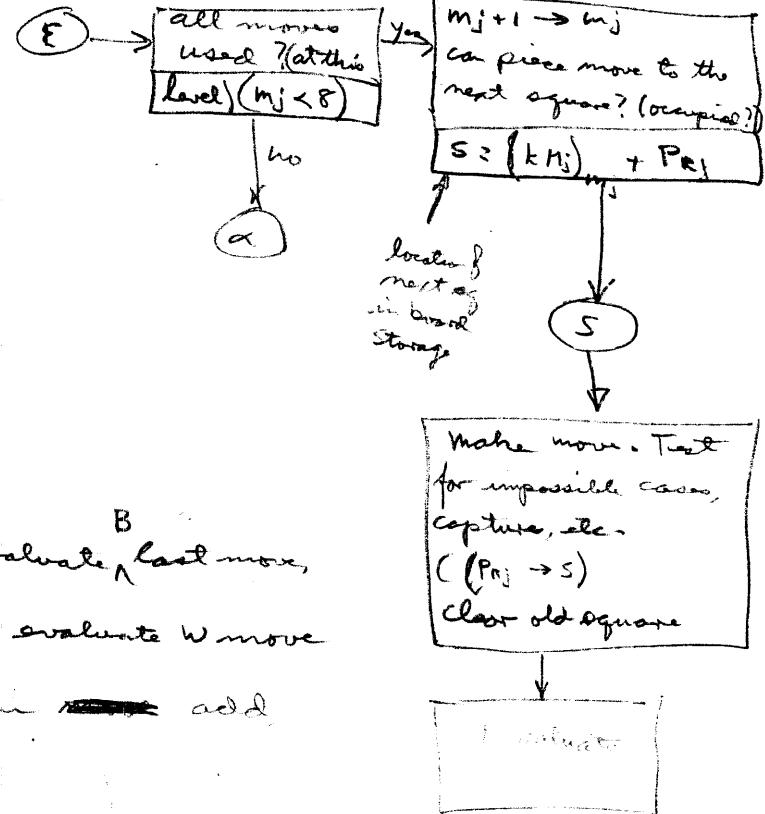
Example: move by wh. Rk.



$m_j = \text{move}$

$R_j =$

Price Storage = P_{R_j}



Evaluate at end of each k^{th} moves, evaluate last move, then back up one more move and evaluate W move etc until back at start of 4. Then ~~add~~ add one move level and repeat

Indirect addressing very valuable (multi-level, too)!

Bit testing is more important!

(6×6 takes on ($k=4$) moves $\therefore 16$ min/move
 8×8 on 704 ($k=7$) $\therefore 16$ min/move)

Non contiguous sets of bits need to be tested!