

SELECTIVE SEARCH 165

THE COMPUTER CHESS MAGAZINE!

Est. 1985

May-Jun-Jul 2013

Published by Eric Hallsworth

£4.25

SPECTATORS AT
THE RECENT
**WORLD
CHESS
CANDIDATES
TOURNAMENT**
IN LONDON
ENJOYING THE
BENEFITS OF
THE
**COMPUTER
CHESS AGE!**



IN THIS ISSUE !

- 2 **ADVERTISING**
- 3 **LATEST NEWS, RESULTS + NEW PRODUCTS** FROM AROUND THE WORLD, INCL. **LATEST SOFTWARE VERSION LISTING - ERIC ON YOUTUBE... AND ON THE MOVE!** - **PETER GRAYSON's 'OLD' SPEED v KNOWLEDGE ENGINE TESTING!** - **NEWS FROM FRANK HOLT - MORE CLONING REVEALED - INTERESTING INTERNET TOURNAMENT RESULTS**
- 8 **THE MATCH: RYBKA 64-CORE CLUSTER v HOUDINI 16-CORE PC!**
 - **COMMENTS, RESULT AND GAMES**
- 14 **WORLD CHAMPIONSHIP CANDIDATES IN LONDON**
 - **NEW EXPERIENCES FOR SPECTATORS, COMPUTER INVOLVEMENT, REMARKS, RESULT AND PHOTOS**
- 18 **THE SSDF**
 - **MY APPRECIATION, PLUS THEIR LATEST RATING LIST**
- 19 **iPads, iPhones and.... HIARCS v STOCKFISH!**
- 27 **CHESS ROBOTS at LARGE**
 - **CHESSKA v KUKA GAMES FROM THEIR WORLD ROBOT FINAL**
- 30 **The Mephisto WONDERMACHINE vs RESURRECTION2 RYBKA**
 - **GAMES 7-10 AS WE COMPLETE STEVE BLINCOE's EXCITING MATCH... PLUS STEVE's WEBSITE**
- 39 **LATEST SELECTIVE SEARCH, CCRL & CEGT DEDICATED & PC RATINGS**

- **SUBSCRIBE NOW** to get REGULAR COPIES of the LATEST ISSUE and RATING LISTS mailed to you as soon as they come out!
- **£8.50** for last 2 ISSUES in UK. For EUROPE addresses **£12.50**, elsewhere **£14**. Send Cheque, Cash or use PayPal from my website!
- **FOREIGN PAYMENTS:** CHEQUES must be in POUNDS STERLING. If you send CASH it should be registered, best to use PayPal.
- **PUBLICATION DATES...** 166: August 2013.
- **ARTICLES, REVIEWS, or GAMES** sent in by Readers, Distributors, and Programmers etc. are always welcome.

SELECTIVE SEARCH is produced by **ERIC HALLSWORTH**

CORRESPONDENCE and SUBSCRIPTIONS please to:

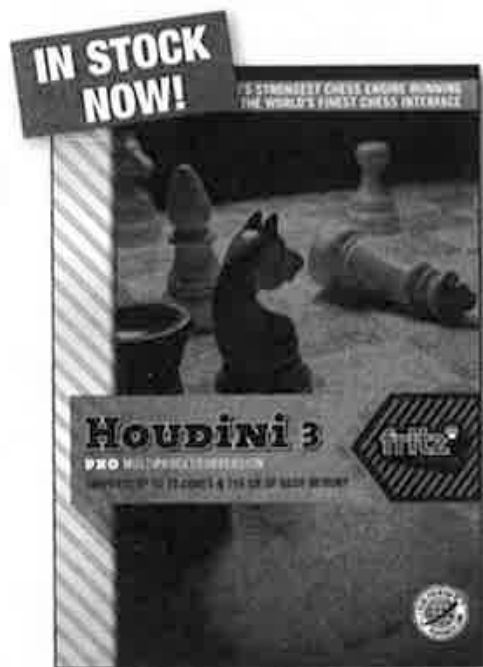
Eric Hallsworth, 45 Stretham Road, Wilburton, Cambs CB6 3RX
from end of May, new address: 147 Heath Drive, Ware, Herts SG12 0RL.

E-MAIL address: erichallsworth@gmail.com

The SELECTIVE SEARCH Website: www.elhchess.demon.co.uk



Houdini 3



Give in to the magic! Only two years ago the Houdini chess engine stormed to the head of the ranking list of engines and since then has been the uncontested number one in the world. The secret of its success: with Houdini chess becomes pure magic! Because the engine of Belgian programmer Robert Houdart can find tricks, even in places where the other engines can make no further progress.

The new version, Houdini 3, goes even further than that and offers yet another increase in playing strength of 50 Elo points thanks to a host improvements in points of detail. These improvements manifest themselves in different ways in the various phases of the game. Thus, in the opening Houdini 3 demonstrates an even more subtle understanding of space and activity. In the middlegame the program spots even more quickly whenever pieces are in danger of being dominated and in the endgame proper evaluations and solutions to problems are reached much faster thanks

to a quicker and deeper search. During the course of this new development and fine tuning of the engine Houdini played, believe it or not, 10 million test games!

At the same time Houdini 3 offers in its "Tactical mode" a new function, which allows the focus of the analysis to be targeted specifically at tactical ideas and motifs. This function promises extra returns when it comes to the analysis of sharp positions and also for the solving of tactical exercises.

Houdini 3 is supplied with the latest Fritz 13 program interface and thus puts at your disposition all the training and analysis functions of Fritz 13. Included in the package are membership of the chess server playchess.com (12 months classic membership) and online access to the world's largest analysis database "Let's Check"* and the ChessBase Engine-Cloud. Houdini 3 exists as two versions, either "Standard" or "Pro". Be aware: the "Standard" version is in its own right a multi-processor version, because the engine can already make use of 6 cores and a maximum of 4 GB main memory. Yet from the point of view of price it costs less than the "deep" versions of other leading programs. Houdini Pro, on the other hand, is the correct version for high-end users with powerful hardware. The engine can use up to 32 cores and 256 GB main memory and thus develop its maximum calculating power and playing strength.



👁 Houdini 3- Standard multiprocessor version

Supports up to 6 cores and 4 GB of hash. 12 months playchess.com (classic)

£64.95

👁 Houdini 3- Pro multiprocessor version

Supports up to 32 cores and 256 GB of hash. 12 months playchess.com (classic)

£79.95

System requirements:

Minimum: Pentium III 1 GHz, 1 GB RAM, Windows Vista, XP (Service Pack 3), DirectX9 graphics card with 256 MB RAM, DVD-ROM drive, Windows Media Player 9 and Internet access to activate the program, Playchess.com, Let's Check, Engine Cloud and updates.

Recommended: PC Intel Core i7, 2.8 GHz, 4 GB RAM, Windows 7 or Windows 8, DirectX10 graphics card (or compatible) with 512 MB RAM or more, 100% DirectX10 compatible sound card, Windows Media Player 11, DVD ROM drive and Internet access to activate the program, Playchess.com, Let's Check, Engine Cloud and updates.

*Access to "Let's Check" till 31.12.2015

NEWS AND RESULTS

KEEPING YOU UP-TO-DATE IN THE COMPUTER CHESS WORLD!

Welcome to another issue of **Selective Search**... no. 165. If your sub. is due for renewal, **please** subscribe again! There will be 1 more issues of the magazine, which will close down with no. 166.

The label on your envelope shows the number of the last issue you will receive of your current subscription, so it's easy to check that, and also you can make sure it's been updated after you've made a renewal payment!

*I cannot take credit card renewals now, but I have organised a **PayPal** account for myself (erichallsworth@gmail.com). You can access it at my **website** and renew your sub. quite easily.*

PAYING YOUR SUBSCRIPTION

Subscriptions can be paid...

- By **cheque**! I know that cheques can be quite difficult for my readers *abroad* as you have to add an amount of around £10 to include the Bank charges in the UK which apply to foreign cheques even when made out in £ sterling!
- You can send **cash** through the post but you really should register it.
- By **PayPal**. If you have a PayPal account you can use it to send your subscription to [erichallsworth@gmail.com]. Even easier, go to my website **www.elhchess.demon.co.uk** and click on Pay Subscription by PayPal, follow the instructions, then click on the 'Donate' button!

OUTSTANDING ARTICLES AND THINGS TO DO!

- Some while ago **Augusto Perez** sent me the games of his most recent 10 game Match: the Mephisto **Milano** v Saitek **Chess Challenger**
- I've still not covered Rybka's win at the **12th. ICT Leiden** Tournament!
- A list of my **Computer Chess Sources**. It will mostly be addresses for Chess/Computer Chess Websites and Forums where you can find out what's new, check for latest versions and upgrades, get up-to-date Ratings for the commercial engines, strong freebies and new engines, and keep updated with what's new on DVD where there is some great chess teaching for viewing on your PC, get latest Book releases

info and lists, and collect important match and tournament Chess results!

- **Mephisto London 68030 v Tasc R30** match being run by Steve Blincoe and Harvey Williamson during May.

Issue **166** may need to be a **a bumper issue** - 40, 44 or 48 pages - to squeeze all that and any other news coming in, but I'll make sure everything gets covered one way or another.

I am still toying with the idea of producing something like a 48 page issue for £6.50/£7.50, perhaps twice a year. This could keep everyone updated on all the essential new engines, software, major tournaments and matches, with some games coverage. My thanks to those who have responded positively to this idea, I've appreciated your vote of confidence and encouragement. Unfortunately, so far, there's only 22 of you! I'll make a final decision to let you know in issue 166 if this will happen, but financially it would really need something closer to 100 people to make all the work worthwhile, which doesn't seem likely as things stand.

ERIC ON YOUTUBE!

FAME AT LAST? Not really, but in 1993 I did a film for the **Grandmaster Video Magazine** series, no.8 to be precise. It was titled "*Eric Hallsworth Surveys the Chess Computer Scene*", and someone (Ed Schroder perhaps?) has put it on **YouTube**!

Here's the link if you fancy seeing what I thought of things (and looked like with a bit of hair on my head) 20 years ago!

<http://www.youtube.com/watch?v=74xHd4AyyFc>

ON THE MOVE?!

Finally Chris and I will be moving in the next month or so. Chris's MS has continued to worsen and we have needed to find a bungalow or ground floor accommodation that we can afford to rent. We believe we are close to having this sorted out, thanks to our good

friends Mark & Lorraine Uniacke, so the next issue will be prepared and sent from our new home! Our new address, from the end of May, will be:

147 Heath Drive, Ware, Herts SG12 0RL

My e-mail address should stay the same (erichallsworth@gmail.com), but may not be available for a while... you know how it can be, organising things with Banks, BT, Sky etc. I will organise 3 months of mail forwarding so that readers sending something to our old address by mistake wont need to worry, it will get to us eventually!

COMPUTER CHESS: NEWS & NEW PRODUCTS!

NEW SOFTWARE ENGINES:

- Nothing New again this time

SOME LATEST VERSIONS:

Here is a list of many of the top engine's latest versions at the time of going to press and in alphabetic order:

- Bouquet 1.6
- Chiron 1.5 (only 30 Elo better than 1.1)
- Crafty 23.5
- Critter 1.6a (may not be better than 1.4)
- Deep Saros 3.5 (but site currently closed down)
- Fritz 13
- Gull Chess II-JA
- Hiarcs 14 + Hiarcs Chess Explorer 1.4
- Houdini 3
- Junior 13.3
- Komodo 5 (SP only)
- Naum 4.2 (final version, work on it finished)
- Pro Deo 1.85
- Protector 1.5.0-JA
- Rybka 4.1
- Shredder 12
- Stockfish 2.3.1 (may not be better than 2.2.2)
- Strelka 5.5 (SP only)
- Toga 3.0-JA

COMPUTER CHESS: RESULTS

Things continue to be rather quiet! There are a few Tournaments being run on the Internet, which are quite interesting though sometimes the choice of participating engines is a bit

disappointing. Nevertheless these are better than nothing!

Before them though, some latest results from **Peter Grayson** and **Frank Holt**.

PETER GRAYSON + ENGINE TESTING...

Peter's recent house move reduced his testing somewhat, though BT has finally installed his new phone and therefore Broadband, so I recently got an e-mail from him. I've taken the liberty of extracting the really interesting bits!

Hi Eric

Reviewing some of the main engines that were around 10+ years ago, there seemed to be 2 main streams of engine programming; "knowledge based" and "fast searchers". Personally I think the latter term suggests that engines falling into this category may have been little more than bean counters.

That demeans the work of the programmers and remembering Richard Lang's comments that his Genius engines contained code (knowledge) that allowed the engine to assess beyond its normal search capability that became less effective as processor speed increased, then I believe there must be a fine balance between "knowledge" and speed that is likely dynamic to relative processor speed.

The "fast searchers" still require much chess knowledge otherwise they would likely play poor chess by most people's standards. I also suspect the fast searcher may be a consequence of more efficient code. As Houdini, and Rybka before it have shown, it does seem possible to combine efficient code whilst maintaining essential and perhaps enhanced chess knowledge. The fact that many of us may struggle to understand the moves played by these engines at the time may be more of an indictment of our ignorance than any lack of chess knowledge in the engine!

I'm about to update my PCs but before I do I decided to play some matches between some of the main "fast searcher" and "knowledge based" engines from that early PC engine period.

The intention was to run at least 100 games per match at 40/10 repeating, ponder on, 1 PC per engine. Engines using fresh copies of their supplied books. Because of issues with earlier ChessBase GUI's being unable to handle the large amount of memory on my machines, engines were run within the Fritz 8 GUI that was the first ChessBase GUI able to cope with the

memory. I had considered running these matches on one machine but decided to stick to using 2 machines and the Autoplayer interface.

On 1 standard clock core of the Q9550 these engines would be running approximately 9 times faster than the PII 450 I had when I bought most of these engines. So 40 moves in 10 minutes now would have been around the 40 moves in 90 minutes back then!?

The first match was Fritz 5.32 Original vs Genius 6.5. I mention original Fritz because dating back to late 1998, the original engine was about half the code size of the later releases that came with most Fritz disks and it could only use 128 Mb hash. Later versions were capped at 256 Mb (255 recorded in the GUI). Genius 6.5 played in its own GUI from the Millennium package that supported Autoplayer. Genius supported a maximum of 64 Mb hash. Both engines used fresh versions of the books supplied in their packages. As the match progressed, Fritz 5.32 pulled further away from Genius 6.5, though it had a few purple patches it was generally outplayed.

CEGT has Fritz 5.32 at 2348 Elo - that would put Genius 6.5 at 2210 Elo. Probably not much stronger than Genius 3 which would have been some 70+ Elo weaker on a P90 that beat Kasparov? So a 2150 engine could beat Kasparov? I recall Genius 3 was around 2550 against other engines at the time and 2600+ against humans. This really highlights that comparing engines and humans through the same rating process is just plain wrong and also the Elo system may be wrong for chess engines? Unlike humans who peak and then go downhill, it is difficult to envisage why an engine rated at 2550 Elo back then on a P90 could be 2210 Elo on a CPU some 30+ x faster than the P90. It should be stronger. Books may play a part but in this match Fritz seemed a cut above Genius.

▪ Fritz 5.32 v Genius 6.5 +52-15=36, so 70-33

Seeing off Genius, I then paired Fritz 5.32 against Junior 7 + 256 Mb hash from May 2001. This was a curious match: by game 50, Junior 7 had established a 70 Elo lead but amazingly Fritz 5.32 began to claw its way back and ended up even at the end of the match. I let this run to 116 games mainly because I was out for most of the day that it completed. Fritz 5.32 was within 6 Elo at game 100 so perhaps a slight benefit to Fritz by running to the extra games. Even so there was little to choose between the two and it showed what a good engine Fritz was being 2½ years older than Junior 7. Game 57 caught my eye where Fritz 5.32 had a pair of knights versus Junior 7's pair of bishops in a blockade

position. Junior trapped its own black bishop on the kingside and the manoeuvrability of the knights gained Fritz the win.

CEGT has Junior 7 +65 Elo to Fritz 5.32, so that may be a pointer that Fritz benefited most from CPU speed up? Perhaps Junior has to be considered a knowledge based engine, or did its Book run out of stamina?

▪ Junior 7 v Fritz 532 +39-39=38, so 58-58

My Fritz 6 disk failed some time ago so it was straight on to see the improvements with Fritz 7 from late 2001. This turned out to be very one sided and highlighted the big jump in playing strength between the two Fritz versions. Fritz 7 was also allocated 512 Mb hash. How much bearing this had is unclear but Fritz performance of +200 Elo was about double that expected from the ratings lists. These early Fritz engines always seemed to thrive on large hash.

▪ Fritz 7 v Fritz 532 +73-14=27, so 86½-27½ !

Time to introduce another "knowledge" based engine, so enter HIARCS 9 from mid 2003. Despite being later than Fritz 7, it was shown as being about 15 Elo weaker. The gap in this test match was about 40 Elo so again perhaps the faster CPU benefited the fast searcher. Having anticipated a very aggressive series of games it surprised me how many of HIARCS wins actually came from superior endgame play and I had intended highlighting this aspect, though it made a big end game blunder in the very last game. Later HIARCS engines, including H14 WCSC struggle with the position that other engines see fairly quickly, suggesting there may be some legacy code that needs to be reviewed?

▪ Fritz 7 v Hiarcs 9 +44-31=37, so 62½-49½

I intend playing two more matches to cover the early MP engines. Match 5 will be Shredder 7 using 1 core versus Fritz 8, and Match 6 will be Shredder 7, 4 cores versus Deep Fritz 8, 4 cores. Shredder 7 ChessBase package was released as an MP engine but most of us would only have used it with one core at the time so it will be interesting to see how they compare, but I suspect Deep Fritz 8 will benefit from improvements having been released 12 months after Fritz 8.

