DER SCHACHCOMPUTERKATALOG 1996

P. Schreiner (ed.)[1]

EuroChess Zentrale
53639 Königswinter, Germany
256 pp. (in German)
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Reviewed by Jaap van den Herik

This booklet is a worthy successor of the previous *Schachcomputerkatalog* (see *ICCA Journal*, Vol. 18, No. 4, p. 231). It starts with an Editorial by Martin Stamer, announcing very much up-to-date information. The booklet contains extensive descriptions of chess computers in almost all possible versions, price lists and information on the most prominent microcomputer chess programmers. It is a joy to read, although the information has only a short life cycle. Knowing this, the 1997 edition is already announced in the Editorial.

ARTICLES PUBLISHED ELSEWHERE

BEST-FIRST MINIMAX SEARCH

R.E. Korf and D.M. Chickering[2]

Los Angeles, California, USA

Artificial Intelligence, Vol. 84, No. 1-2, pp. 299-337

We reproduce the abstract:

"We describe a very simple selective search in algorithm for two-player games, called best-first minimax. It always expands next the node at the end of the expected line of play, which determines the minimax value of the root. It uses the same information as alpha-beta minimax, and takes roughly the same time per node generation. We present an implementation of the algorithm that reduces its space complexity from exponential to linear in the search depth, but at significant time cost. Our actual implementation saves the subtree generated for one move that is still relevant after the player and opponent move, pruning subtrees below moves not chosen by either player. We also show how to efficiently generate a class of incremental random game trees. On uniform random game trees, best-first minimax outperforms alpha-beta, when both algorithms are given the same amount of computation. On random trees with random branching factors, best-first outperforms alpha-beta for shallow depths, but eventually loses at greater depths. We obtain similar results in the game of Othello. Finally, we present a hybrid best-first extension algorithm that combines alpha-beta with best-first minimax, and performs significantly better than alpha-beta in both domains, even at greater depths. In Othello, it beats alpha-beta in two out of three games."

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