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## INNOVATIVE IDEAS

The space of innovative ideas is multi-dimensional. Each dimension represents a criterion along which the degree of novelty is measured. There are technological axes and societal axes. So, the weighted combination of new techniques and societal impact may be assessed for its novelty. The novelty scale is wide. For instance, a statement can be a novelty, even if it is an old statement; also, a solution of an established problem can be a novelty.

A telling example of an old idea that is considered as an innovative idea is Nigel Short's proposal to abandon the chess rule that stalemate is a draw (see <http://en.chessbase.com/post/stalemate-the-long-and-the-short-of-it-2>). Short evoked a rigorous debate with his statement. The games world now seems to be split into progressive chess (grand)masters defending the pros and conservative aficionados of the game representing the cons. The latter believe that a stalemate deserves a high reward, namely half a point.

The proposed change of the rule will give our community a new and different game. For some, the question is: should we actually follow the draughts and checker players by declaring stalemate positions as lost? For others the question is: why should we deprive the game of chess from its beauty that so frequently is exploited by composers of chess problems and chess studies, sometimes in combination with underpromotion or fairy-chess pieces. Meanwhile your Editor believes that the computer-chess world may be encouraged to investigate the consequences. For example, what percentage of positions in, say, a 6-man tablebase that are currently drawn, would be a win under Nigel's proposed rule change? The *ICGA Journal* invites contributions on this topic and on related topics.

In the current issue we focus on innovative ideas with respect to game-playing and game-solving. No fewer than three articles and four notes bring us a plethora of innovative ideas. Below I would like to honour nine authors of seven contributions for their innovative ideas.

Cameron Browne focusses on efficient encoding of a range of games by applying fast bitwise-parallel algorithms for common game-related operations. The main contribution is that he connects many different games by proposing clever implementations for different games, using bitboards for filter, query, and update methods. The article is a joy to read.

Wojciech Jaśkowski shows that learning  $n$ -tuple networks is more effective if it involves a large number of systematically placed short, straight  $n$ -tuples. This is an innovative idea with respect to the old idea of placing  $n$ -tuples that involves a small number of long, snake-shaped board location sequences. Obviously, the innovative idea is worth to be probed. The results are convincing and we look forward to the power of the new Othello position evaluation, with the eye on solving the game.

Jos Uiterwijk performs a new step in knowledge-based solving of Domineering boards. Through the years he has concentrated on different ideas and kept working on Solving Games. In the past he has cooperated with

Victor Allis, Jaap van den Herik, and Dennis Breuker. All three have left Maastricht, but Jos continued to develop new ideas by which he is able to describe the impact of safe moves on perfectly solving (new) domineering boards. With the help of nine definitions only he developed an innovative knowledge framework that is able to arrive at perfect assessments of difficult game positions. A great performance and also food for thought.

Mark Watkins shows us that brilliant ideas are to be found on the squared millimeter. He took the game of Losing Chess (also called Give Away Chess). He proved the outcome of the game and consequently he investigated through which opening moves this outcome was reachable. Underway to his result he faced many obstacles to be solved. He did so with ingenuity. Well done.

Christian Posthoff and Bernd Steinbach teach us how to Solve a Sudoku. They introduced a new representation and showed its application on the Sudoku operations meant for row, column, and subsquare. The essence is a ternary vector (1, 0, -) to be considered as a set of binary vectors (see the article). The representation is very fit for a computer but a human being will neither adopt nor adapt the method. Yet, for the Sudoku world their method is an asset.

Guy Haworth continues his series of Chess Endgame News. It is always interesting and innovative. This time, the 5-valued scale for evaluating positions in the context of the FIDE 50-move rule are investigated. It is a specialty in the computer community. At the end of the note the main contributors to the findings are listed. They are respected researchers and a grandmaster. I would also like to thank them for their contribution: Ronald de Man, Oswaldo Caderas, Harold van der Heijden, John Nunn, Emil Vlasán, Eiko Bleicher, and John Tamplin.

Jan van Rijn and Jonathan Vis investigate new interesting patterns in the game of Jungle Chess (also called Dou Shou Qi). They implemented an engine for analysing the game. Moreover, they started to construct tablebases for this game which resulted in new obstacles. It seems that more innovative ideas are necessary to solve this game. The way may be long, but their enthusiasm is promising.

This issue is a clear exception of our policy of splitting the contents into a part for scientific articles and a part for news combined with tournament reports. However, we believe that our Journal can flourish best by innovative ideas. They have been given preference and are expected to be a source of inspiration for the readers.

Jaap van den Herik



The Winners of the Theo van der Storm Cup (May 18, 2014).

F.l.t.r.: Richard Pijl (THE BARON), Tessa Pijl (operator ARASAN), and Fons Bluemers (DIRTY).

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