Best regards..... Peter

FRANK HOLT...

For this issue **Frank** returned to his testing at **Fischer Shuffle (960) Chess**, using a prepared position RNKQRBBN.

FRANK HOLT, 2 GAME MATCHES @ G/15MINS

Pos	Engine	/10
1	CRITTER 1.6A	6½
2	HOUDINI 2.0c	6
3	HOUDINI 3	5½
4=	STOCKFISH 2.2.2 RYBKA 4.1 RYBKA 3	4

Frank read my comment on page 11 of our last issue, where Michael Adams wondered if Anand's blunder 41.Bc4?? was a mistake or a trap, and it reminded him of the Master Game on TV (many years ago) - what a shame that the proposed coverage on Sky Arts of the recent Candidate's Tournament fell through at the last moment... financial issues I think.

Frank said *"I used to watch the BBC television games with the players sharing their thinking ahead. One GM. was playing a rather young Nigel Short and he said, 'I'm not going to let this upstart get the better of me.' Oh! how wrong can you be?"*

I remember those programs Frank, they were great. Someone told me that a few of them are now on YouTube, I'll see if I can find them!

CRITTER PROGRAMMER VIDA CRITICISED

Critter's programmer **Richard Vida** has come under heavy criticism for deliberately and openly making and sharing a clone of **Houdini** which he called **Robodino**. According to his Internet apology he did it as a result of a bet inspired by discussion on the Rybka forum, where he was challenged by some people who said it couldn't be done. Vida says: *"Besides the bet what I REALLY wanted to show was how easy a job this is, given Houdini's origins. With a truly original engine it would be almost impossible to do it in such a short time... having Robbolito source code at my disposal was really essential"*.

Those who still doubt that cloning has been going on regularly over the past few years ought to have a rethink!

The **Robodino** engine took him *"less than 80 hours"* to create, was published and tested over a couple of days by various users who confirmed that it played the same moves that Houdini does, with the exact same node count, except about 10% slower. Of course folk immediately wanted to know if he could improve on Houdini, as he mentioned that he had *"spotted several bugs, though most are inconsequential"*, and his answer was *"I don't know, I won't try"*.

For a few days accusations and complaints flew in every direction, then the engine was smartly withdrawn, the forum thread and its links removed, and Vida himself has promised it will never be seen again. He says he's now working on the next Critter version... wonder what will be in that - ha!

INTERNET RESULTS I'VE COLLECTED...**THE GROB TOURNY 2013 4cpu**

Xeon X5430x2 Octal ChessGUI. 1024mb hash, 3-4-5 piece tablebases, Ponder off, **Grob.cgb Book!** (only to 10 moves). 40 moves in 29 minutes repeating (equivalent to CCRL 40/40). All engines 64-bit 4cpu where available. 2 cycles 30 rounds

Pos	Engine	/30
1	CRITTER 1.6A 64-BIT 4CPU	21
2	HOUDINI 3 64-BIT 4CPU	19½
3	IVANHOE 9.46H 64-BIT 4CPU	18
4=	VITRUVIUS 1.11C 64-BIT 4CPU ROBBOLITO 0.21Q 64-BIT 4CPU	17
6=	STOCKFISH 2.3.1 64-BIT 4CPU BOUQUET 1.5 64-BIT 4CPU	15½
8=	RYBKA 4.1 64-BIT 4CPU STING SF 2 64-BIT 4CPU KOMODO 5 64-BIT	15
11	STRELKA 5.5 64-BIT	14
12	NAUM 4.2 64-BIT 4CPU	13½
13	CHIRON 1.5 64-BIT 4CPU	13
14	SHREDDER 12 64-BIT 4CPU	12½
15	HIARCS 14 4CPU	10
16	GULL II B2 64-BIT 4CPU	8½

The opening book being used was based on selected variations of the Grob (1.g4).

FANFARE FOR THE COMMON MAN (i.e. Free Engines!) 4CPU

Xeon X5430x2 Octal ChessGUI. 1024mb hash, 3-4-5 piece tablebases, Ponder off, **ForumUsers Book!** (to 12 moves). 40 moves in 29 minutes repeating (equivalent to CCRL 40/40) All engines 64-bit 4cpu where available. 4 cycles 44 rounds

Pos	Engine	/44
1	HOUDINI 1.5 64-BIT 4CPU	32
2	STOCKFISH 2.3.1 64-BIT 4CPU	27½
3	CRITTER 1.6A 64-BIT 4CPU	26½
4	IVANHOE 9.46H 64-BIT 4CPU	25
5	STING SF 2 64-BIT 4CPU	24
6	BOUQUET 1.5 64-BIT 4CPU	23½
7	HANNIBAL 1.3 64-BIT 4CPU	20½
8	ROBBOLITO 0.21Q 64-BIT 4CPU	20
9	GULL R375 64-BIT 4CPU	18
10	SPIKE 1.4 LEIDEN 64-BIT 4CPU	17½
11	RYBKA 2.3.2 64-BIT 4CPU	16½
12	PROTECTOR 1.5.0 64-BIT 4CPU	13

The opening book being used was based on favourite opening lines submitted by members from the Talkchess, Rybka and Chess2U Internet forums.

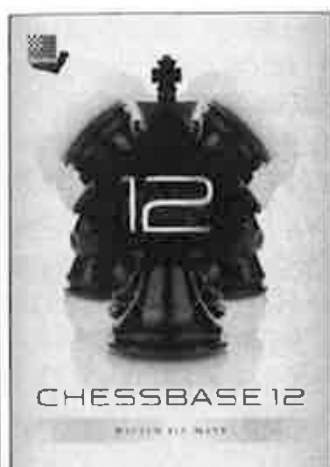
Finally the latest test by this group is in progress right now, called...

TACTICAL DISPLAY

Intel i5 Quad, ChessGUI. 256mb hash, 3-4-5 piece tablebases, Ponder off, **ForumUsers2 Book!** (to 12 moves). 40 moves in 25 minutes repeating (equivalent to CCRL 40/40) All engines 64-bit 1cpu. 2 cycles 30 rounds

Standings after Round 14

1	HOUDINI TACTICAL 3 64-BIT	10½
2	ROBBOLITO 0.21Q 64-BIT	8½
3=	STOCKFISH 2.3.1 64-BIT	8
	KOMODO 5 64-BIT	8
5=	STRELKA 5.5 64-BIT	7½
	RYBKA 4.1 64-BIT	7½
7=	BOUQUET 1.5 64-BIT	7
	DEEPSAROS 3.3B 64-BIT	7
	VITRUVIUS 1.11C 64-BIT	7
	GULL II B2 64-BIT	7
11	IVANHOE 9.46H 64-BIT	6½
12=	CRITTER 1.6A 64-BIT	6
	STING SF 2 64-BIT	6
14	CHIRON 1.1A 64-BIT	5½
15=	BLACKMAMBA 1.2C 64-BIT	5
	NAUM 4.2 64-BIT	5



CHESSBASE 12 NOW IN STOCK

New in ChessBase 12 Online player encyclopaedia regularly updated with new Elo ratings/player photos • Access to *LiveBook*, the *Engine Cloud* and *Let's Check* • **New "Deep Analysis" feature** ChessBase generates an analysis tree with the best candidate moves and replies. This tree changes dynamically as with time weaker variations are dropped. **New Search Facilities** You can now search for similar games to the game on screen. Ask ChessBase to find you games with a similar pawn structure, endgame theme and even manoeuvres! ChessBase can now automatically shows all previous games in an opening by the players of the active game all classified according to the level of similarity with the original game. It makes use of the most recent games from the online database.

ChessBase 12 Premium Package (PC-DVD) ~~RRP £335~~ £299.95 Includes everything in the Mega Package plus Endgame Turbo & Correspondence Database and 1-year subscription to PlayChess.com (worth £39.95)

ChessBase 12 Mega Package (PC-DVD) ~~RRP £245~~ £224.95 Includes everything in the Starter Package plus Mega Database 2013 (with nearly 70,000 annotated games) and a 1 year subscription to ChessBase Magazine (6 issues)

ChessBase 12 Starter Package (PC-DVD) ~~RRP £165~~ £149.95 Includes ChessBase 11 Program • Big Database 2013 and Player encyclopedia with over 35000 pictures • Games download service till the end of 2013 • 1 up-to-date ChessBase Magazine PLUS Half-year subscription to ChessBase Magazine (3 issues)

ChessBase 12 Upgrade (PC-DVD) ~~RRP £89.95~~ £79.95 Upgrade from any previous version of ChessBase

FOR FULL DETAILS OF THE FEATURES OF CHESSBASE12 PLEASE VISIT OUR WEBSITE

www.chess.co.uk/shop or call us on 020 7288 1305

The RYBKA 64-Core OnLine CLUSTER v HOUDINI 3 16-Core PC

Well I must start this article off with an apology that I didn't find space to get even the result to you in the last issue - I'm sorry - we'd left it at 2-0 for Houdini on page 34 of issue 163...

The RYBKA CLUSTER v HOUDINI 3

The **Computer Schache & Spiele** forum collected some ChessBase dukats, so they could have a set of serious games between **Houdini 3** on a **16-core 3.4GHz PC** against the OnLine rentable **Rybka 64-core Cluster!**

The plan was firstly to have 2 games from the start position without opening books, so engines thinking from move 1. Then 6 games will be played from fixed positions. The time control is G/105mins + 15secs per move.

In **game 1** Houdini was Black and went >1.00 at move 32. Rybka would have resigned showing >-9.99 at move 55 and was mated at move 73. In **game 2** Houdini, now White, went >1.00 at move 39, Rybka showed >-9.99 at move 66, and was mated at move 99. So **Houdini 2 Rybka 0**. It's gone quiet so I'm not sure what's happening, but games and any updates next time!

It is interesting to see how Houdini and Rybka's opening ideas from move 1 compare with known theory!

I've left in the time taken for each move, plus the evaluation and depth of search, so readers can compare their own PCs.

Rybka Cluster - Houdini 3

Game 1. 105m+15s

1.d4 215 0.26/21 1...♟f6
224 0.02/28 2.c4 305
0.46/22 2...e6 447 0.09/29
3.♟c3 0.36/24 0 ♟b4 179
0.08/27 4.e3 481 0.14/23
4...b6 234 0.06/29 5.♟d3
0.16/22 19 ♟b7 226
0.05/28 6.f3 0.12/23 0 c5
161 0.02/28 7.♟ge2
0.17/22 9 ♟c6 122
-0.04/28 8.0-0 305 0.11/22
8...cxd4 -0.03/28 0 9.exd4
290 0.08/23 9...0-0 0.01/28
0 [9...d5 10.cxd5 ♟xd5
11.♟xd5 ♟xd5 was
Capablanca-Kan, 1936]
10.♟c2 415 0.02/22
10...h6N 133 -0.10/26
[First new move! Both
10...♟e7, and 10...♟c8 have
been tried] 11.a3 260
0.07/23 11...♟e7 534
-0.01/28 12.♟a4 279
0.11/21 12...♟c8 -0.04/27 1
... 73...♟xe2#. 0-1

Houdini 3 - Rybka Cluster

Game 2

1.d4 0.34/28 4:34 ♟f6 (d5)
0.08/23 5:22 2.♟f3
0.27/28 3:38 e6 (d5)
-0.02/22 0 3.c4 0.30/27
3:21 h6 -0.11/22 0 [Rybka
lets us down a bit, this is not
in PowerBooks, though there
are a few lower level games
in my Big Database] 4.e3
(Sb1-c3) 0.33/27 2:34
4...♟b4+ (d5) -0.10/22 5:31
5.♟d2 0.32/28 3:38
♟xd2+N 0.03/23 3 [New
move. Here I could only find
5...d5 in my Big Database]
6.♟xd2 (Sf3xd2) 0.36/30
2:23 6...b6 (0-0) 0.17/25
7:53 7.♟c3 0.38/29 1:57
0-0 (Lb7) 0.03/25 2:09

8.♟d3 0.35/29 4:17 d6
0.23/24 3:02 9.♟d1 0.34/29
34 ♟b7 (De7) 0.20/23 3:22
10.e4 0.44/27 2:24 ♟c6
(Sbd7) 0.19/21 8 11.0-0
0.34/27 2:33 e5 0.18/22 0
12.♟c2 0.39/28 4:54 ♟d7
0.21/22 0
... 95.♟g7#. 1-0

For games 3 and 4 the opening used was 1.e4 c5 2.Nf3 Nc6 3.d4 and, with no Books in use, the engines were left to fight it out from there.

For games 5 and 6 the opening used was 1.e4 c6 d4 and again the engines left to play from there, and the results of these will come after game 4!

Game 3 was drawn, and we'll look at game 4 in a moment. But first let's just see how they handled the opening once they were on their own in game 3:

Rybka Cluster - Houdini 3

Game 3

1.e4 c5 2.♟f3 ♟c6 3.d4 cxd4
0.12/27 4:23 4.♟xd4
0.14/22 3:04 g6 (e5)
0.07/30 1:16 5.c4 0.18/23
8:06 d6 (Sf6) 0.10/31 0
6.♟e2 (Sc3) 0.25/24 7:53
6...♟xd4 0.15/30 3:00
7.♟xd4 0.27/25 0 ♟f6
0.14/32 3:20 8.♟c3 0.28/25
47 ♟g7 0.17/31 4:51
9.♟e3 0.27/24 0 0-0
0.14/29 2:07 10.♟d2
0.28/23 38 ♟a5 (Sg4)
0.17/29 7:06 11.f3 (0-0)
0.36/24 7:15 11...♟e6
0.18/29 3:13 12.♟c1 (Sd5)
0.38/24 0 12...♟fc8 0.16/29
1:47 13.b3 0.40/22 23 a6

0.18/29 1:30 14.♠a4 (Sd5)
0.44/23 39 14...♙xd2+
0.14/27 2:20 15.♙xd2
0.43/24 12 ♠d7 0.16/27
4:31 16.g4 0.42/22 0

*Full credit to the engines,
this is all in PowerBooks!
But now 16...f5 is usual –
there are others, but Houdini
chooses something new*
16...♞e8N (Tab8) 0.17/29
2:00 17.h4 0.48/24 6:54
h6 0.19/29 0 18.♠c3
(Thg1) 0.51/23 3:00
18...♠c5 (Tac8) 0.27/27
3:05
... 50...♙g6 0.01/40 1:18
½-½

I've chosen game 4 for full coverage particularly as one of the things of special interest, to me at any rate, was to try and gauge how much faster the Rybka 64-core Cluster is than my Quad and, to a lesser extent, the same question for Houdini on its 16-core machine!

I think it's an important issue because Rybka on its Cluster is available to rent for users to prepare openings, check theory's endgame accuracy, or play games against - as has just been done with the Houdini engine. And the rental rates are not cheap! So the Rybka Cluster has got to be a lot faster than our PCs at home and live up to its billing as the strongest chess playing entity on planet Earth!

It proved to be almost impossible to find this out, all I could do was compare my Quad timings with those shown in the gamefile records... but of course there's no way of knowing whether moves were played at the

moment its evaluation was decided to be satisfactory at the particular ply, or if the time shown represents the decision being made after all the moves were checked at that depth! Equally, once the game was under way, thinking in opponent's time would be operating, so for example moves were often made in "0 secs" showing depth 25 or whatever, there's no way of comparing them.

For what it's worth in the following game, for Rybka's 3...cxd4 played after 1min37, my Quad took 4min46 to finish looking at the move at depth 21 and 9min55 to reach depth 22. So, based on this, the Cluster is somewhere between 3x and 6x as fast as my Quad. I expected a lot more, didn't you!?

As for Houdini, Harvey Williamson managed to find a screenshot of Houdini while it was thinking about its likely response to Rybka's 45th move in this very game. So I've put the screenshot at the appropriate place in the game and readers can see its kN/s at that moment and compare their own PC if they have Houdini3! I've also placed diagrams a couple of moves before major evaluation swings, so that readers can study these moments in the games for themselves and see if they can discover where the loser went wrong!

