Table of Contents 129

TABLE OF CONTENTS

Table of Contents	. 129
The Olympiad (H.J. van den Herik)	. 129
Large Endgame Databases with Limited Memory Space (T.R. Lincke and A. Marzetta)	131
Solving Kalah (G. Irving, J. Donkers, and J.W.H.M. Uiterwijk)	139
Space-Efficient Indexing of Endgame Tables for Chess (E.V. Nalimov, G.M°C. Haworth, and E.A. Heinz)	148
Information for Contributors	163
News, Information, Tournaments, and Reports:	164
The Fifth Computer Olympiad (H.J. van den Herik)	164
SHREDDER wins the 17 th WMCC (T. King)	165
MARVIN wins Awari Tournament (T.R. Lincke and R. van der Goot)	173
GOEMATE wins Go Tournament (N. Wedd)	175
YL wins Lines of Action Tournament (Y. Björnsson)	178
8QP wins Amazons Tournament (P. Hensgens and J.W.H.M. Uiterwijk)	179
HEXY wins Hex Tournament (V. Anshelevich)	181
Yss wins Shogi Tournament (H. Iida)	184
Report on the Computer-Games Worksh/ (J.W.H.M. Uiterwijk)	186
P.CONNERS wins the 10 th Grandmaster Tournament in Lippstadt (U. Lorenz)	188
A One-sided Advanced Chess Match. Part 1: The Games (I. Althöfer)	192
Calendar of Computer-Games Events in 2000-2002	., 198
The Swedish Rating List (T. Karlsson)	
How the ICGA Journal Reaches You	

THE OLYMPIAD

Let us pledge a toast to the fifth Computer Olympiad. It is a joyful occasion that the Olympiad has been revived and that there are now discussions on how to broaden its scope. Yet, some purists may query the name Olympiad, since the origin goes back to the Olympic Games. The ancient Greeks coined the Olympiad as the four-year interval between the celebrations of the games. Later on, the notion was used, and still is, for the celebration itself.

Be that as it may, as early as in 1927 the chess world adopted the popular name Olympiad for their FIDE World Team Championships, which were usually held at two-year intervals. There have been several attempts to link Chess with the Olympic Games; the first was in Stockholm, Sweden in 1912 and the last in Sydney, Australia in 2000. In 1912 (and also in Paris in 1924) the chess world was not prepared to distinguish between amateurs and professionals. In 2000, some demonstration games of two top Grandmasters were played. However, neither in the circles of Antonio Samaranch, nor in those of Kirsan Ilyumzhinov was there much enthusiasm for Chess as Olympic Game. So, now both groups are waiting to see what their leaders decide for the future.

Obviously, the notion 'Olympiad' has a magic sound. Therefore, the games community was grateful to David Levy when he launched the first Computer Olympiad in Park Lane Hotel in London, 1989. Sixteen games competed and Chess was only one of them. This Olympiad was as great a success comparable to the first Chess Olympiad.

Although there was but one year's interval, the next Computer Olympiad in 1990 was a worthy successor. Competitions were held for fourteen games, new participants being Nine-Men's Morris and Qubic. These two games retained the status of Olympic Games only for two years, when Qubic was solved (for insiders: solved again) and Nine-Men's Morris followed suit somewhat later. In the Olympiads of Maastricht (1991) and London (1992) thirteen games competed, with one newcomer in London: Ginrummy. Thereafter the energy to organize such an event dwindled, mainly because it was difficult to find major sponsors interested in computer games with cognitive processes. This was embarrassing for the competitors and the organizers, but it looked like the tide had turned off further development.

^t The games were: Awari, Backgammon, Bridge, Chess, Chinese Chess, Connect-Four, Dominoes, 8x8 Draughts (also called Checkers), 10x10 Draughts, 9x9 Go, 19x19 Go, Go (Wei-Ch'i), Go-Moku, Renju, Reversi (Othello), and Scrabble.

Meanwhile, the Mind Sports Olympiad (MSO) proved to be quite successful. The MSO established itself as an Olympiad for talented people, who were (very) skilled players of connection games such as Hex and Twixt as well as strategic games such as cards games, Chess and Kalah.

Apparently, in the year 2000 everything turned out for the best. First, the *ICGA Journal* was established as a successor of the *ICCA Journal*, encouraging researchers to publish their results over a broad spectrum of games. Second, the organizers of the MSO and of the new uniform platform World Microcomputer Chess Championship suffered so many setbacks that they shifted their attention towards a fifth Computer Olympiad, including the 17th World Microcomputer Chess Championship. Therefore, this Olympiad was announced rather late, so that there were only contests in seven games. Even so, four games were newcomers, viz. Amazons, Hex, Lines of Action, and Shogi (Japanese chess).

Over the five Computer Olympiads we have seen a number of 23 games in total. Four of them have been solved so far (Connect-Four, Qubic, Go-Moku, and Nine-Men's Morris); two are on the list of games to be solved soon (Awari and Renju). Of the seventeen remaining games, I expect four to be solved (Othello, Hex, Lines of Action, Checkers) in the next decade if students and researchers continue their persistent research work.

This issue of the Journal is intended to encourage researchers in two respects. First, by providing a tournament-by-tournament account of the fifth Computer Olympiad. Second, by the scientific part that aims at solving games. For Awari and Chess the focus is on subgames; for several mancala games the objective is to make an inventory of the distinct configurations solved, including the game of Kalah. Several new techniques have emerged from these research projects. In passing we note that in Chess the subgames are still endgames, but in Awari the 35-, 36- and 37- stone databases discussed can hardly be called endgame databases, since the whole game contains 48 stones. So, in Awari a relatively small gap remains to be bridged. Here too, the competition is open. This means that the *ICGA Journal* is very eager to hear about the research progress of the groups in Zürich, Switzerland and Edmonton, Alberta. As Editor I hope that the sixth Olympiad will be held in 2001 and that it will be the last to include Awari. This might be a bit optimistic, but should not be impossible.

Finally, I would like to congratulate Stefan Meyer-Kahlen on the prolongation of SHREDDER's World Microcomputer Chess Championship. As we understand, the title prolongation and the way the program arrived at this result fulfilled the author's ambitions and inspired him to challenge World Champion Garry Kasparov to a match. With bated breath we are waiting to see what happens after the Kasparov-Kramnik match. Will SHREDDER be ready for the top?

Jaap van den Herik

ICGA Journal readers may be interested to know that information on our publications is available on the Internet. Our homepage can be reached by http://www.dcs.qmw.ac.uk/~icca/journal.htm

A complete list of all articles, notes, and literature reviews published in the *ICCA Journal* and the *ICGA Journal* is available on the Internet at http://www.dcs.qmw.ac.uk/~icca/toc.htm