

JOURNAL OF RECREATIONAL MATHEMATICS

Executive Editor

Harry L. Nelson
4259 Emory Way
Livermore, California 94550

22 Nov 81

Editorial Board

Joseph S. Madachy
4761 Bigger Rd.
Kettering, OH 45440
Editor for Vols. 1-8

John Brunn
Bay City, MI 48706
Solutions Editor

Romuald Cormier
DeKalb, IL 60115
Solutions Editor

Steven Kahan
150-38B Union Tpk.
Flushing, NY 11367
Alphametics Editor

Friend H. Kierstead, Jr.
2504 Fifteenth St.
Cuyahoga Falls, OH 44223
Computer Editor

David A. Klarner
Binghamton, NY 13904

Frank Rubin
59 DeGarmo Hills Road
Wappingers Falls, NY 12590
Contest Editor

Benjamin L. Schwartz
Vienna, VA 22180

Charles W. Trigg
2404 Loring St.
San Diego, CA 92106
Book Review Editor

R. Hyatt,

Dear Bob,

I am enclosing a position which I think exemplifies in a straightforward way a big problem for Blitz in particular and computer chess in general. Position 1. poses no problem to Blitz which finds the winning moves in 2 to 45 seconds depending upon how you look at it. Position 2, however, seems to present, (due to the horizon effect I assume) an unsolvable problem given any reasonable amount of time. A human, on the other hand, finds the second position only slightly harder than the first. Such "iterative"

positions abound in the play of almost any game.

2 ✓

YOUR MOVE: KEG2

BLACK

-	*	-	*	-	*	-	K	*
*	-	P	-	*	-	*	P	
-	*	-	*	K	*	-	*	
*	-	*	-	*	-	*	-	
P	*	-	*	-	*	-	*	
P	-	*	-	*	-	*	-	
-	P	-	*	-	*	-	*	
*	-	*	-	*	-	*	-	

-	*	-	*	-	*	K	*
*	-	R	-	*	-	*	P
-	*	-	*	K	*	-	*
*	-	*	-	*	-	*	-
P	*	-	*	-	*	-	*
P	-	*	-	*	-	*	P
-	P	-	*	-	*	-	*
*	-	*	-	*	-	*	-

WHITE

YOUR MOVE: KEG2

GO

EXPECTED TIME 4:00.

DEPTH	TIME	EVAL	VARIATION
6	0:01	0.000	P-B1+ K-N7 P-B2+ K-N8
7	0:02	2.370	P-B1+ K-N7 R-KR1 K-N6 R-KB1 K-N7 R-B2+ K-R6
8	0:05	2.370	P-B1+ K-N7 R-KP1 K-N6 R-KB1 K-N7 R-B2+ K-R6
9	0:23	0.000	P-B1+ K-N7 R-KR1 K-N6 R-KB1 K-N7 R-KR1
10	0:45	2.452	P-B1+ K-N7 R-KR1 K-N6 K-Q2 K-N7 K-K2 . . .

Have such things been given any treatment in the literature? Or, have you or Bert thought about possible ways of solving such difficulties?

It seems to me that computer play cannot be brought to Grandmaster level until a solution is found.

On another subject, Cray has recently announced specifics on the CRAY-2, 4-processors, 3ns cycle, liquid nitrogen cooled at -200°C. Together with enhancements to Blitz, such a machine would get a couple of additional ply in most positions, over the current version. (Unfortuantely, in positions like the one mentioned above this would be ^{inadequate} help.)

On still another subject, I had a lot of trouble getting Blitz to proceed to the mate in miniature endgame positions, like ^{below, before} the one shown ~~below~~. I discovered that until move number 16 passes, Blitz doesn't find it attractive to advance its King into the fray. I think that a better system should be established for deciding when a position is such that the King needs to fight rather than hide, than just counting the moves. In particular, Set Board should cancel any such criteria as depend on move number.

SF
ENTER BOARD POSITION.
6K//6K///2PPP/2R1R/
D
YOUR MOVE: H
BLACK

- * - * - * K *
* - * - * - * -
- * - * - * K *
* - * - * - * -
- * - * - * - * -
* - * - * - * -
- * P P P * - *
* - R - P - * -
WHITE

Davy
P.S. The problem with S V
not causing Blitz to find
a mate in "n" seems to
be due to the extra
quiescence ply finding
a forced mate. How do I
set the quiescence depth to
zero? //