Houdini 3 - Rybka Cluster Game 4

1.e4 c5 2.♠f3 ♠c6 3.d4 cxd4
0.11/21 1:37 4.♠xd4

0.23/28 3:02 e5 0.17/22
3:18 5.♠b5 0.23/29 0 d6
0.22/23 4:37 6.♠1c3
0.28/30 0 ♠f6 (a6) 0.22/23
5:31 7.♠g5 0.32/29 2:14
a6 0.26/21 0 8.♠a3 (Lxf6)
0.45/30 7:58 8...♠e6 (Le7)
0.27/22 5:05

*They'd played top-line
theory moves so far, but here
8...b5 is more popular and
considered best*

9.♠c4 (Lxf6) 0.51/30 5:58

*The best reply and Houdini
has an edge according to
theory*

9...♞c8 0.22/22 4:12
10.♠xf6 0.49/30 0 ♙xf6
0.21/24 2:14 11.♠b6
0.49/31 0 ♞b8 0.23/24
1:25 12.♠cd5 (Lc4) 0.48/31
46 12...♙g6 (Dd8) 0.21/24
4:26 13.♙d3 (f3) 0.70/28
2:32 13...♠e7 0.08/22 1:56
14.♠c7+ (g3) 0.70/29 14
14...♠d8 (Kf8) 0.41/21
4:17 15.♠cd5 0.72/28 2:26
f5 0.53/20 0



*Another terrific effort by
the engines, again they've
chosen moves found in
PowerBooks up to here. Now
16.0-0-0 is known, so is
16.f3, and I also found a
game going with 16.Nxe7,
but not 16.Qc3*

16.♙c3N (0-0-0) 0.70/25
4:45 16...fxe4 0.84/21 7:08
17.0-0-0 1.01/27 0 ♠xd5
(Ke8) 0.89/20 3:06
18.♠xd5 0.91/26 53 ♞c8

0.84/19 1:07 19.♔b1
0.94/28 4:29 ♖f8 1.03/20 0
20.♙b3 0.94/28 1:55 b5
1.02/22 31 21.♙a3 0.90/28
3:29 ♙g4 1.00/22 0 22.f3
0.84/28 2:41 exf3 0.99/22
0 23.♟xe7 0.85/27 0 ♟xe7
1.00/22 1:23 24.♙xd6+
0.93/28 29 ♟f7 1.01/23 0
25.gxf3 0.93/27 0 ♙f5
1.13/23 2:56 26.♙d5+
(Ld3) 1.46/25 1:19



26...♟f6 (Ke8) 0.80/22 2:18
[26...♟e8 27.♙d3 w126]
27.♙d3 1.74/27 1:37 ♙e6
0.89/24 0 28.♙e4 1.90/27
1:59 g6 1.22/21 0 29.h4
2.09/27 6:31 ♙cd8 1.47/21
0 30.a3 1.84/28 1:58 ♙d7
(Td4) 1.35/21 13 31.h5
1.80/28 3:14 g5 1.60/24 0
32.h6 1.86/25 5:40 ♟d4
(Tg8) 1.96/22 1:39
33.♙hg1 (Lf1) 2.23/27 7:54
33...♙fd8 1.55/22 6:37
34.♙e3 2.35/30 0 ♙g8
1.51/22 17 35.♙de1
2.30/28 1:06 ♙d5 1.63/22
45 36.♙g4 2.47/27 29 ♙c5
(Dd6) 2.01/22 3:26 37.♙g2
(Teg1) 2.43/26 59 37...♙d5
2.01/21 1:00 38.♙g1 (Le4)
2.43/24 0 38...♙f7 (Dd6)
1.60/21 4:01 39.♙f2 (Dh2)
2.51/25 58 39...♙d5 (Dd5)
2.02/22 5:52 40.c3 (Le4)
2.46/25 1:38 40...♟e6
1.92/23 5:29 41.♙c2
2.53/28 0 ♟f4 2.05/22
2:08 42.♙g3 (Db6+) 2.60/26
21 42...♙d7 (Tgd8) 1.47/22

1:41 43.♙e3 2.69/26 1:26
♙d5 1.58/22 1:05 44.♔a1
2.71/26 6 ♙e8 (Tc8)
1.72/20 54 45.♙g4 (Dg1)
2.28/25 1:08



Here we are then, we reach the position where Harvey managed to get a screenshot of Houdini's analysis while it was waiting for Rybka's reply. It shows Houdini3 Pro x64 on the 16-core machine to be running at 36,650 kN/s after between 4-5 mins. My

Quad showed 7148 kN/s after 4mins30 and had just reached 25ply, so the Houdini 16-core is 5x faster than my Quad. That sounds about right!

45...♟e6 (Dc4) 2.26/21
5:35 46.♙b1 (Kb1) 3.39/26
55 46...♙c7 (Ted8) 2.62/20
4:11 47.♙a2 4.79/23 54
♙c5 3.24/19 0 48.♙e4
5.39/26 59 ♙d6 3.52/19 0
49.♙g2 (Teg1) 5.63/27 1:35
49...b4 4.35/20 4:13
50.axb4 5.73/27 0 ♟f4
4.46/19 22 51.♙b1 5.96/26
0 ♙d7 4.54/20 1:11
52.♙d2 6.34/27 0 ♙a4+
4.56/20 6 53.♙a2 6.68/26
27 ♙c6 4.68/20 0 54.♙c2
6.67/25 12 ♙d7 5.48/21
4:32 55.♙xd7 6.96/28 43
♙xd7 5.35/20 0 56.♙d1
6.42/27 28 ♙c7 5.96/21
3:09 57.♙b1 (Da4) 6.47/26

Uhr: Lang 105m-15s

0:33:47	0:18:56
0:01:07	0:04:49

Engine: Houdini 3 Pro x64

Houdini 3 Pro x64 [Stop] 16 CPUs [Cloud]

+- (3 33) Tiefe=28 46.Lb1 (1/39) 36650 kN/s [F4]

46.Lb1 Dc6 47.Df2 Tf8 48.Dh2 Dc7 49.Dg1 Se6 50.De3 Dd6 51.Te4 Dc5 52.De2
Td5 53.Te3 Dc7 54.Dc2 Tf7 55.La2 Tfd7 56.Lxd5 Txd5 57.Td3 Sd4 58.Dd1 Sb3+
59.Kb1 Txd3 60.Dxd3 Sc5 61.Dd5 a5 62.Tg1 a4 63.Dd2 Se6 64.Dd3 Sc5 65.Dxb5
Dd6 66.De2 Dd3+ 67.Dxd3 Sxd3
+- (3 33) Tiefe: 27/81 00:04:17 9352mN

0 57...e4 5.05/21 5 58.♖a4
6.47/22 13 ♖b8 (Te6)
4.84/19 1:01 59.♗d7 (Lxe4)
8.83/24 18 59...♗e7 5.50/15
4 60.♗d6+ 9.26/23 1 ♗e6
5.60/16 0 61.♖c6 9.53/22
1 ♖b5 6.37/15 3 62.♖xe4
9.52/22 0 ♖e5 6.43/15 2
63.♖d3 10.06/21 0 ♖a7
(Db5) 8.08/19 33 64.♗c6
(Txa6) 11.23/22 4 64...a5
(Tb7) 5.79/16 4 65.b5
(Dd8+) 11.86/22 4 65...♗e7
(Tb7) 9.54/16 19 66.b6
19.45/22 32 a4 (g4)
14.16/19 1:38 67.♗d8
25.90/24 28 ♗f7 27.50/19
59 68.♖c8 29.93/24 0 1-0

Rybka Cluster - Houdini 3 Game 5

1.e4 c6 2.d4 d5 3.e5 0.26/22
6:02

I did some more timing tests on Rybka! My Quad took 12mins45 to finish looking at 3.e5, and 23min27 to finish depth 22, so here the implication is that the 64-core Cluster is only between 2x and 4x faster than my Quad. Probably Rybka finished the depth 22 search before making its move, so that would mean 4x faster, but surely that still shouldn't be right?!

3...♗f5 0.13/27 4:03

As for Houdini my Quad took 21min17 to make the depth 27 decision and 26min52 to reach depth 28, so the 16-core machine shows at just over 5x faster than my Quad, similar to the indication on the kN/s from the Screenshot on the previous page. If this is correct then the Houdini 16-core PC runs faster than the Rybka 64-core Cluster!?!

4.♗f3 0.25/22 10:36 e6
0.13/28 2:14 5.c3 0.23/23
3:50 ♗d7 0.04/28 3:08
6.♗e2 0.20/21 0 ♗e7
0.05/28 4:39 7.0-0 0.24/23
0 h6 0.03/28 5:06 8.a4
0.23/21 2:15
8.♗bd2, 8.♗a3, 8.♗e3
and 8.♗h4 are all known,
almost always followed by
8...Bh7 from Black
8...a6 0.08/27 20 9.♗e3
0.19/22 3:39 ♗h7 0.03/28
0 10.a5?! 0.15/22 6:58
♗f5 0.06/29 6:21



Houdini evaluations now start to go up, though quite slowly at first

11.♗d2 0.14/23 0 c5
-0.06/27 2:42 12.♖a4
0.08/21 53 ♗c8 -0.22/26
2:50 13.♗a3 0.12/22 5:06
♗e7 -0.18/29 1:45 14.b4
0.10/22 29 c4 -0.14/30
4:17 15.b5 0.06/24 0 0-0
-0.16/27 4:09 16.♗fb1
0.05/21 0 ♖c7 -0.35/24
1:51 17.♗e1 0.01/20 1:22
♗b8 -0.25/26 3:27 18.♗d1
0.00/21 28 ♖d7 -0.11/27
1:25 19.♗a2 -0.16/22 2:04
♗xa3 -0.57/28 1:25
20.♖xa3 -0.46/23 5:23
axb5 -0.57/29 1:49 21.♗b2
-0.47/24 52 ♗c6 -0.55/31
8:57 22.♗xb5 -0.47/26 0
♗a8 -0.59/29 5:02 23.g4
-0.40/22 4:09 ♗fe7
-0.80/27 2:53 24.♖d6 (g5)
-0.49/22 0 24...♗fd8
-0.76/29 1:11 25.♖xd7

-0.56/23 1:39 ♗xd7
-0.70/31 0 26.♗a4
-0.52/25 1:52 ♗e4
-0.78/31 0 27.♗h4
-0.55/23 1:37 ♗a6 (Tdd8)
-0.73/29 36 28.f3 (Ta1)
-0.70/24 7:02 28...♗d3
-0.78/30 1:11 29.♗c1 (Sg2)
-0.73/25 2:04 29...♗a7
-0.90/30 1:27



30.♗c5 (Tb6) -0.83/22 6
30...♗ec6 (Td8) -0.97/29
1:24 31.g5 (Sg2) -0.93/25
8:19 31...♗d8 -1.26/29
2:24 32.gxh6 -1.08/21 0
♗xa5 (Txa5) -1.22/28 1:05
33.♗b5 (Tc7) -1.16/22 4:52
33...♗b6 -1.45/27 1:19
34.♗g5 (La4) -1.23/24 1:01
34...♗b8 (Ta8) -1.98/28
2:52 35.♗a4 -1.35/22 1:30
♗5c6 -1.96/27 36 36.hxg7
-1.56/21 1:30 ♗xg7 (Tb3)
-1.95/27 0



37.♗g2 (Kg2) -1.40/19
2:04 37...♗a6 -2.23/26
1:11 38.♗xc6 (Lb5)
-1.53/22 1 38...bxc6
-2.50/24 1:02 39.♗c1
-1.73/21 57 ♗b2 -2.59/26

6 40.♙h4 (Le3) -1.96/21
1:17 40...♖g6 (Taa2)
-3.22/26 1:40 41.♙g3 (Lf2)
-2.73/21 2:49



The material is level but Houdini's rooks are deciding the game

41...♖a2 -3.59/26 20
42.♙f4+ -3.33/23 5:20
♙f5 -3.83/30 0 43.♙h1
-3.38/23 52 ♙e2 (Td2)
-4.07/27 0 44.♙g2
-3.41/23 35 ♙b5 (Tb3)
-4.13/26 39 45.♙h3
-3.45/18 21 ♙xf3 -4.13/26
0 46.♖f1 -3.49/19 15 ♙e4
-4.22/25 0 47.♖e1+
-3.49/18 27 ♙e2 -4.11/25
0 48.♖xc6 -3.70/18 14
♙xc3 (Ke3) -4.38/25 2:45
49.♖c7 -3.31/16 21 ♙b5
-4.36/24 0 50.♖xf7
-3.38/17 11 ♙xd4
-4.46/23 0 51.♖f6 (Te7)
-3.72/18 1:57 51...c3
-4.55/21 24 52.♙xe6
-3.77/17 21 ♙xe6
-4.51/23 0 53.♖xe6
-3.90/17 11 d4 -4.40/22
12 54.♖c6 -4.06/19 33
♖a8 (Tb8) -4.70/22 0
55.e6 (Tc7) -4.12/19 1:37
55...♖h8+ -5.12/22 25
56.♙g2 -4.13/18 0 ♖e8
-5.12/21 7 57.♙f2 (Lc7)
-4.43/18 28 57...♙d5 (Td2)
-5.39/23 8 58.♖c7
-4.75/18 7 ♙b5 -5.42/22
0 59.♙f3 -5.11/20 50 d3
-5.72/25 0 60.♙e3 (Lg3)
-8.64/21 6:34 60...d2 (Lc6)

-8.84/22 1:04 61.♖a1 (Th1)
-13.79/19 3:24 61...♙c6
-10.62/23 22 62.♙g3 (Kf4)
-14.63/18 43 62...♖xe6
-17.37/21 25 63.♙xd2
(Kf3) -61.55/17 1:09
63...cxd2 -16.33/22 18
64.♖c8 -#13/23 50 ♖b3+
(Ke5) -#16/29 4 65.♙f2
(Kf4) -#13/22 36 65...♙c4
-#14/27 6 0-1

So that makes it, for the Rybka Cluster, an embarrassing 4½-½ lead in favour of Houdini! Fortunately Rybka clawed one back in what proved to be the final game - they'd intended 8 games, but the cost of hiring the Rybka Cluster added to the fact that Houdini couldn't be caught even if Rybka won all of the last three games decided the organisers to stop at 6.

Houdini 3 - Rybka Cluster Game 6

1.e4 c6 2.d4 d5 3.♙c3 249
0.34/28 3...dxe4 216 0.21/23

Well of course, finding that Rybka had actually won this game, I wondered if maybe something had been done to 'correct' the Cluster's seemingly poor speed performance. So I tested again! My Quad would have chosen 3.dxe4 somewhere between 11m11 and 21m40 which this time puts the Cluster between 3x and 6x my Quad. It's hard to be sure what it all means, if anything! We know that the Rybka depth and kN/s figures have always been a lie anyway, originally to deceive users into thinking it was a knowledge program rather than a speedy derivative of Fruit. So who can say

whether the Cluster figures are a straightforward multiplication or not

4.♙xe4 0.33/29 0 ♙f6 186
(Lf5) 0.21/23 5.♙xf6+ 284
0.32/29 5...exf6 0.21/24 0
6.♙f3 154 0.34/29 6...♙a6
0.19/23 28

Theory is now 7.Be2 or c3
7.a3 122 0.34/29 7...♙c7 60
0.17/24 8.♙d3 73 0.30/29
8...♖e7+ 250 0.16/24 9.♙e2
0.31/31 0 ♙f5 261 0.18/25
10.0-0 0.29/30 40 ♖d7 128
0.16/25 11.♙h4 180 (c4)
0.34/30 11...♙e6 166
0.16/23 12.c4 0.28/29 0 b5
281 (Ld6) 0.16/22 13.♖e1
197 (Lf4) 0.27/27 13...bxc4
281 (Le7) 0.05/22 14.♙xc4
118 0.28/27 14...g6 0.04/23
9 15.♙d2 564 0.16/28
15...♙e7 0.03/24 0 16.♖c1
120 (Lxe6) 0.16/27 16...0-0
229 -0.01/22 17.♙f3 75
0.13/28 17...a5 183 (Tfc8)
-0.03/22 18.♙f4 142 (Dc2)
0.04/25 18...♙d6 370
-0.15/23 19.♙xe6 0.03/28
0 ♙xe6 -0.16/20 31
20.♙e3 88 (Ld2) 0.00/28
20...♖fb8 269 (Tfc8)
-0.13/21 21.♖c2 213
0.00/28 21...♖a6 (Tc8)
-0.14/23 1 22.♖e2 134
(Dc4) 0.05/26 22...♖b7 186
(Taa8) -0.19/23 23.♖c2 250
(g3) -0.04/28 23...♖d8 338
(Lf8) -0.19/23 24.h3 88
-0.06/26 24...♙e7 (Lf8)
-0.20/22 47 25.h4 116
(Dd2) -0.04/25 25...♖d7
331 (Td5) -0.26/24 26.♖c4
98 (Dd1) -0.07/26 26...♖b6
190 -0.29/23 27.♙c1
-0.11/30 0 ♖d5 143
-0.28/23 28.♖d2 188 (Dc2)
-0.11/29 28...♙d6 237 (Lf8)
-0.29/23 29.♖c2 141
-0.19/25 29...♙g7 -0.29/22
0



30.♖e4 104 (Te2) -0.23/24
 30...♜db5 231 -0.34/22
 31.♞d1 (Te1) -0.21/26 0
 31...♜b8 269 (Th5) -0.43/24
 32.♞d2 82 -0.26/25
 32...♞d7 (Td5) -0.40/20 0
 33.♞c2 204 (Dh6+) -0.29/26
 33...♞d5 131 -0.46/24
 34.♞e2 (Te3) -0.36/27 0
 34...h6 127 (Lc7) -0.68/21
 35.♜c3 164 (Te3) -0.54/25
 35...g5 121 -0.91/21 36.g3
 326 (De1) -0.81/27 36...f5
 180 -1.15/22 37.♜xe6
 -0.59/29 0 ♞xe6 -1.16/22
 11 38.♞xe6 137 -0.71/30
 38...fxe6 -1.08/25 0
 39.hxg5 -0.57/29 0 hxg5
 -1.06/25 15 40.♜xg5
 -0.57/30 53 ♜f6 -1.08/25
 39 41.♜c4 -0.62/30 57
 ♜b3 (Ld6) -1.08/25 32
 42.♜g2 67 -0.49/30 42...e5
 -1.07/24 0 43.♜f3 -0.51/30
 55 e4 -1.07/25 0 44.♜g1
 98 -0.48/31 44...♜d3 (Ke6)
 -1.11/27 56 45.♜e2
 -0.53/31 55 ♜e6 -1.08/25
 0 46.♜c5 -0.55/30 53 ♜a6
 -1.08/26 35 47.♜c4
 -0.52/30 37 ♜b3 -1.08/26
 14



