6-man chess solved

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NOTES

6-MAN CHESS SOLVED

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ABSTRACT

Eugene Nalimov has completed the computation of a set of endgame tables for 6-man chess, and independently, Marc Bourzutschky has completed tables for 3-3 chess and for 4-2 chess where Black is not just 'KP'. The ICGA salutes both achievements and looks ahead.

The silent attachment of the statistics file kppkpp.tbs to an August 9th 2005 email signaled to the author that Eugene Nalimov had 'completed'[2,3] the Depth to Mate (DTM) endgames tables (EGTs) for 6-man Western Chess. The EGTs are being made available via Rob Hyatt's ftp site (2005) which continues to download 24×7 at 70Mbits/sec. Enquiries on the EGTs can be made via Eiko Bleicher's site (2005).

Meanwhile, Marc Bourzutschky has been using Johan de Koning's *FEG* software to generate DTM EGTs in a different format and specific to CHESSMASTER. He completed the 3-3 EGTs in March 2005 and has also completed the 4-2 EGTs where Black is not 'KP'.

Marc notes that there is a 1-1 mapping from the FEG format to Nalimov's format and has indeed converted his KPPKPP EGT to this format. This raises the prospect of FEG EGTs being validated, which they have not been to date, by comparison with Nalimov EGTs. Further, Nalimov EGTs may now be checked against FEG EGTs, a procedure more independent of the original EGT-generation than is currently used.

In a computation completed in 2004, John Tamplin exercised Marc's *gtbgen* evolution of Nalimov's code to create DTC/Z and DTZ$_{50}$[4] EGTs for all pawnless 6-man endgames (Bourzutschky, Tamplin and Haworth, 2005). The effect of the 50-move drawing rule, and some exemplar affected winning lines are noted.

A challenge is now to mine this EGT data for higher-grade information: Rafael Andrist's WILHELM and *gtbgen* are to hand. Eiko Bleicher has begun a review of all 6-man maxDTM and mzug positions. The ICGA website (2005) carries summary information about the endgames in *Western Chess Endgames*. KRNKNN retains the maxDTC/M records: Karrer's (2000) analysis of the famous Kasparov-World KQPKQP endgame (Marko and Haworth, 1999) proves correct despite the P=Q constraint he had to adopt then.

The ICGA congratulates and thanks Eugene, Johan, Marc, John, Rob, Eiko, and Rafael for their dedicated and enduring commitment to the endgame domain and their contributions to our understanding of it.

References

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[2] The 5-1 EGTs have not been computed, it being assumed that they are not currently required.
[3] It is assumed that neither side has any castling rights. However, a few 4-6-man studies include castling moves and Tim Krabbé notes the 8-man Pupols-Meyers (1976) position 7r/4k3/P7/8/8/5R2/1r3P2/R3K3 w: 40. O-O-O.
[4] DTC ≡ Depth to Conversion, DTZ ≡ Depth to move-count-zeroing move, DTZ$_{50}$ recognises the 50-move rule.