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GO FOR A BREAKTHROUGH

With much pleasure I would like to congratulate a large team of French researchers that in a combined effort (cooperatively as well as competitively) achieved a milestone in the world of computer Go. Stories of successes are always interwoven with long lists of names, and the breakthrough in Go is no exception. It is hard to make an accurate record of the variety of contributions over the years. For me, the first step in the "breakthrough" direction was made by Bruno Bouzy when he suggested to apply Monte-Carlo search in competitive Go programs. In his habilitation thesis, he successfully defended his position as an advocate for Monte-Carlo search. Even more important is that he had many successors.

In 2006, Rémi Coulom surprised the Go community in Turin with his new findings at the conference, and with his implementations in the 9x9 and 19x19 tournaments. In the same year, a team in Paris started to study the game of Go in combination with the UCT algorithm and Monte-Carlo search.

A descendent of the French research group – he did his M.Sc. with Bruno Bouzy as supervisor – was Guillaume Chaslot who went to Maastricht to work in the GoForGo project. He brought with him the ideas developed by Bruno and himself, and refined them into the now established Monte-Carlo Tree Search method (MCTS).

From Maastricht, Guillaume strengthened the ties with the MoGo research group in Paris[1]. It became a success. In Amsterdam 2007, MOGO won the 19x19 competition and landed second in the 9x9 tournament (after STEENVRETER by Erik van der Werf). For 2008, the signs were clear, all over the world there were activities, publications, and interesting research results.

In this issue a large team of authors describe the Human-Computer Go Revolution 2008. It is a fascinating story described in four sections and the end of the development is not in sight yet. The main breakthrough was achieved by the French-Dutch combination of (1) implemented ideas (as in MOGO) and (2) supply of computer power (as by the supercomputer Huygens). So, the new name of the program became MOGO TITAN (a courtesy

[1] The members of MOGO development team are: Jean-Yves Audibert, Guillaume Chaslot, Christophe Fiter, Sylvain Gelly, Jean-Baptiste Hoock, Remi Munos, Julien Perez, Arpad Rimmel, Olivier Teytaud, Yizao Wang, and Zigin Yu. Other contributions are by: Vincent Danjean, Thomas Herault, Georges Bolsilva, and David Silver.

to Christian Huygens who discovered the moon around Saturn, which he called Titan). The computer was provided by the Dutch research organisation NCF[2] in cooperation with SARA[3].

On August 7, 2008 an official 9-stones handicap game was played between MOGO TITAN and Kim Myungwan, an 8 dan professional. MOGO TITAN won and this was the first time that a computer program (with a handicap of 9, the maximum) won a game in a direct encounter with a professional Go player of high calibre. From August 7, the challenge was to improve the number of handicap stones. After the game, Kim Myungwan stated: "it would even be difficult with eight stones". So, Rémi Coulom took up that challenge and defeated Kaori Aoba, a 4 dan professional, in an 8-stones handicap game. Therefore MOGO TITAN challenged Kim Myungwan again for a 7-stones handicap match. The computer played excellently, but lost in an advantageous endgame. We may thus conclude that still some work in MCTS has to be done.

The results in the human-computer Go matches inspired David Fotland to come back in the arena with a new version of his program MANY FACES OF GO. This time he brought a Champion Face to Beijing. Although Fotland had to suffer from two losses in the 9x9 tournament by MOGO, his program won both competitions (i.e., 9x9 and 19x19). A report on this breathtaking tournament will be published in the December issue of the Journal. Meanwhile the Editorial Board congratulates David Fotland with his successes and looks forward to seeing all the strong Go Programs in Pamplona, Spain for the next breakthrough.

Jaap van den Herik

Progress in the Swedish Rating List

As soon as a breakthrough occurs (such as has happened in Go), the usual progress is somewhat suppressed. Nevertheless, we would like to inform our readers that

(1) the SSDF has upgraded its 'standard hardware' to Intel Core 2 Quad 6600, 2.4 GHz with 2GB of RAM;
(2) the hardware has added an average of 120 rating points to the performance of the top engines;
(3) DEEP RYBKA 3 on the Quad 6600 is clearly leading the list.

G. Haworth

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The credits of the photographs in this issue are to: Reijer Grimbergen, Joke Hellemons, and Hans van der Zijden.

[2] NCF stands for National Computer Facilities.
[3] SARA Computing and Network Services.