48.♜c3 (Tc2) -0.56/28 53
 48...♜d6 78 -1.08/25
 49.♜f1 -0.55/30 0 ♜a8
 -1.16/23 58 50.♜a4
 -0.55/29 4 ♜h8 (Kd7)
 -1.21/22 52 51.♜e3
 -0.61/28 59 ♜f7 (Kd7)
 -1.33/22 17 52.♜xc6
 -0.55/27 51 ♜xg3 -1.45/23
 0 53.♜c5 213 -0.99/30
 53...f4 -1.69/26 0 54.♜xf4
 -0.99/28 1 ♜xf4 -1.69/26
 7 55.♜f5+ -0.99/28 4 ♜e6
 -1.67/26 7 56.♜xf4
 -0.99/28 0 ♜d5 -1.72/27
 8 57.♜e2 (Sc3+) -0.97/31
 45 57...♜xd4 -1.86/25 37
 58.♜f7 -0.94/31 25 ♜h2
 (Th5) -2.24/24 23 59.♜d7+
 -1.87/27 45 ♜c4 -2.11/23
 0 60.♜e7 103 -2.01/29
 60...♜bh3 -2.53/25 0
 61.♜xe4+ 61 -1.86/29
 61...♜b3 -2.58/24 0
 62.♜c5+ 107 (Sb6)
 -1.97/30 62...♜xb2
 -2.55/24 12 63.a4
 -2.10/27 31 ♜c3 -2.51/24
 24 64.♜e8 (Se6) -2.22/29
 25 64...♜b4 -2.78/23 53
 65.♜d3+ (Sb7) -2.30/28 0
 65...♜xa4 -2.81/22 5
 66.♜b8 -2.42/30 53 ♜h4
 (Ka3) -2.98/25 0 67.♜d2
 222 -3.12/30 67...♜2h3
 -3.30/25 0 68.♜f8 (Tc8)
 -3.07/28 37 68...♜d4 71
 (Kb3) -3.76/23 69.f3
 -2.94/25 14 ♜h5 (Thh4)
 -3.68/23 16 70.♜c3
 -3.12/29 51 ♜hd5
 -3.81/24 0 71.♜b2+
 -3.21/29 34 ♜b5 -3.90/25
 0 72.♜b8+ -3.23/30 35
 ♜c6 -3.96/26 0 73.♜c8+
 -3.31/29 48 ♜d7 -4.04/27
 0 74.♜f8 166 -3.73/31
 74...♜b4 (Ke7) -4.38/26 0
 75.♜d3 -3.36/29 38 ♜a4
 -4.21/22 0 76.♜b3 (Sf4)
 -3.37/29 31 76...♜ad4
 -4.24/23 14 77.♜f2

-3.43/31 20 a4+ -4.50/26
 16 78.♜c3 144 -5.40/30
 78...♜c7 -7.45/27 59
 79.♜e4 75 -6.34/29 79...a3
 63 -7.46/25 80.♜a8
 -6.34/32 0 ♜d3+ -5.11/15
 2 81.♜c2 -6.52/32 28
 ♜b7 -12.55/22 0 82.♜a4
 122 -8.77/32 82...♜5d4
 -24.25/25 0 83.♜a5 74
 -8.79/31 83...♜b6
 -32.02/26 0 84.♜a8
 -10.20/28 45 ♜d8
 -61.24/26 0 85.♜a4
 -11.82/31 46 ♜b5
 -62.63/26 0 86.♜a7
 -7.47/28 38 ♜b4 103
 -60.64/27 87.♜b7+
 -13.80/27 0 ♜c4
 -23.29/26 1 88.♜a7 (f4)
 -13.80/22 9 88...♜c8 351
 (Te3) -#18/24 89.♜b1
 -13.79/28 24 ♜b8+ 171
 (Th8) -#16/26 90.♜c1
 (Ka1) -10.99/26 23
 90...♜d4 182 (Kb4) -#17/24
 91.♜d7+ 73 -12.22/29
 91...♜e3 -#16/26 0 92.♜e7
 -12.22/25 7 ♜c8+ 83
 (Kxf3) -#15/29 93.♜b1
 -19.95/27 10 ♜xf3 75
 -#15/29 94.♜g5+ -#22/35
 0 ♜f4 -77.98/20 1
 95.♜e6+ -#19/34 20 ♜f5
 61 -#13/28 96.♜g7+
 -#19/34 23 ♜g6 -#13/29
 55 97.♜e6+ (Te8) -#17/33
 0 97...♜xg7 135 -#12/32
 98.♜e2 -#15/39 0 ♜g6 94
 (Kf6) -#11/32 99.♜f2 89
 (Th2) -#15/38 99...♜g5
 108 (Tcd8) -#11/37
 100.♜a1 (Ka2) -#14/36 28
 100...♜h4 69 (Kg4) -#10/39
 101.♜g2 (Te2) -#13/36 6
 0-1

	1	2	3	4	5	6	
Houdini	1	1	½	1	1	0	4½
Rybka	0	0	½	0	0	1	1½

THE 2013 WORLD CANDIDATES TOURNAMENT

AT THE IET, SAVOY PLACE, LONDON, MARCH 14-APRIL 1

What a remarkable and exciting Event and Tournament this has been - I wonder how many of my readers went to watch, or maybe followed it on their Computers at home, as I did?! A nail biter to the very end!

While most of the players seemed to be quietly acclimatising themselves with careful draws, **Lev Aronian** started out like a train with 2 wins in his first 3 games.

Then **Magnus Carlsen** got his first win in round 4, but when he got another in round 6 with Black against Svidler, he found that Aronian had also won with Black against Radjabov. **Aronian** had $4\frac{1}{2}/6$ (3 wins, 3 draws), **Carlsen** 4, and no-one else better than 50%!

All the round 7 games were drawn but **Vladimir Kramnik** finally woke up after 7 straight draws by beating Svidler in round 8. Carlsen played Aronian - a draw!

Then the long-time leader **Aronian** lost to Gelfand in round 9. In the meantime **Carlsen** somehow survived a magical novelty against **Kramnik**. Carlsen had already won a 'drawn' game thanks to his remarkable endgame technique, and here it saved him from losing. The draw was enough for 1st place, so we had **Carlsen** 6/9, Aronian $5\frac{1}{2}$, Kramnik 5, Gelfand and Grischuk $4\frac{1}{2}$. Ivanchuk had $3\frac{1}{2}$ having already lost 2 games on time!

In round 10 the 3 leaders **all won!** **Aronian's** win came in a complicated game in which Ivanchuk as Black played an unlikely and hotly debated Budapest Gambit: 1.d4 Nf6 2.c4 e5. Yet Aronian seemed ready for it and got a strong advantage, finally creating such difficulties that Ivanchuk lost on time yet again, his flag falling at move 30!

However **Aronian's** hopes all but evaporated in round 11 as he lost to Svidler, and a new number 2 emerged when **Kramnik** beat the struggling Radjabov, while Grischuk v Carlsen was drawn. **Carlsen** $7\frac{1}{2}/11$, Kramnik 7, Aronian $6\frac{1}{2}$, Svidler $5\frac{1}{2}$, 3 rounds to go!

So to round 12: **Carlsen** had White against Ivanchuk, while the main attraction was **Aronian v Kramnik**, a game which they both needed to win to keep up with Carlsen!

For spectators this was a Chess Event of high order, excitement guaranteed, with everyone getting not only headphone sets so that they could listen to the expert GM commentary, but also Samsung SP Android tablets loaded with the Komodo engine for following and analysing the games in progress! Better graphics promised for next time!



I would have loved to visit London and watch the event live on one of the days, but am not too keen on leaving Chris for very long periods at the moment, in case she has a fall on the stairs or something. But I have never enjoyed following a chess tournament as much as I did with my alternative '*at home*' method - I'll explain in a moment! - which really was a great experience!

Boris Gelfand said that he feels that the general chess public has become less respectful of Grandmaster chess and the GMs themselves because of the strength of computer engines nowadays - within moments of a move being played users can announce '*it's what the computer expected*', as if that makes it a firm confirmation that it's the best move, or they can conclude a move is '*an inaccuracy, or even a mistake*' because they see the evaluation drop from, say, +0.10 to -0.25.

My feelings, watching on the Internet at home with Hiarcs Chess Explorer were actually rather the opposite!

I was constantly impressed with how often the GMs did find '*the best moves*', especially in sometimes the most complicated of positions. I also noticed how, when the GM move was (supposedly) '*not the best*' the computer evaluation would indeed often drop sharply

and then, as the search deepened, start coming back up again as the engine saw the fuller implications and resulting complications coming from the move!

This happened quite a lot and, with Grischuk, Radjabov (somewhat unsuccessfully) and of course Ivanchuk, as well as Aronian, Carlsen and occasionally the others sending their games into incredibly complicated positions with some new opening ideas (stored up for a special occasion!) or following with adventurous and daring play, I began to realise I needed to swap my analysis engines around during the games depending on the type of position we'd reached!

The defensive deep search engines (Houdini, Critter, Rybka) were fine for the quieter positions, and sometimes for finding a defence in sharp positions, but I usually preferred Hiarc or Stockfish to try and get an understanding of the plans and potential of the aggressor, as well as a more promising prediction of the attacker's likely moves!

Apart from choosing which analysis engine to work with I also had to decide between using a **ChessBase** engine and the PlayChess connection, or **Hiarcs Chess Explorer** and a link to the live pgn files! HCE was upgraded to version 1.4 (free upgrade to owners) just before the event, and it enables users to know exactly when new moves have come in for

Hiarc Chess Explorer at work:

Left: Full Screen; My Updated Notes later in the game

Right: My Comments, Book Info plus Analysis; Stars showing new moves have come in

The screenshot shows the Hiarc Chess Explorer interface. The main window displays a chessboard with a game in progress. The game log on the right lists moves and engine evaluations. The bottom panel displays game statistics and a list of games.

Game Log:

Move	Games	Score
11.e4	2	50.0%
11.fxc3	2	50.0%
11.fxd2	2	25.0%

Game Statistics:

No.	White	Black	Star
1	Grishchuk, Alexander	Kramnik, Vladimir	1
2	Grishchuk, Alexander	Kramnik, Vladimir	1
3	Grishchuk, Alexander	Kramnik, Vladimir	1
4	Grishchuk, Alexander	Kramnik, Vladimir	1

any of the games, so I could immediately jump from one game to another to update myself. With its OnLine Tournament Book in place and Deep Hiarcs analysing I felt I was getting the best possible help to understanding what was happening through all phases of the game, especially the most complicated and tactically confusing ones, some of which I would have found utterly chaotic without engine help! Even so I did boot my second computer up with *ChessBase* and followed the progress of some of the quieter games there with Houdini, which was also good in the endgames with the Gaviota tablebases.

What the computer engines don't understand is that the objectively best move, just because it gets the top evaluation, may not be the best over-the-board choice when it allows the opponent to find an easier non-time-consuming response. Pressure counts for a lot! Creating tension with double-edged fighting chess, giving the opponent problems to solve, variations to calculate, decisions to make with a fast-beating clock (and heart!) can often prove better than a top evaluation quieter move. Ivanchuk is both the best and worst proponent of this method - he creates incredible chaos but then often spends more time in the muddle than his opponent!

But when it works, you win games! The importance of this was seen when the tournament finally ended: the traditional tie-break method produced a tournament winner, but in the Candidates' rules you count the number of wins, so in fact the player who ended 2nd on normal tie-break will go on to challenge Vishy Anand... because he won more games!

So, back to round 12. **Kramnik** outplayed **Aronian** in a fierce middlegame but, ahead with a rook, bishop and 3 pawns for rook and 5 pawns, he meandered. You all know - I often make the point in game notes - when you're behind in material you avoid exchanges, but Aronian saw the chance to exchange the rooks (!) and manoeuvre Kramnik into a position where his 'winning' pawn would be the wrong colour - a draw. Then stunningly after getting this remarkable concept to the point where everyone's analysis was '0.00', he blundered and Kramnik

CHESS IS AN EASY GAME!



won after all!

But then the really big shock: **Carlsen** lost to **Ivanchuk**, and in the endgame at that! Carlsen was very critical of himself in the after-game interviews, he felt he had played 'on auto-mode'. Earlier in the Tournament we had seen his brilliant endgame play produce at least 2 extra $\frac{1}{2}$ points, but he now played listlessly in what should have been a drawn endgame. In the meantime Ivanchuk played both aggressively and accurately, accumulating enough small advantages to win! Now **Kramnik** had the lead with 8/12, Carlsen was on $7\frac{1}{2}$, Aronian $6\frac{1}{2}$, Svidler 6.

Carlsen said he would address some aspects of his play for round 13, and he did, beating Radjabov with Black. Meanwhile **Gelfand** with Black held **Kramnik**. So it would go down to the wire with **Kramnik** and **Carlsen** 1= with $8\frac{1}{2}$. Svidler and Aronian were both on 7, too far behind and out of it!

And so to the final round!

Carlsen had White v **Svidler**, **Kramnik** was Black against **Ivanchuk**.

It was soon clear that, as expected, Carlsen was trying for the win which would guarantee him top place!

Kramnik of course had to do the same, he needed a win and had to hope that Carlsen would only draw. So much to everyone's surprise he went for a wild Pirc Defence (hardly ever seen at the top level and Pirc's are not always wild unless Black takes some risks!). Anyway he managed to create a desperate all-out attack. But Ivanchuk, inevitably playing as if his very life also depended on a win, punished this over-aggression, and

everyone could see he had a clear advantage - along with the seemingly inescapable time shortage issues!

Meanwhile Carlsen's Ruy Lopez, having looked quite healthy early on, had stagnated, and he then over-pressed, enabling Svidler to counterattack and gain a distinct advantage. Around move 30 Carlsen could have given up a pawn to try and quieten things down, but instead, looking exhausted and with around only 1 minute left for his last 10 moves, he allowed the attack and was in quickly in big trouble.









Inevitably Kramnik could see all this and hung in despite his disadvantages against Ivanchuk, with the always-present hope that the latter's propensity for time trouble might get him the draw, which was all he now seemed to need, or even a win!

Later **Svidler** would admit that he didn't really always know what was going on during parts of his attack against Carlsen, but it proved to be good enough anyway, and he got the point.

And so did **Ivanchuk**! He got the bishop pair, made the time control, gained a healthy passed pawn, and beat Kramnik just as easily as, 2 rounds earlier, he had beaten Carlsen!

Carlsen, with only a $\frac{1}{2}$ point lead after round 11, had actually lost 2 of his last 3 games, yet now both he and **Kramnik** had $8\frac{1}{2}$, with the latter having the better Berger tie-break score. But as the **Final Table** shows Carlsen had won 5 games (5-2=7), and Kramnik only 4 (4-1=9), so it will be Anand v Carlsen for the Title.

'Lucky' Carlsen was the general view, though I think this will actually be the Match most people would have hoped for.

			1	2	3	4	5	6	7	8		TB	Perf.	+/-	
1		Kramnik,V	2810	* *	½ ½	½ 1	½ 1	½ ½	½ 0	½ 1	8.5 / 14	57.75	2858	+10	
2		Carlsen,M	2872	½ ½	* *	1 0	½ ½	1 ½	1 1	½ 0	½ 1	8.5 / 14	56.25	2850	-4
3		Svidler,P	2747	½ 0	0 1	* *	½ 1	½ ½	½ ½	½ 1	1 ½	8.0 / 14	52.75	2842	+19
4		Aronian,L	2809	½ 0	½ ½	½ 0	* *	½ ½	1 0	1 1	1 1	8.0 / 14	49.75	2833	+5
5		Grischuk,A	2764	½ 0	0 ½	½ ½	½ ½	* *	½ ½	½ 1	½ ½	6.5 / 14	44.00	2764	0
6		Gelfand,B	2740	½ ½	0 0	½ ½	0 1	½ ½	* *	½ ½	½ 1	6.5 / 14	43.00	2768	+5
7		Ivanchuk,V	2757	½ 1	½ 1	½ 0	0 0	½ 0	½ ½	* *	0 1	6.0 / 14		2741	-3
8		Radjabov,T	2793	½ 0	½ 0	0 ½	0 0	½ ½	½ 0	1 0	* *	4.0 / 14		2627	-32

THE SSDF For many years their '*Ply*' Magazine and my '*News Sheet*', later called '*Selective Search*', were the only printed magazines produced. The **SSDF** did (and do) a great job and, although the printed version of *Ply* ended a few years ago, they still test Chess Computers and produce a Rating List. To express my regard for their work as *Se/S* ends, and because they were a valuable source of information when I was getting started, I am showing their current Rating List! It looks different to most of the Lists we see, as the SSDF refuse to test Clones - proven or probable! Rybka versions are on the list: they had been established, gone commercial & won World Championships, contributing 4,000 40/2 games, before the ICCA clone-banned them too!

