TABLE OF CONTENTS

SOME REALIZED BREAKTHROUGHS

In the world of cyclists there used to be a famous saying: "Quality has wings". In fact, this holds for any sport and even for the games in the Computer Olympiad, where we saw STEENVRETER (Erik van der Werf) winning the competition in the 9x9 Go tournament. The expected breakthrough by MOGO (Sylvain Gelly and Yizao Wang) was restricted to 19x19 Go. The real breakthrough was not the application but the underlying methods, consisting of two elements. The UCT algorithm in combination with a Monte-Carlo search technique constitutes the new idea. Four persons are to be recognized here: Brügmann and Bouzy for introducing Monte-Carlo techniques into the computer-Go programming world in the 1990s and Kocsis and Szepesvári for the development of the UCT algorithm in 2005. The combination of both techniques is powerful. It has a breakthrough time of only two years.

In Reykjavik 2005, we had another breakthrough which we then called a revolution. ZAPPA (Anthony Cozzie) and FRUIT (Fabien Letouzey) took over the hegemony of JUNIOR and SHREDDER. For a while it looked as if the computer-chess world had two successors, which would have their own fight in the years to come. However, this turned out to be far from the truth. In Turin 2006, we saw that JUNIOR and SHREDDER were back in the race, in particular JUNIOR by winning the world title. FRUIT did not participate then and ZAPPA ended up in an unexpected fourth place. The third place in Turin went to Vasik Rajlich's program RAJLICH. As a Tournament Director I was privileged to talk to him on the pairing in relation to the Swiss system, on the elimination of a team, on his career, and on his expectations. From all conversations it was clear that Vasik was a very motivated, self-driven person who did not enjoy finishing in third place in his first appearance on the world scene. He would like to be the best.

However, for being the best, you have to work hard, you have to be motivated, you have to be talented, you have to attract talented collaborators, and you have to be lucky. Creating your own setting is an important part of the way that ultimately leads to success. Vasik Rajlich returned from the USA to Europe and set his goal: to

become the best among the computer-chess programmers. This is really a challenge. Here I would like to state that our community has many talented contenders. To write a world-championship chess program is a sign of talent combined with persistence and deep understanding. In Turin 2006, Vasik Rajlich was knocking on the door. In Amsterdam 2007, the young Czech programmer realized his breakthrough.

For the insiders it was not a surprise. Many insiders will remember what happened to DEEP BLUE in Hong Kong 1995 where FRITZ took full advantage out of the few chances offered to it. That unexpected breakthrough by FRITZ in 1995 ultimately led to the 4-2 victory in 2006 by DEEP FRITZ 10 over the human World Champion Kramnik (see *ICGA Journal*, Vol. 29, No. 4, pp. 208-213), with special attention to game 6 (showing the new idea 10. Re3, 11. Rg3). The clear winner of all these developments is computer chess in general, or let me broaden the area, the Computer Games World (see the introduction of Checking Life-and-Death Problems in Go on p. 67 of this issue).

Let us now return to RYBKA's performance. In Turin 2006, Rajlich's program lost to SHREDDER, and finished on equal footing (second and third) with the former World Champion. For Vasik it was a disappointing experience not to win the "Shannon horse". The report in this issue is a combination of writings by Jeroen Noomen, Jos Uiterwijk, and Jaap van den Herik. From Jeroen Noomen's contribution I adopt the performances by RYBKA in the period 2006-2007 as a proof of the realized breakthrough. The signs are overwhelming and the results are in accordance with the expectations. So, with much pleasure the Editor congratulates Vasik with his first World Computer Chess title. Below we mention for RYBKA the following results after Turin 2006.

NK Leiden 2006   : 1st place 9 out of 9
Paderborn 2006   : 1st place 6.5 out of 7
CCT9 2007   : 1st place 6 out of 7 (2 draws)
ICT Leiden 2007   : 1st place 7.5 out of 9 (3 draws)
and now
WCCC 2007   : 1st place 10 out of 11 (2 draws)

In the last five tournaments RYBKA scored 39 out of 43, was undefeated, and played only eight draws. A score of 90.7 per cent. The ICGA community is proud of such a World Champion.

Jaap van den Herik

WELCOME AND FAREWELL

The composition and production of the *ICGA Journal* is an interesting and laborious task, which can only be fulfilled by the excellent support of the Editorial Board. When I took up the Editorship in 1983, I was privileged to have the help of the late Professor Bob Herschberg and Professor Tony Marsland (as Associate Editors) and Professor Monty Newborn (as ICCA President and since 1986 as Associate Editor). The professors Marsland and Newborn served the Journal for more than twenty years. They now step down to give new blood the opportunity to take their place. In one of the next issues we will provide an overview of their computer-chess activities and their services to our community. The Editorial Board and all other ICGA officers would like to thank them for the smooth cooperation over many years.

The same Board and officers are grateful to be able to welcome Professor Xinhe Xu (Northeastern University, China) to join the Editorial Board. We expect to cooperate equally well with Professor Xinhe, who we know as the driving force of the ICGA 2008 events (the 16th WCCC, the 13th Computer Olympiad, and the CG 2008).

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