THE SSDF RATING LIST 2013-03-23 123376 games played by 312 computers

	Rating	+	-	Games	Won	Oppo
1 Deep Rybka 4 x64 2GB Q6600 2,4 GHz	3212	27	-25	930	75%	3022
2 Deep Hiarcs 14 2GB Q6600 2,4 GHz	3205	29	-27	716	71%	3049
3 Deep Rybka 3 x64 2GB Q6600 2,4 GHz	3202	24	-22	1251	77%	2991
4 Naum 4.2 MP x64 2GB Q6600 2,4 GHz	3152	24	-23	919	64%	3050
5 Naum 4 x64 2GB Q6600 2,4 GHz	3137	25	-23	1030	74%	2960
6 Deep Junior 13.3 2GB x64 Q6600 2,4 GHz	3123	25	-25	760	57%	3074
7 Deep Shredder 12 x64 2GB Q6600 2,4 GHz	3111	20	-19	1381	65%	3003
8 Spike 1.4 MP 2GB Q6600 2,4 GHz	3106	20	-19	1320	64%	3009
9 Deep Hiarcs 13.2 2GB Q6600 2,4 GHz	3106	28	-27	632	60%	3034
10 Hiarcs 13.1 2GB Q6600 2,4 GHz	3104	25	-24	788	60%	3037
11 Deep Fritz 13 2GB Q6600 2,4 GHz	3095	28	-27	624	58%	3037
12 Deep Fritz 12 2GB Q6600 2,4 GHz	3094	21	-21	1040	56%	3050
13 Deep Rybka 3 256MB Athlon 1200 MHz	3078	39	-37	332	58%	3022
14 Deep Junior 12 x64 2GB Q6600 2,4 GHz	3074	24	-23	938	63%	2979
15 Deep Fritz 11 2GB Q6600 2,4 GHz	3066	19	-18	1424	63%	2977
16 Zappa Mexico II x64 2GB Q6600 2,4 GHz	3057	25	-25	776	59%	2992
17 Naum 3.1 x64 2GB Q6600 2,4 GHz	3043	27	-26	692	58%	2989
18 Deep Hiarcs 12 2GB Q6600 2,4 GHz	3021	18	-18	1391	54%	2990
19 Deep Shredder 11 x64 2GB Q6600 2,4 GHz	3017	22	-22	968	52%	3004
20 Glaurung 2.2 x64 MP 2GB Q6600 2,4 GHz	2994	21	-21	1085	57%	2942
21 Hiarcs 11.2 MP 2GB Q6600 2,4 GHz	2989	22	-22	963	49%	2993
22 Naum 4 256MB Athlon 1200 MHz	2988	28	-28	614	50%	2985
23 Shredder 12 256MB A1200 MHz	2977	32	-32	446	50%	2977
24 Deep Junior 10.1 2GB Q6600 2,4 GHz	2970	23	-23	886	46%	2998
25 Fritz 12 256MB A1200 MHz	2951	29	-28	620	64%	2853
26 Rybka 2.3.1 Arena 256MB Athlon 1200 MHz	2918	22	-21	1004	52%	2906
27 Jonny 4.0 MP 2GB Q6600 2,4 GHz	2904	29	-31	600	30%	3049
28 Deep Fritz 8 2GB Q6600 2,4 GHz	2904	23	-24	929	35%	3011
29 Shredder 8 MP 2GB Q6600 2,4 GHz	2887	24	-25	908	32%	3014
30 Deep Junior 8 2GB Q6600 2,4 GHz	2862	24	-25	952	30%	3012
31 CM King 3.5 x64 MP 2GB Q6600 2,4 GHz	2858	26	-28	752	29%	3011
32 Zap!Chess Zanzibar 256MB Athlon 1200 MH	2834	21	-21	1100	50%	2837
33 Fruit 2.2.1 256MB Athlon 1200 MHz	2829	18	-18	1465	59%	2767
34 Pocket Fritz 4 Naum 4.2 Ipaq 214	2803	70	-64	115	62%	2717
35 Chess Tiger 2007 256MB Athlon 1200 MHz	2795	21	-22	1154	35%	2905
36 Pocket Fritz 4 Hiarcs 13 Ipaq 214	2753	64	-58	140	65%	2648
37 Pocket Fritz 3 Hiarcs Ipaq 214 624 MHz	2727	53	-50	182	57%	2679
38 Revelation Shredder 12 XScale 500 MHz	2704	60	-58	140	56%	2664
39 Pocket Shredder Ipaq 114 624 MHz	2700	55	-51	180	63%	2611
40 CEBoard Fruit 2.3.1 XScale 400 400 MHz	2662	50	-49	195	56%	2623
41 Hiarcs Palm Chess 12.1 T5	2650	63	-64	120	48%	2662
42 Revelation Rybka 2.2 XScale 500 MHz	2629	47	-44	240	62%	2547
43 Pocket Fritz 2 XScale 400 MHz	2511	42	-42	265	52%	2495
44 Pocket Fritz 3 Glaurung 2.1 Ipaq 614C	2502	59	-67	140	33%	2629
45 Resurrection Rybka 2.2 StrongARM 203 MH	2485	43	-42	260	51%	2478
46 Resurrection Fruit '05 StrongARM 203 MH	2393	67	-62	120	60%	2320

HIARCS13.3 v STOCKFISH2.4 ON THE iPad AND iPhone

Long time reader **Philip Acock** has sent me the games from an 8 game Match he played on his iPad and iPhone between **Hiarcs 13.3** running on the iPad2 and **Stockfish 2.4** running on the slightly slower iPhone4. Very welcome, especially after **Amador Cuesta's** article in the last issue, which included some discussion on Smartphones, Phablets and Tablets!

To make life simpler for himself Philip played the 4 games with Hiarcs playing White first, then the 4 games with Stockfish as White.

Game 1 was a draw, but Hiarcs might have had a chance to win in a difficult endgame...

Hiarcs13.3 - Stockfish2.4

Game 1. C89: Closed Ruy Lopez: Marshall Attack

After White's 35.♔g2



35...♔f7?!

35...g5 was best, to stop what White should have played next. After 35...g5 White's best try would be 36.♔f3 ♔f7 37.♔e4± 36.♔f3?!

The win would come only from 36.h4! Now best is 36...♔f6

The only other try to save the game would be 36...g5 37.h5± e5 (37...g4 38.♔f2! ♔f6 39.♔e3 ♔f5 40.b4 e5 41.♔d3! 7.98/29 33 ; 37...♔f6 38.♔h3 a5 39.♔g4 6.18/28 33 ; 37...a5 38.♔f3 ♔f6 39.♔g4 a4 40.b3 b4 41.cxb4 9.82/28 35) 38.b4 e4 39.♔f2 ♔f6 40.g4 ♔e6 41.♔e3 ♔d5 42.a3! Now the



The iPhone4

king must move, so 42...♔d6 and 43.♔xe4 wins.

37.♔f3 ♔f5 38.g4+ ♔f6 39.♔f4 a5 40.b3 a4 41.bxa4 bxa4 42.g5+ ♔e7 43.♔e5 ♔d7 44.c4 wins.

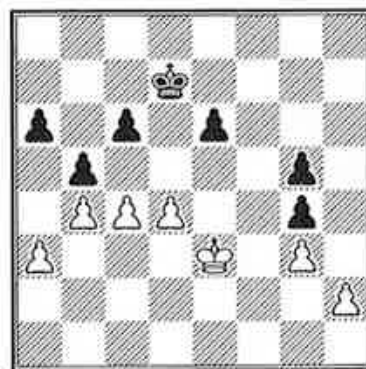
Back to the game...

36...g5 37.b3 ♔e7 38.♔e4 ♔d6 39.b4

At first I thought that 39.h4!? might give White a second chance to keep looking for a win, but after 39...gxh4 40.gxh4 ♔e7 41.♔e5 ♔d7 42.a3 ♔e7. For a while my PC engine still thought that either a4 or c4 might win, but eventually the evals dropped close to zero with either: 43.a4 ♔d7!=, or 43.c4 bxc4 44.bxc4 ♔d7=

39...g4 40.a3 g5 41.♔e3 ♔d7 42.c4!

Like it! – a sneaky last try for the win!



42...♔d6!

Not 42...bxc4?? which would give White a

chance to exercise serious technical ability employing the opposition, zugzwang and king triangulations – methods used to pass the move back to the opponent so he/it has to make moves it doesn't want to! So... 43.♔d2 ♕d6 44.♕c3 ♕d5 45.a4! What should Black do, it mustn't move its king away or White wins back the sacrificed pawn and then the game. So 45...c5 perhaps?! 46.bxc5 a5 47.♔d2! Black can't play ♕xd4 because of c6, so 47...♕c6 48.♕c2! ♕d5 49.♕c3 e5 (49...♕c6? 50.♕xc4 m/15) 50.dxe5 m/32 50...♕xc5 (50...♕xe5? 51.♕xc4 m/15) 51.e6 ♕d6 52.♕xc4 ♕xe6 53.♕b5 ♕d5 54.♕xa5 ♕c5 55.♕a6 ♕c6 56.a5 m/26 43.♔d3 ♕e7 44.♕e2 ½-½

Hiarcs13.3 - Stockfish2.4

Game 2. A35: Symmetrical English: 2 Nc3 Nc6 3 Nf3

1.♖f3 c5 2.c4 ♕c6 3.♖c3 g6 4.e3 ♖g7 5.d4 d6 6.♗e2 ♖f6 7.d5 ♕a5 8.e4 0-0 9.h3

9.0-0 is the most popular move here, and Black usually replies with 9...e5 or ♖g4, though 9...a6 also seems to have a good record. The Hiarcs 9.h3 is to stop ♖g4 of course

9...♖d7N

9...e6 is best according to theory. The move played isn't too bad, especially as the book alternative of 9...e5 has a dreadful record

10.♖c2 ♖e5 11.♖xe5 ♗xe5 12.♗h6 ♖e8 13.♖c1

I quite like the idea of expanding on the kingside with 13.h4 trying to take advantage of Black's cramped position. And if 13...♗d4 14.h5±

13...♗d7 14.0-0 a6 15.♕h1



The position seems close to equal now

Hiarcs
running on
an iPad



15...♖b8 16.f4 ♗d4 17.f5!?

This push instead of my earlier suggestion with the h-pawn also looks quite promising 17...b5 18.cxb5?!

Seems to let Black off the hook altogether, whereas with 18.fxg6 fxg6 19.e5! dxe5 20.♗d3± White would have an interesting initiative for the pawn

18...axb5 19.♗g4 ♖b7 20.b3 b4 21.♖e2 ♗f6 22.♖g3



22...♗b5?

This only succeeds in encouraging White to improve its kingside attack, which Hiarcs immediately does! Better was 22...♗e5 23.fxg6 hxg6 24.♖f2 which doesn't leave White with much

23.♖f3!?

Good, but even better was 23.e5! dxe5 (23...♗xf1? 24.exf6! exf6 25.♖xf1 with a terrific attack) 24.fxg6 hxg6 (24...fxg6?! 25.♗e6+!+-) 25.♗e6! ♕h7 26.♗xf7+- 23...♗d7

Best. Critter reckoned 23...♗e5 was the

only defence with any chance, but surely if 24.fxg6! fxg6 25.♖f2! Black's game would be in tatters. Even after 25...♔h8 White plays 26.♖f7 ♕d7 27.♖f1! ♖g8 28.♖xe7 and it's game over!

24.fxg6 hxg6?!

Recapturing with the wrong pawn. Instead 24...fxg6 25.♕xd7 ♖xd7, but still 26.e5! dxe5 27.♕e4 should keep White well on top **25.♕e6!**

Very nice, a true Hiarc move! 25.♖xf6! was another sacrifice that would have worked out nicely: 25...exf6 26.♖f2

25...fxe6

If 25...♖c8? 26.♖f2! ♖d8 27.♕h5! ♕xe6 (if 27...gxh5? 28.♖xf6 is m/5 28...♕xe6 29.dxe6 etc) 28.♖xf6! exf6 29.♕xf6+ ♔h8 30.♖h4 m/3

26.e5! ♔h7

Not 26...♕xe5?? 27.♖xg6+ ♔h8 28.♖f7 ♕xg3 29.♖g7#.

Nor 26...dxe5?? 27.♖xg6+ ♔h8 28.♕g7+ ♕xg7 29.♖f7 ♖g8 30.♖h5+ ♕h6 31.♖xh6# **27.exf6 exd5**

Or 27...♖xd5 28.♖d1! ♖e5 29.♕c1 ♖f8 30.♕e4 ♕c6 31.♕g5+ and Black has to give up his queen just to delay the end: 31...♖xg5 32.♕xg5 ♕xf3 33.fxe7 ♖fe8 34.gxf3 wins comfortably 1-0

28.♖f4!

A quiet and neat little move threatening ♖h4. Black would rather not move anything at this moment as, whatever it does, just makes things worse!

28...exf6 29.♖xf6 ♖g8



30.♖d2?

A Hiarc's mistake, though it doesn't matter as it still wins easily enough.

But there was a mate... 30.♖f7+! ♔h8 31.♖d2 g5 32.♖d3 ♕f5 33.♖xf5 ♖xf7

34.♖xf7 ♖a7 35.♖h5! ♖b8 36.♕f5 ♖f8 37.♕xf8+ ♔g8 38.♖f1 ♖c7 39.♕h6+ ♔h7 40.♕f7+ ♔g8 41.♖h8#

30...♕b5!

Stops the mate opportunity

31.♖f4 ♖gd8

31...♕d3 would have only delayed the end a little after 32.♖d1! ♕c2 33.♖f1!

32.♕f5!

Another brilliant Hiarc's find!

32...gxf5 33.♕f8! ♖d7

33...♖xf8 34.♖h6+ m/6 34...♔g8 35.♖g6+ ♔f7 36.♖e1 etc

34.♖h6+ ♔g8 35.♖g6+ ♔f7 36.♖e1 ♕e2

37.♖xe2 ♖e7 38.♖xe7+ ♖xe7 39.♖h7+ ♔xf8 40.♖g8# 1-0

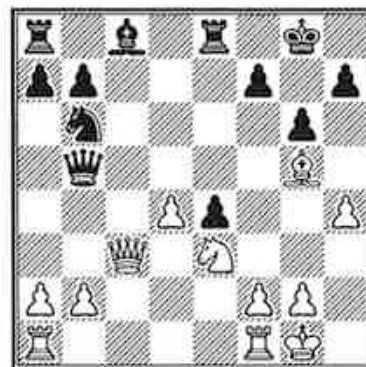
Hiarc's13.3 - Stockfish2.4

Game 3. D38: Queen's Gambit Declined: Ragozin Defence (4 Nf3 Bb4)

1.d4 d5 2.c4 e6 3.♕c3 ♕f6 4.♕f3 ♕b4 5.♕g5 ♕bd7 6.e3 c5 7.cxd5 exd5 8.♕d3 ♖a5 9.♖c2 c4 10.♕f5 0-0 11.0-0 ♖e8 12.♕d2 g6 13.♕xd7 ♕xd7 14.e4 dxe4 15.h4N

I prefer this to the other Book move, which is 15.♕cxe4, and Black usually plays 15...♕xd2 (but how about 15...b5!?) 16.♕xd2 15...♕xc3 16.♕xc4

16.♖xc3?! would be a mistake because of 16...♖xc3 17.bxc3 f6 18.♕e3 ♕b6. Black's advanced pawns look a little awkward, but he is a pawn up so this looks favourable 16...♖d5 17.♖xc3 ♕b6 18.♕e3 ♖b5



19.♖c7

Perhaps a little premature as the queen is easily driven back. I'd prefer 19.♖ac1!

19...♕d5 20.♖d6 ♕e6 21.♖e5 f5!? 22.h5!?

Active play by both computers!

22...♖ac8?!

Grabbing an open file is normally to be strongly recommended, but sometimes there are more pressing issues!

Defending with 22...♙f7 looks preferable, then 23.♖h2 ♖a6 24.hxg6 ♖xg6 25.♘xd5 ♙xd5 26.♙f4±

23.♙h6

With 23.♖fc1! Hiarscs could have grabbed a clearer advantage as, after 23...♖d7 (23...♖xc1+? 24.♖xc1 threatening ♖c7 24...♖d7 25.h6!+-) 24.♖xc8 ♖xc8 25.h6± 23...♖d7! 24.♖fc1



24...b6

Stockfish is hanging on, but you can see some of the dangers it is now in as, if it made the mistake of 24...gxh5? you'd get 25.♖g3+! ♙h8 26.♖e5+ ♙g8 27.♖xc8 ♖xc8 28.♖g3+ ♙h8 29.♘xd5 ♙xd5 30.♙f4 (threatens ♙e5+ mate next move) 30...♖e8 31.♙e5+ ♖xe5 32.♖xe5+ ♙g8 33.♖c1! winning

25.♖xc8 ♖xc8 26.b3 ♘xe3

26...gxh5? would still be a serious blunder allowing 27.♖g3+! ♙h8 28.♘xd5 ♙xd5 29.♙f4! again threatening mate

27.fxe3

Taking with the bishop was also okay: 27.♙xe3!? ♖d5 28.♖g3 ♙f7 29.hxg6+ hxg6 30.♖d1±

27...♖f7 28.♖g3 ♙d7 29.♙f4 ♖c2 30.♖g5 ♙f8 31.♖d8+ ♖e8 32.♖f6+ ♖f7 33.♖d6+

♙g8 34.h6!



34...♙c6

34...♙e8!? looks like a better defence, taking away the 8th rank checks. Now 35.♖b8 ♖d7 36.d5 is less effective, though you'd still have to fancy White's chances

35.♖b8+ ♙e8 36.a4

36.d5!? was also promising. White's better piece activity and threats along the a1/h8 diagonal maintain enough of an initiative that Black must play carefully at nearly every move

36...♖c3 37.b4 ♖d7

37...♖c4? is met by 38.b5! ♖c2 39.a5! bxa5 40.♖e5! ♙d7 41.♖xa5 and there is no effective way for Black to stop the impending ♖xa7 and a White win

38.a5! b5 39.d5! ♖c4 40.a6 ♖xb4



Black is a pawn up, but its queen is tied



iPhones compared, from left to right:
The newer and faster iPhone 5...
the 4S... and the iPhone4

down trying to defend the bishop/e8, pawn/a7, the g7 square and back rank mates. It can't do everything so White is winning, but this certainly a cracking game!

41.♙c7 ♖c4 42.♙b6

Or 42.d6!? ♖c6 43.♙d1+—

42...♖c8

I can't imagine many players would make the mistake of grabbing the bishop with 42...axb6 in view of 43.a7! after which 43...♖c8 44.a8♖ (m/12) 44...♙xb8 45.♖xb8 ♖e7 46.♙a7 ♔f8 (there is nothing better) 47.♖xb6! ♙f7 48.♙a8+ ♙e8 49.♖d4 ♖f7 50.d6 ♖e7 51.dxe7+ ♔xe7 52.♖d8+ ♔f7 53.♙a6 ♙c6 54.♙xc6 f4 55.♙f6# 43.♖xa7 ♖xa7

What else could Stockfish play? It releases itself from the pressure of mate threats, but greatly multiplies the value of White's a-pawn, but it's all Black could try 44.♙xa7 ♔f7 45.♙b6 ♔e7

Or 45...♙a8 46.a7 ♔e7 47.♖c1 ♔d6 48.♖c7 ♔xd5 49.♙xh7 ♙c6 50.♙g7 ♙h8 51.h7. With 2 pawns on the 7th White cannot help but win!

46.a7 ♙a8 47.♖c1! ♔d6 48.♖c7



48...f4

If 48...♙d7 49.♙b7 b4 50.♙b8 ♖xa7

51.♙xa7 winning

49.♙xh7 ♙d7 50.exf4

50.♙xd7+! ♔xd7 51.h7 fxe3 52.♙d4 was more clinical, but the game is over anyway 50...g5

This sacrifice gives White connected passed pawns and looks strange, but in fact there's nothing better

51.fxg5 b4 52.♙e3 ♙f5 53.♙b7 ♔xd5

54.♙xb4 ♙e6 55.♙b8

55...♙xa7 56.♙xa7 is showing m/12, but it's obviously all over anyway. 1-0

2 wins on the run for Hiarcs, but it couldn't get the hat trick and game 4 was drawn. So, at the half way stage with the four Hiarcs games with White, we have...

	1	2	3	4	5	6	7	8	/8
Hiarcs 13.3	½	1	1	½					3
Stockfish 2.4	½	0	0	½					1

That looks as if it might be good enough to win the match!? Let's see...

Stockfish2.4 - Hiarcs13.3

Game 5. C43: Petroff Defence: 3 d4

1.e4 e5 2.♖f3 ♖f6 3.d4 ♖xe4 4.♙d3 ♖c6 5.♙xe4 d5 6.♙g5 ♖d6 7.♙d3 e4 8.0-0 f6N

Black usually plays 8...exd3 9.♙e1+ ♙e7 10.♖xd3, and only then 10...f6 as in Sax-Horvath in 1995 which was drawn

9.♙h4 ♙g4

9...exd3 could still be played: 10.♙g3 dxc2 11.♖xc2 ♖d8 12.♖c3 ♙b4 13.♙fe1+ ♔f7 and Black stays the pawn up but its king might need to find somewhere safer to hide!

10.♙g3 ♖d7 11.♙b5 exf3 12.♙e1+ ♙e7?!

Rather than submit to the unpleasant pin I think 12...♔f7 is the better option, and after 13.gxf3 Black has 13...♙h5=

13.gxf3



13...♙h3?!

I'm not sure about this either, it looks threatening but can it really achieve much? I think Hiarcs should have tried to consolidate with 13...♙e6 and after 14.c4 a6 15.♙a4 perhaps try 15...dxc4. All the same this leaves White with 16.♙xe6 ♖xe6 17.d5 which would give Stockfish ♙+♖ for ♙+♖ plus lovely open central files aimed straight at Black's uncastled king.... mmm advantage

still with White!

14.c4! a6 15.♙a4 ♖d8?

Black's game is already difficult! 15...dxc4 was perhaps better, then 16.d5 b5 17.dxc6 ♖xc6 18.♘c3 bxa4. Black is 2 pawns up, but watch out: 19.♘d5! ♖d8 20.♗e2 ♖c5 (20...♖d7? 21.♙xc7 ♖c8 22.♗xe7+ ♖xe7 23.♖xe7+ ♔f8 24.♖ae1 is 1-0. There are other variations after 20...♖d7? but White's attack is frightening in all of them) 21.♗xe7+ ♖xe7 22.♖xe7+ ♔f8 23.♖ae1+-
16.cxd5 b5

Not 16...♖xd5? 17.♘c3 ♖c4 18.d5 and as the knight is pinned 18...0-0-0 is best, but 19.♖e4 ♖c5 20.♙xc6 bxc6 21.♖d3! winning
17.dxc6 bxa4 18.♘c3 ♔f8 19.♖xa4 h5!

This counterattack against White's ♔ is a good idea and gives Black a fighting chance



20.♖c4 h4 21.♘d5! hxg3 22.♖xe7 gxh2+ 23.♔xf2

Black's attack seems to be over and its pieces are left looking powerless

23...♖d6

Only chance, but...

24.♘f4!?

Well done Stockfish, clearing d5 and threatening ♘g6#. There were two very strong moves here, the other, 24.♖ae1! might even have been even more effective

24...♔xe7

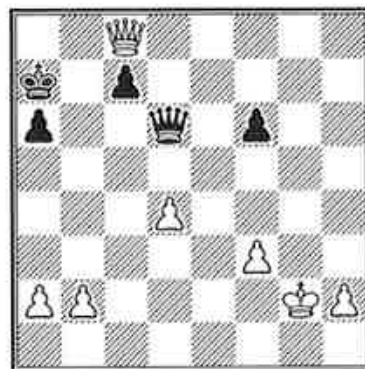
Again the only move offering any chance. Not 24...♖xf4?? 25.♖f7#

Nor 24...♖xe7? 25.♘g6+ ♔e8 26.♖e1 1-0

Over the next few moves Stockfish decides to convert its attack into a 2 pawn material advantage, which should be enough to leave it with a simpler endgame win

25.♘g6+ ♔d8 26.♘xh8 ♙e6 27.♘f7+ ♙xf7 28.♖xf7 ♖xc6 29.♖f8+ ♔d7 30.♖xg7+ ♔c8 31.♖g4+ ♔b8 32.♖e1 ♖d6 33.♖e8+- ♔a7

34.♖xa8+ ♔xa8 35.♖c8+ ♔a7 36.♔g2



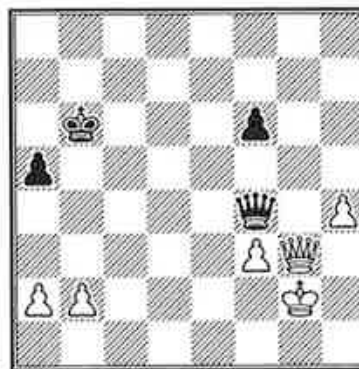
36...♖xd4

36...♖f4 looks to be best, giving the ♖ maximum scope to create problems, then White should play 37.h4! and Black must decide between 37...♖d2+ probably followed by ♖c1 to get into the queenside pawns, or 37...♖xh4 38.♖xc7+ ♔a8 39.♖c6+ ♔a7 40.♖c5+ ♔b7 when 41.a4 keeps White heading for the win

37.♖xc7+

Sometimes the analysis of even a top PC engine is useless! Here Critter (on my quad!) reckoned this was a mistake and that 37.b3 was correct. But it's nonsense as 37...♖d2+ 38.♔h3 ♖c1! would very likely get Black a draw instead of almost certain defeat!

37...♔a8 38.♖c8+ ♔a7 39.♖c3 ♖f4 40.♖e1 ♔b6 41.h4 a5 42.♖g3



White's progress is slow but Black mustn't exchange queens, so where should she go?!
42...♖h6?

42...♖f5 was the last Black try to delay what had appeared to be an inevitable conclusion. After 43.♖b8+ ♔c6 44.♖e8+ ♔d6 45.♖d8+ ♔c6 and White continues to struggle to find a way to get its pawns moving. But now...

43.♖d6+! ♔b7 44.♖d5+ ♔b6 45.h5! ♖f4

46.b3 ♖h6

46...f5!? gives Black some checks after 47.♖e6+ ♔b7 48.h6 ♖g5+ 49.♔f1 ♖c1+ 50.♔e2! However now White's king can get to the queenside and eventually escape the checks under the cover of the White pawns 47.a4! ♖f4

Critter reckons 47...♖g7+ still gives some sort of hope, but after 48.♔h3 there is no new check so 48...♖g1 49.♖b5+ ♔c7 50.♖xa5+ and the rest, much as in the final game moves, is easy

48.♖b5+ ♔a7 49.♖xa5+ ♔b8 50.♖b5+ ♔a7 51.♖c5+ ♔b8 52.b4 ♔b7

53.a5! ♖d2+ 54.♔g3 ♖e1+ 55.♔g4 ♖e6+ 56.♖f5 ♖g8+ 57.♔h3 the checks come to an end and White wins easily. 1-0

So that's 1 game back straightaway, it's now only 3-2 to Hiarcs and 3 games with Stockfish as White still to come!

Stockfish2.4 - Hiarcs13.3

Game 6. D36: Queen's Gambit Declined:

Exchange Variation: Main line (5 Bg5 c6 6 Qc2)

1.d4 ♘f6 2.c4 e6 3.♘f3 d5 4.♘c3 c6 5.cxd5 exd5 6.♙g5 ♙e7 7.♖c2 g6 8.e3 ♙f5 9.♙d3 ♙xd3 10.♖xd3 ♘bd7 11.0-0 0-0 12.♙ab1 ♙e8 13.♙f4

I'm not sure if either engine was still in its Book, but probably not as this is quite rare. 13.♘d2 is best known, then 13...a5 14.♙fc1 ♘e4 15.♙xe7 ♖xe7=

13...♘h5N

13...a5 and 13...♙f8 are known, but the 13.♙f4 line is rarely seen

14.♙h6 ♙d6 15.♖c2 f5 16.h3 ♘df6 17.♘g5 ♖c7 18.♙fc1 ♖e7 19.♖b3 ♖d7 20.♘f3 ♘e4 21.♖c2 ♘xc3 22.bxc3 b5 23.a4 a6 24.♙a1 ♖c7 25.♖a2 ♙ab8 26.axb5



26...axb5

26...♙xb5?? would have been a disaster:

27.c4! dxc4 28.♖xc4+ ♔h8 29.♙xa6+-

27.g3

Blocking the route to h2

27...♖b7 28.♖a6

Hiarcs next move looks okay, but its game then seems to start going downhill. So I started a long look for something better

28...♖c8?!

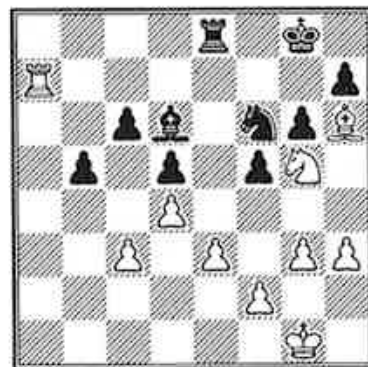
Perhaps 28...♖c7 29.♙f4 ♘xf4 30.exf4 and Black can probably play ♙b6, ♙e4, ♙e7, or maybe even 30...c5 31.dxc5 ♙xc5± to get rid of the backward pawn

Or there's 28...♙ec8 29.♖xb7 ♙xb7 and if 30.♙g5 ♙e7 things look okay. Black's c6/pawn is backward but that apart the game is close to equal

I think 28...♘f6!? is best, and if 29.♖xb7 ♙xb7 30.♙a6 ♙c8=

29.♖xc8 ♙bxc8 30.♙a7! ♙c7?!

A second mistake puts Hiarcs in real trouble. 30...♙e7 was better by far and after 31.♙xe7 (not 31.♙ca1?! ♘f6 32.♙xe7 ♙xe7 33.♙a7 ♙f8!± which only just favours White) 31...♙xe7 32.♙a1 ♘f6± and White's advantage is not yet enough to win 31.♙ca1! ♘f6 32.♘g5 ♙xa7 33.♙xa7



33...♙e7?!

Although this looked to be best a couple of moves ago, right now the bishop should have gone to e7: 33...♙e7! and after 34.♙c7 Black has a chance to sort out the backward pawn with 34...c5 35.dxc5 ♘e4! 36.♘xe4 dxe4+- True this leaves White a pawn up and with good chances, but Black might still hope to save the game (perhaps!)

34.♙a6! ♘e8 35.♙xc6

The much-used expression 'it's all a matter of technique from here' applies!

Hiarcs doesn't make any mistakes over the next 15 or more moves, but Stockfish is a pawn up and Black's c-pawn is isolated so, slowly but surely, White inevitably edges its way towards the win

35...♖b7 36.♔g2 ♖b8 37.♖a6 ♖c8 38.♖a7
♙c7 39.♔f3 ♙d6 40.♖b7 ♘c7 41.♔e2 ♖e8
42.♖b6 ♖d8 43.♔d3 ♙e7 44.♔f3 ♙d6
45.♙g5 ♖d7 46.♙f6 ♘e8 47.♙e5 ♙e7 48.h4
♔f7 49.♙b8 ♖d8 50.♔e5+ ♔f8 51.♖xb5

Finally the isolated pawn falls



51...♔f6 52.f3 ♖c8 53.♖b7 ♔g8

53...♔e8 saves the exchange but is no better, might even be worse after 54.c4! dxc4+ 55.♔xc4 ♔f8 (55...♔d7 56.♙c7) 56.♙d6!

54.♖xe7 ♖xb8 55.♔d7!

Virtually forcing more exchanges, which Black doesn't want of course but can't refuse or it would lose ♖ for ♔!

55...♔xd7 56.♖xd7 ♖b5 57.e4! dxe4+ 58.fxe4 fxe4+

58...♖b1 hoping for 59.exf5 wont work, White just plays 59.e5! and wins

59.♔xe4 ♖b3

What else? The game is lost

60.c4 ♖xg3 61.c5! ♖g4+

After this my PC engine is showing a long m/23 and Black's position is hopeless.

61...♖c3 would have delayed the PC's mate announcement, but not by much: 62.♔d5 m/25

62.♔e5 ♖g2 63.c6 ♖e2+ 64.♔d6 ♖c2 65.c7 h6 66.♖d8+ ♔g7 67.c8♖ ♖xc8 1-0

That made it 3-3, and game 7 was an exact repeat of game 5, all the way through to move 52... in fact Philip let it run to move 57 this time but of course the result was the same! I would normally restart a game when

I see the computers exiting their Books in an identical copy of an earlier game, but Philip allowed it, so Stockfish got another point and now led by 4-3.

Game 8! I'd have loved to be able to close with an exciting decider, but it was not to be!

Instead we got a line of the Sicilian Scheveningen where the theory goes deep.

In fact it's been so heavily analysed during the last few years that the GMs themselves no longer play it all that often.

As a result a somewhat unenterprising 37 move draw ensued, leaving Stockfish the match winner...

	1	2	3	4	5	6	7	8	/8
Hiarcs 13.3	½	1	1	½	0	0	0	½	3½
Stockfish 2.4	½	0	0	½	1	1	1	½	4½

I was impressed by the chess from both sides and found it an interesting match to analyse.

Sometimes, not always, there are just a few too many blunders in dedicated computer games – though I happily admit from a personal point of view that I can spot most of the real mistakes without help and can better understand what's going on in them. But even more misjudgements are being found nowadays because of the very fast hardware and much stronger engines that are available to us for our work!

On the other hand the top PC engine games when, as often, run on much faster hardware than I have, pose a real challenge when I am trying to work out where one side or the other made even some small mistake.

These iPad/iPhone games were nicely in the middle, no horror blunders, a lot of very good chess, both engines playing in quite active styles making it genuinely interesting to have myself a few good 'thinks' trying to work out what was going on. And if I couldn't it was Hiarcs on my quad to the rescue!

But the overall chess on this iPad/iPhone hardware is definitely good enough both for playing tough games against as well as using them for analysis etc., so these units are clearly well worth thinking about for both home and 'on the move' use!

After GRISCHUK v the ROBOT, its THE ROBOT WARS!

As I'd never previously heard of KUKA, and no-one can (or will!) tell us anything about the program or processor running inside this **Robot Chess Computer**, I wondered if maybe it was a bit of a gimmick when the Moscow organisers ran a special **Human v Robot Exhibition match**, as a spectacular run-up to the actual final match for **World Robot Championship**.

As reported in *SelS 161* the human sacrifice was the brilliant Russian GM and World Candidate qualifier **Alexander Grischuk** (he came 5th) and, although I knew nothing about KUKA, as it was a Blitz Match I assumed the computer would be favourite.

The whole event attracted massive spectator interest and, to avoid time being wasted changing KUKA from being Black to White to Black etc. between every game (not so easy with the Robots!), Grischuk had White for the first 3 games. The first two were straightforward draws with neither side finding any advantage, but KUKA castled into danger in game 3 as Grischuk had a rook on the open h-file. However, he missed his winning chance and 'they turned round' at 1½-1½.

With KUKA as White it was a very different story with the computer winning game 4 after an interesting struggle. In game 5 Grischuk over-reached, trying for an equalising win, and went down in only 28 moves, and game 6 lasted only 1 move more, so 4½-1½ to the Computer.

How, then, would the obviously strong KUKA get on against current Robot champion **CHESSka** in their World Robot Championship match!

KUKA: full name KUKA Monster, created by the German company KUKA Robotics.

CHESSka: Has the bigger reputation, it is the brainchild of Russian coach, father of WGM Alexandra Kostenuik and the Godfather of robot chess, Konstantin Kostenuik. It



has been around for a few more years than KUKA and has already won the World Robot Championship. It was also the first chess Robot to play games against the likes of Kramnik and Karjakin, as well as Alexandra Kostenuik. I understand it has some wins against well-known GMs, though I have been unable to find any game details from these matches. Very secretive!

There are other manufacturers and programmers showing interest in developing chess robots, particularly the FANUC Corporation in Japan and ABB of Sweden, but KUKA Robotics expected that their new Robot on the block would wrest the Title from **CHESSka**.

As in the Grischuk-KUKA match, it was decided to give one of the Robots White for the first 3 games and then again reverse colours, so here is Game 1...

KUKA Monstr - CHESSka

C50- Hungarian Defence with Guioco Piano

1.e4 e5 2.♖f3 ♘c6 3.♗c3 ♗f6 4.♗c4 ♗c5
5.h3 0-0 6.d3 ♗a5 7.♗xe5 ♖e7 8.♗xf7+
♙xf7 9.♗xf7 ♖xf7 10.0-0 ♗c6 11.♗e3 ♗b4
12.♖f3 ♗xc3 13.bxc3 d6 14.a3 a5 15.♗g5
♗e5 16.♖e3 ♗d7 17.f4 ♗c6 18.d4 ♖e8
19.♗xf6 ♖xf6 20.♖d3 ♖f7 21.d5 ♗e7 22.c4
♖f6 23.c5 ♗g6 24.c6 bxc6 25.dxc6 ♗c8
26.f5 ♗f4 27.♖f3 ♖d4+ 28.♗h1 ♖xe4
29.♖b3+ ♖d5 30.♖b8 ♗xg2 31.♖xc8+ ♗f7



The board looks a bit chaotic, but the position is probably fairly equal

32.♖b7??

32.c4 ♖xc6 33.♖ab1 looks best, and
32.♖f2 ♗e3 33.♗g1 also seems okay
32...♗e3?

32...♗h4! would have been m/12. Missing this made me wonder if the Robots are quite as good as the KUKA win over Grischuk had made me believe, but they were choosing their moves very quickly (see comments later) so that could be the cause of the miss!?

33.♖f3 ♖e5?

Here 33...a4! would have been winning for Black, but there's no mate in sight of course, just White has no good moves! It needs to defend against 34...♖e7! leaving its own rook pinned by Black's queen... which in fact it would be m/11. So there's two choices: a pawn sac' to delay this, or move the king.

34.c4 34...♗xc4 35.♖g1 ♖e7 36.♖gg3, but Black is still winning after 36...♗d2!]

The immediate 34.♖g1? fails as 34...♖e7!
35.♖gg3 ♖d1+ 36.♗h2 ♖e2+ 37.♗g1
♖e1+ 38.♗h2 ♗f1+ 39.♖xf1 ♖xf1 m/12

Finally 34.♗g1 doesn't work because of 34...♗d1! but if White also then finds the

best defence 35.♖a7 to stop ♖d4+ then there's no quick win at all and Black's best is probably 35...♗f6. But there's quite a lot more play in the game after 36.♖xd1 ♖xd1+ 37.♖f1-+

34.♖b3

The game is now drawn...

♗c4 35.♖d3 ♖xc6 36.♗g1 ♖c5+ 37.♗h1
♗f6 38.♖af1 ♖e3 39.♖xe3 ♗xe3 40.♖f3
♗xf5 41.♗g2 ♗g5 42.♖d2+ ♗g6

... except that White's flag fell before it could play 43.♖c3. CHESSka's clock showed it had 15 seconds left. 0-1

Game 2, again with KUKA as White, was drawn due to a 3-fold repetition with hardly any time left on either clock! Neither side had ever held any significant advantage.

In game 3 the 'chess' was again totally level, until an aimless move by CHESSka momentarily gave KUKA a chance of an advantage...

KUKA Monstr - CHESSka

C50- Hungarian Defence with Guioco Piano

1.♗f3 ♗f6 2.♗c3 ♗c6 3.e4 e5 4.♗c4 ♗c5

So far as game 1, though a different move order, but now White varies

5.0-0 0-0 6.d3 h6 7.h3 a6 8.a4 d6 9.♗d2
♗d4 10.a5 ♗d7 11.♗xd4 ♗xd4 12.♗e2 ♗a7
13.♗g3 ♗e6 14.♖e1 c6 15.♗xe6 fxe6 16.♗e3
♗xe3 17.♖xe3 ♖c7 18.♗f1 d5 19.♗d2 ♖ad8
20.♖e2 ♖fe8 21.♖g3 ♗h8 22.♖a3 ♖d7
23.♖e3 ♖dd8 24.♖d1 ♗g8 25.♖e1 ♖d6
26.♖b3 ♖c7 27.♖a1 c5 28.♗f3 ♖c8 29.♖a4
♗h7 30.♖a3 ♖e7 31.♖b3 ♗g8 32.♖c3 ♗d7
33.♖aa1



The game is pretty equal - White has the

better pawn structure but Black a threatening centre and the chance of the half-open f-file

33...♖ce8?!

33...♖f7 would have been fine and left them just shuffling their pieces around for a few more moves 34.♖ac1 ♖cf8 35.♗b3=

34.♖e2! ♗d6

34...♖f7!?

35.♖b1! ♖f7?!

Okay before, but not now. 35...♖b8 was the better reaction to after White's ♖b1



36.♗a3

36.b4 was White's chance! Whether it's a 'big' chance, I'm not so sure, but it could certainly have opened up some possibilities for KUKA:

(a) 36...cxb4 37.♗xb4 ♗xb4 38.♖xb4±

(b) 36...d4!? 37.bxc5 ♖xc5 38.♗b4±;

(c) the surprising 36...♖xf3 37.gxf3 d4 might be playable: 38.bxc5 ♖xc5 39.♗d2 ♖f8!±

36...♗c7 37.♖d1?!

Just shuffling pieces again, it's a draw.

37.b4!? was again the most interesting try,

but 37...cxb4 38.♗xb4 is less effective now

due to 38...♖b8 threatening to come to c6

37...♖f8 38.exd5 exd5 39.♖de1 ♖xf3

40.gxf3 ♖g6 41.♗a4 ♖e6 42.♖e3 ♖f4

43.♗xf4 exf4 44.♖xe6 ♗xa5 45.♖1e5 ♗a1+

46.♖g2 ♗xb2 47.♖xd5 a5 48.♖xc5 a4 49.c4

a3 50.♖b5 ♗c3

... but once more KUKA's flag fell first, this time as it played its 51st move 51.♖e8+ 0-1

So KUKA as White is losing ½-2½ due to time trouble, and I went through game 4 in just the same way as I did the first 3, looking for moments where Hiarcs or Houdini could



find something to criticise or get excited about. You've already seen everything of interest that I found in games 1 and 3 - not much! - and game 4 was the same, an equal game of gentle sparring with, almost inevitably KUKA's flag falling first, at move 52 this time. So it was its third loss on time, and on each occasion CHESSka's clock showed only a few seconds left in these drawn positions. In my view a great shame, not a satisfactory way to determine such an Event. I know they want to test the Robot mechanics as well as the chess, but I think a longer time control (G/10) or one with a time increment (G/2+5 perhaps) needs to be used.

Seeing this outcome was a bit of a let-down to me, and I can imagine a sense of disappointment amongst the spectators that 3 of the 4 games ended on time losses in equal positions. Perhaps this is why they stopped the match at 3½-½ to CHESSka, instead of completing games 5 and 6.

If you've got a fast Internet connection you can go to **YouTube** and do a search on 'CHESSka'. You'll find yourself directed to film of some of the games, taken live! It's quite amazing to see their quick, smooth movements, putting any captured pieces into little boxes, then their arms swivelling round to press the clock buttons!

But you'll also see that, brilliant as it is, and even though they seem to make their chess decisions very quickly, all the movement needs a few seconds to complete accurately on every move. Neither Robot looks that likely to complete a game lasting more than 60 moves at G/5 to me.

THE MEPHISTO WUNDERMACHINES!

SELECTIVE SEARCH SUBSCRIBER STEVE BLINCOE PLAYS 2 MATCHES WITH HIS!

We introduced **Steve Blincoe's Mephisto WonderMachine** in issue 161 when it played a Match against one of **Ruud Martin's** creations, the **Resurrection1 Fruit 2005**, and the **WonderMachine** won that by an impressive 8-2, a **2635** performance!

We started our second match in the last issue, knowing it would be tougher as it's Ruud's **Resurrection2 Rybka2.2** which is **2632** with the SSDF. We expected a good match and that it should be close!

Steve was using the same conditions as in his previous matches:

- 10 games
- Time control 1 minute per move
- The computers are forced to open once each with: **1.e4, 1.d4, 1.c4, 1.Nc3, 1.Nf3** but they use their own books straight after White's first move.

The first 4 games were all won with the side playing the White pieces, but we noted that the 1.c4 openings weren't so successful for White - **ResRybka** got a draw but the **Wondermachine** lost, so it left the score favouring **Resurrection Rybka**, with 4 games to go...

	1	2	3	4	5	6	7	8	9	10	
ResII Rybka	1	0	1	0	½	1					3½
WM-Genius5	0	1	0	1	½	0					2½

The White opening for games 7 and 8 is **1.Nc3**

Steve's Introduction to Game 7.

ResII is out of book first at move 9, **WM** is out on move 11. The game proceeds normally until move 33 when the **ResII** undertakes a standard pawn exchange offering to exchange queens. The **WM** at first considers the exchange but then rejects it moving its queen deep into White's position and weaving a mating net! **ResII** offers a rook to prevent the attack which the **WM** declines in order to further tighten its death grip. **ResII** can do little to prevent the mate and **Wunder Boy** brings home the bacon, a beautiful example of **Richard Lang** programming at his very best.

RESURRECTION II RYBKA -

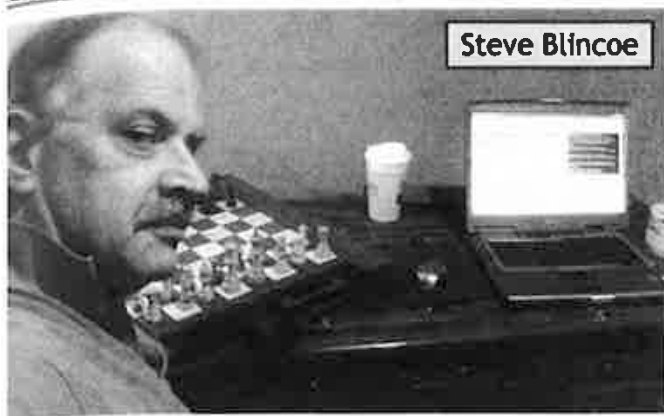
MEPHISTO WUNDERMASCHINE GENIUS 5

Game 7. C18: French: 3 Nc3 Bb4: Main line: 7 h4 and 7 Qg4

1.♠c3 d5 2.e4 e6 3.d4 ♠b4 4.e5 c5 5.a3 ♠a5 6.b4 *Instead of sacrificing the d4 pawn White can instead choose to win one with 6.dxc5 ♠xc3+ 7.bxc3, but after 7...♠e7 only 8.♞g4 has any sort of winning record for White, and even then 8...♞a5 9.♠d2 ♠g6 has proved quite successful for Black 6...cxd4 7.♠b5 ♠c7 8.f4 ♠c6?! Quite rare and it puts Rybka out of its Book. 8...♠d7! is most popular and almost certainly best, also there is; 8...♠e7 9.♠f3 ♠ge7 10.♠d3 ♠b8 ResII has found theory moves but now, instead of 11.♠bxd4 it plays 11.0-0 ...and WM-Genius goes out of Book 11...a5N I did find 11...♠g6 and 11...a6 in my database, but the WM-Genius move seems as good 12.bxa5 ♠xa5 13.♠d2 ♠a8 14.♠fxd4 14.♞e2 h6= 14...♠xd4 15.♠xd4*



White has won its pawn back and the ♠ looks good on d4! 15...♠a7 16.c3 ♠c5 17.♠e3 0-0 The pawn can't be taken because after 17...♠xa3?? 18.♞b3!+- wins the pinned bishop 18.♠f2 b6 19.♞c2 ♠g6 20.a4 ♠b7 Now White must decide whether to commit its queen to the queenside or kingside 21.♞b3 Instead 21.♞e2!? ♞e7 22.♠f3 looks quite promising! 21...♞d7 22.♠b5 ♞e7 23.♞d1 ♠fc8 24.♞d3 ♞d8 25.♠f3 ♠e7 26.♠g3 ♞c7



Steve Blincoe

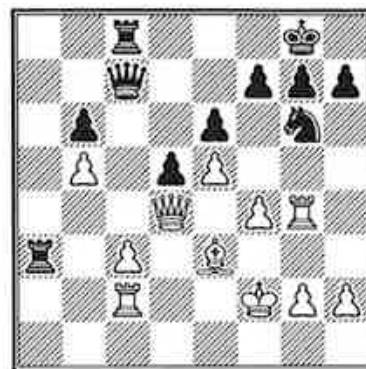


27.♖c1 Rather than reacting to the threat against the c3-pawn White could have tried 27.f5!? exf5 28.♕xf5, and after Black wins its pawn with 28...♗xc3 29.♗xc3 ♖xc3 30.♕xe7+ ♕xe7 31.♕xb6 gets the pawn back. Also the ResII passed a-pawn is well supported as it moves towards a7 so is probably stronger than Black's passed d-pawn 27...♗a3 28.♖c2 ♗c5



29.♖g4? A strange choice. Perhaps ResII saw a line where f4-f5 would leave this rook attacking d4, but instead it should have played 29.♖c1 ♕e7 (29...♗xd4?! 30.cxd4 ♗d8 31.f5 seems to favour White) 30.♗e2 which looks about equal to me 29...♗xd4! 30.♗xd4 ♗c6 31.♕f2?! Another surprise. After 31.♗xb6 ♗xb6 32.♕xb6 ♕xb5 33.axb5 ♖ab8 34.♗e3 ♖xb5 my PC insists Black has a 0.50 advantage, because of White's

isolated c-pawn I guess, but I don't think there's too much in it 31...♗xb5 32.axb5 ♖a3



White's last two moves have already put it at a disadvantage. But as Steve points out the WM-Genius reply to White's next move is an outstanding response, so we need to see what ResII should have played 33.♗xb6 The pawn on c3 is attacked 3 times, so trying to save it with 33.c4 seems best. 33...dxc4 is playable: 34.♗xb6 has to be met by 34...♗xb6 35.♕xb6 and Black's chances are better after 35...♖b3! Or instead Black has 33...♖b3 threatening ♖xb5 as the c4-pawn is pinned, and now 34.♗xb6 ♗xb6 35.♕xb6 ♖xc4 36.♖xc4 dxc4, but perhaps 37.f5! ♕xe5 38.♖e4 gives White some chances of saving the game 33...♗c4! As Steve tells us that WM-Genius did first consider the exchange with 33...♗xb6 we'd better see what might have happened next... 34.♕xb6 ♖b3 35.♗e3 ♖xb5. Material is level again. White's isolated c3-pawn remains a problem but 36.♖g3 followed by ♗d2 will give it the protection it needs, so White might have held. However WM-Genius had successfully found the killer move! 34.♗d4? Instead of offering the rook White could have tried 34.♗d4, but 34...♗xb5 35.♗d2 ♕e7. Now the neat 36.f5 enables the ♖g4 to get over to the queenside with 36...♕xf5 37.♖b4 but 37...♗c6 should win, though there's still some work and care needed to secure the full point 34...♗d3! 35.♖e2 ♗f5 36.♗d6?! If 36.♕f3 which is better, then 36...h5 37.♖xg6 ♗xg6 38.♕f2 (to escape the dual check threats of ♗g4+ and ♗d3+) 38...♗g4 39.g3 ♗h3 40.♕e3 h4! 0-1 36...♖a1 37.♕g3 h5! 38.♖xg6



38...♖f1! Brilliant! and My PC says m/16.
38...fxg6 is obvious and even wins a bit
quicker, but it's nothing like as dramatic as
ignoring the en pris rook! 39.♕e3 ♖g4+
m/11 39.♖e7 ♖xf4+ 39...♖xc3+! was m/15
40.♔h3 ♖f5+ 41.g4 hxg4+ 42.♔h4 ♖xg6
43.♖g5 ♖h7+ 44.♔xg4 ♖f5 45.♖f2 45.♖xf5
hangs on for a little longer: 45...♖xf5+
46.♔g3 ♖a8 m/13 45...♖xg5+ 46.♔xg5 ♖a8
47.♔g4 g5 48.♖b2 ♖e4+ and White has seen
the coming mate and resigns. 49.♔g3 ♖a1
50.b6 ♖f4+ 51.♔g2 g4 52.♖f2 ♖e4+
53.♔g3 ♖g1+ 54.♔h4 ♖h7+ 55.♔g5
♖g6+ 56.♔h4 ♖h6# 0-1

The scores are level again at 3½-3½!

Steve's Introduction to Game 8.

WM has White and opens with 1.Nc3 and
is out of book first at move 16. This is the
first game in any of the 20 games, including
the match against Fruit to see 0-0-0 castling
by any computer, and here *both* computers go
0-0-0 which results in a double edged tactical
game where no side can launch a full out
attack without exposing its own king to
attack. Eventually the ResII wins a pawn on
move 45 but the WM is able to hunker down
and hold the draw.

MEPHISTO WUNDERMASCHINE GENIUS 5 - RESURRECTION II RYBKA

Game 8. B67: Sicilian: Richter-Rauzer: 7...a6 8
0-0-0 Bd7, lines without 9 f4 Be7

1.♘c3 c5 2.e4 ♘c6 3.♘ge2 d6 4.d4 cxd4
5.♘xd4 ♘f6 6.♕g5 e6 7.♖d2 a6 8.0-0-0
♘d7 9.f4 h6 10.♕h4 g5 11.fxg5 ♘g4 12.♘f3
hxg5 13.♕g3 ♕e7 14.♕e2 ♘g5 15.♔b1 b5

WM-Genius now goes out of its Book.
Theory's main move is 16.♖df1, but 16.a3



Steve's WonderMachine with Genius5

which WM plays is also known – Unzicker
played it in a 1998 game 16.a3 ♘xf3N
16...♖b8 17.♔a2 a5 was the Unzicker game,
won by Black 17.gxf3 ♘e5 18.f4 gxf4
19.♕xf4 ♖c7 20.♖hf1 ♖c5 21.♕e3 ♖c7



22.♕h6?! Here 22.♕d4 seems better to me,
allowing the pawn to go as, if 22...♖xh2
White has 23.♖e3 threatening ♖e3-g3-g8,
so 23...♖h8 24.♖h1± 22...0-0-0! 23.a4 bxa4
24.♕g7 ♖h7 Not 24...♖xh2?? 25.♕xa6+
♔b8 26.♖xh2 1-0 25.♕f6 Of course
25.♕xa6+ which would have destroyed
Black in the previous note, wasn't as effec-
tive here... but was still a better choice. Then
25...♔b8 26.♕xe5 dxe5 27.♖e2= 25...♕xf6
26.♖xf6 ♔b7 27.♖xd6 ♖xd6 28.♖xd6 ♖xh2
29.♕xa6+ ♔c7 30.♖d1 ♖b8 31.♔c1 ♕c6
32.♖d4 ♔b6 33.♕e2 ♔c5



Black is now clearly on top, its rooks are better, the a-pawn though isolated could be dangerous whereas White's on e4 could be vulnerable, and Black's ♖ is getting involved as well 34.♞d1 ♞b4 35.♙d3 ♞h8 36.♞e1 ♞hb8 37.♙d1 ♞a8 38.♙f2 a3 39.bxa3 ♞xa3 40.♙d2 ♙d4 41.♞d1



41...♞a2? According to my PC 41...♞b2 was the only way to play for the win here: 42.♙e1 (42.♙f1? ♞ba2! 43.♙e1+ ♙e3-+) 42...♙e3 42.♙e2 ♞bb2 43.♞d2 ♙xd3 44.♞xd3+ ♙c4 45.♙e3 Avoiding the blunder 45.♞xf7?? ♞xc2+ 46.♙d1 ♞cb2+. Now the game should be a draw even though Black wins a pawn 45...♞xc2 46.♞d4+! The only move to draw as WM-Genius correctly drives the Black king away from the centre and also the kingside pawns 46...♙b3 47.♞d3+ ♙b4 48.♞d4+ ♙a5 49.♙d3 ♙b5 50.♞d8 ♙xd3 51.♞xd3 ♞c7 52.♞b3 ♞h2 53.♙f4 ♞h5 54.♞b1 ♞b5 55.♞g1 ♙b6 56.♞g7 ♞b1 57.♙e5 ♞c5+ 58.♙d4 ♞d1+ 59.♙e3 ♞c3+ 60.♙e2 ♞d4 61.♞gxf7 ♞xe4+ 62.♙d2 ♞c6 63.♙d3 ♞e1 64.♙d2 ♞e5 65.♞d7 ♙c5 66.♞f3 ♞d5+ 67.♞d3 ♞xd7 68.♞xd7 ♞d6+ 69.♞xd6 ♙xd6 70.♙e2 ♙d5 71.♙d3 e5 72.♙e3 e4 73.♙e2 ♙e6 74.♙f2 ♙f5 75.♙e3 ♙e5 76.♙e2 ♙d4 77.♙d2 ♙e5 ½-½



A Ruud Martin Resurrection board

Steve: I called it a draw here. WM understands the concept of "King Opposition" and has been replying instantly since move 70 showing 0.00.

	1	2	3	4	5	6	7	8	9	10	
ResII Rybka	1	0	1	0	½	1	0	½			4
WM-Genius5	0	1	0	1	½	0	1	½			4

So as we go into our last 2 games the scores remain level on 4-4! Games 9 and 10 have White opening with 1.Nf3.

Steve's Introduction to Game 9.

For ResII's last game with White I open with 1.Nf3 for it. WM is out of book first on move 10, ResII was out on move 11. Once out of book WM moves a knight to the edge of the board which significantly reduces its control of the centre. Slowly the ResII increases the pressure, wins a pawn and then eventually wins a bishop for nothing. A humbling loss for the WM in a critical game.

RESURRECTION II RYBKA -

MEPHISTO WUNDERMASCHINE GENIUS 5

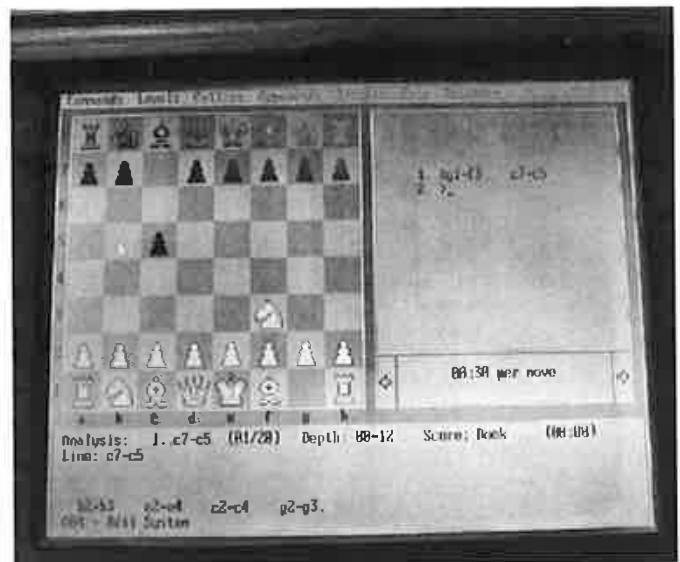
Game 9. D46: Semi-Slav: 5 e3 Nbd7 6 Bd3,
Black avoids the Meran

1.♙f3 d5 2.d4 e6 3.c4 c6 4.e3 ♙f6 5.♙d3 ♙bd7 6.0-0 ♙e7 7.♙c3 0-0 8.b3 b6 9.♙b2 ♙b7 10.♞e2 Surprisingly putting WM-Genius out of Book, both this and 10.♞c2 are popular lines 10...dxc4 10...c5 and 10...♞c8 are both better known and have over 100 games between them in my

PowerBooks! 11.bxc4 ♖c7 Even though it is still finding theory moves WM plays another lesser known one. 11...c5 12.♖ad1 cxd4 13.exd4 ♖e8 is the main line, as in Yakovich (2600) – Baramidze (2543), Dresden 2007, ½-½ **12.e4 ♜h5?!** As Steve says in his introduction, this knight move to the edge of the board is not so good, though surprisingly I did find a game in my PowerBooks... but White won! Better, though untried, would be 12...e5 13.♜xe5 (or 13.d5 ♙c5 14.♖ad1 ♖ac8=) 13...♜xe5 14.dxe5 ♜d7 and, though 15.f4 looks to give White a big centre, 15...♜c5 should lead to an interesting game with equal chances **13.g3! ♖fd8N** The game in my database went 13...g6 14.♖ad1 ♖ad8 15.e5! and White won in 28 moves **14.e5 ♜f8 15.♖ad1 ♖d7 16.♖e3 g6**



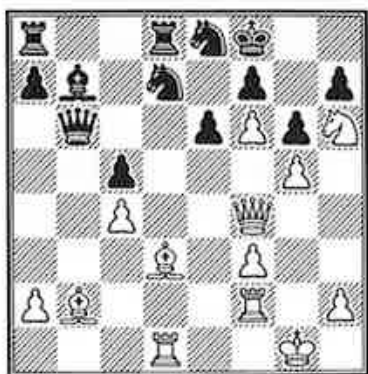
An indication of the trouble that Black is in. Though this move releases the ♜f8 from protecting the vulnerable h7 square, in doing so it takes the g6 square off the knight which now has nowhere to go! **17.g4! ♜g7** Both knights are suffering! **18.♜e4** White is so much on top it could afford to miss the strong 18.c5! bxc5 19.dxc5 ♖b8 (Black could try sacrificing the exchange with 19...♖xd3 20.♖xd3 ♙a6 which appears to get the ♖ for ♙ back, but 21.♜e4! ♙xd3 22.♖xd3 with ♜d6 to come would suit White nicely) 20.♜e4+- **18...c5! 19.dxc5 bxc5?!** A shame. With 19...♖ad8! as the follow-up to the excellent 18...c5 Black would have created some counter-chances without quite equalising 20.♜f6+! ♙xf6 21.exf6 ♜e8 22.♜e5 ♖dd8 23.g5 ♜d7 24.♜g4 ♖c6



The PC screen on Steve's WonderMachine!



25.f3 The mate threat of ♖g2 might have caught out a human – busily looking only at his own attack – but not a computer! **25...♜d6?** It was hard if not impossible to find a good move for Black. In fact the knights, though much maligned by me, were here the only protectors of Black's besieged king and this makes it more vulnerable. Are there alternatives that don't do any harm? If 25...♖b6 26.♖d2 ♜f8 27.♖fd1+- Or 25...♖ab8 which is met by 26.♙c3 and now if 26...♖c7 27.♖e1 again. Finally if 25...♖c7 we have a line which demonstrates some of White's threats: 26.♖e1 ♖ab8 27.♙xg6! hxg6 28.♖h4! 0-1 **26.♖f4! ♖b6 27.♖f2** 27.♜h6+ ♜f8 28.♙xg6! hxg6 29.♖xd6 ♖xb2 30.♖xe6! is another great way to win, and 27.♙c3 was also very strong **27...♜e8?** 27...e5 was the only chance, but even then White should win fairly quickly after 28.♙xe5 ♜xe5 29.♜xe5 **28.♜h6+ ♜f8**



29.♔f1? Missing a fast and decisive win with 29.♔h4! and there is no defence: 29...♖exf6 (29...e5 30.♖xf7 ♗xf7 31.♔xh7+ m/7. Or 29...♖dx6 30.gxf6 e5 31.♖xf7) 30.gxf6 e5 31.♖xf7 1-0 29...♔c7 30.♔e3?! 30.♔h4! 30...♖b6! ResII is still winning, but Black can create a few complications now 31.♔e5 ♔c6 32.♖fd2! ♖xd2 33.♔xd2 ♖c8 34.♔e2 ♔a6 35.♔a5?! What on earth did it want to put the queen on the wrong side of the board for?! Correct was 35.♔g3! ♔b7 36.a4! which looks much better 35...♔b7 36.♔d2! ResII puts the queen back! 36...♔a6 37.♔c1 37.♔g3! again is better, as is 37.♔f4. White is fortunate to be sufficiently on top that it seems able to get away with these missed opportunities so far 37...♔a8?! There is no purpose to this, Black has to try and slow down ResII's attack, or give it something to think about. So 37...♔b7 was the best try on this move, and also the next 38.♔g3! ♔a4?! 39.♔d2! ResII is finally back on track at, and, as already mentioned, is fortunate that it's attack since move 26 was so good it could afford all the indecision 39...♔c6 40.a4! A decoy!



40...e5 Black avoids the trap of either 40...♖xa4? 41.♔d7 m/11, or 40...♔xa4?? 41.♔d6+ ♖xd6 42.♔xd6+ ♗e8 43.♔e7#

41.♔c3 But the rest is straightforward anyway and White makes no more major mistakes 41...♖d7 42.♔xe5 ♔e6 43.♔g3 ♖b6 44.♔f1 ♖xc4 Sacrificing a minor piece to try and delay the end is probably as good as anything 45.♔c1?! 45.♔e1! here would have been deadly: 45...♔d5 46.♔e7! But it doesn't really make any difference any more 45...♔d8 46.♔xc4 ♔xc4 47.♔xc4



A piece up and White must win 47...♔d1+ 48.♔g2 ♔xc4 49.♔xc4 ♔d5 50.♔e4 ♔d7 51.♔h3 a6 52.♔f2 ♔d5 53.♔e7 ♖d6 54.♔g3 ♖f5 55.♔xf7+ 55...♔e8 56.♔xh7 ♖xh6 57.gxh6 ♖f5 58.♔e7+ ♖d8 59.♔c7+ ♖c8 60.h7 ♖b7 61.h8 ♔h5+ 62.♔xh5 gxh5 63.f7 c4 64.f8 ♔c3 65.♔e8 a5 66.♔g3+ ♖a6 67.♔b5# 1-0

A big disappointment after WMGenius had fought its way back into the Match. ResII now leads 5-4 and WM must win the last game to equalise, but does have White!

Steve's Introduction to Game 10, the final game.

WM has White and has its turn opening with 1.Nf3, and is out of book first on move 9. No mistakes from either computer in this game. But things got a bit tense around move 34 when the ResII advances its c-pawn to the 3rd rank. However the WM had its own advanced pawn on the a-file that had to be dealt with....

MEPHISTO WUNDERMASCHINE GENIUS 5 - RESURRECTION II RYBKA

Game 10. E63: King's Indian: Fianchetto: Panno Variation with 7...a6

1.♖f3 ♖f6 2.c4 g6 3.d4 ♔g7 4.g3 0-0 5.♔g2 d6 6.♖c3 The opening has ended up a

straightforward King's Indian Fianchetto 6...♖c6 7.0-0 a6 The Panno Variation. Now White now has a wide choice of moves, but while Steve knows that WM-Genius must play for a win, he has no way of telling this to the computer.

Here are the figures for lines with 100 games or more, and given in percentages:

8.d5. 38-27=35

8.♖d3. 43-19=38, good record, but high on draws

8.♖e1. 36-31=33, low on draws, but only a small plus score

8.♗d2. 34-28=38, too many draws

8.e4. 25-45=30, few draws, too many losses

8.♗g5. 27-37=36

8.♗f4. 51-25=24, low on draws and a very good record

So Steve would probably hope for 8.♗f4,

8.d5 or 8.♖e1. What WM-Genius plays is...

8.h3?! Prophylactic but cautious and maybe a bit drawish, its +- = figures are

37-27=36. 8...♗d7 Not new, but 8...♖b8

gets played 80% of the time 9.♗f4N Now on its own WM misses the theory moves. 9.e4

is the most popular reply and it has a good record (9.e4 e5 10.dxe5 (best. 10.♗e3 only

scores 50% as Black replies with 10...exd4, and there's 10.d5 which is seen less often

though it scores 58%) 10...dxe5 and here

11.♗e3 scores nearly 70% for White. 9.♗e3

is played occasionally but only scores 50%,

9.b3 is rare but does a bit better 9...♖e8

10.d5 ♖a5 11.♖d3 c5 12.e4 b5 13.♗d2

♗h5 14.♗e3 It was important to withdraw

the bishop. If 14.cxb5? ♗xf4! 15.gxf4 axb5

16.♖fc1 b4 17.♗d1 e6+ would be very

uncomfortable for White to say the least

14...bxc4 15.♖e2



15...♖b6?! The semi-open b-file aiming at White's b2-pawn is important, but it was better to put the rook there with 15...♖b8



Ruud Martin's latest products are the beautiful Revelation boards

and, after 16.♖ab1 ♗f6, ResII's extra pawn is pretty weak on the c-file but Black would have a small advantage anyway 16.♖ab1

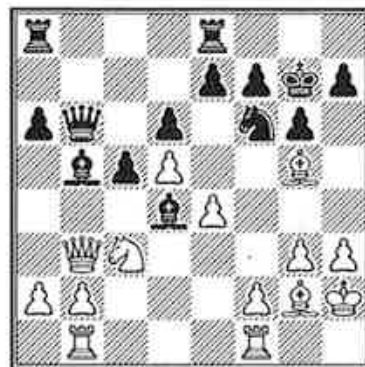
♗d4 17.♗h2 ♗f6 18.♗g5 ♗g7 19.♗xc4?

Walking into an awkward pin which Black should have made more of. Definitely better

was 19.♗f3 h6 20.♗f4 g5 (20...e5?! 21.dxe6

♖xe6 22.♖d2=) 21.♗d2+ 19...♗xc4

20.♖xc4 ♗b5 21.♖b3



21...♗d7?! ResII might well have been on

the way to settling the match result right

here with 21...♖eb8! To save the ♖f1 my

laptop insists that 22.♖fd1 is best, then

22...h6 (22...♗xf2?! 23.e5!) 23.♗xf6+ ♗xf6

24.♖c2 ♖a5+ 22.♗xb5?! Strange how

they both misunderstand a position together, especially as they are quite dissimilar

programs. 22.♖fd1! was the correct reply

and after 22...f6!? which seems best

23.♗c1= has equalised after Black's slightly inferior move 22...axb5 23.a3 c4 24.♖c2

♗e5 25.f4?! Wow, this is bold. It looks to

put pressure on Black's kingside, but also

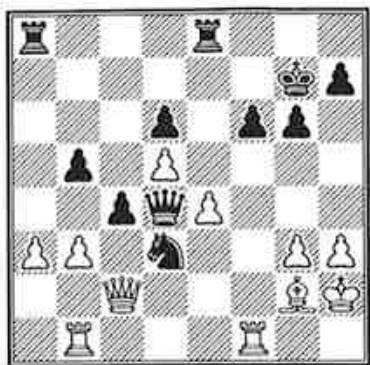
encourages Black's knight to a better square

in support of ResII's stronger-looking king-

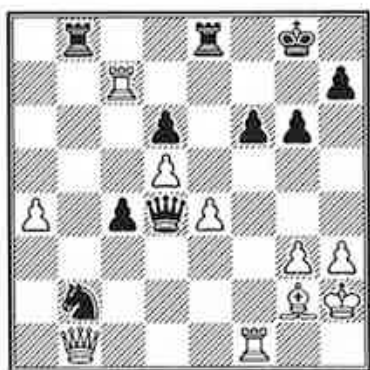
side attack. Instead the solid 25.♗d2 looks

safer, but while WM has increased its losing

chances, it's also increased its winning hopes! 25...♖d3 26.f5 ♕f6 Black's turn to go wrong, even though it still has the advantage after this. But 26...f6!? 27.♕d2 g5 pretty much kills White's kingside hopes. In fact after 28.♕c3 h5! ResII would have good chances on both wings! 27.♕xf6+ exf6 28.fxg6 fxg6 29.b3 ♖d4



Targeting the backward e-pawn. Black still has an initiative and the more aggressive piece placings 30.bxc4! bxc4 30...♖xc4!? 31.♖b3! ♖eb8 would also be interesting 31.♖b7+! ♕g8 32.a4! Excellent counterplay by WM-Genius 32...♖ab8 33.♖b1 ♕b2 34.♖c7



A critical moment, as pointed out by Steve, and I think ResII had something better than pushing the pawn! 34...c3?! Better was 34...♕d3!? 35.♖b7 (best 35)...♖bc8 36.♖b5! Nothing else seems to give White as much chance as this of holding the game in this variation, but it's hard to know if WM-Genius would have found it (if 36.♖c2?! ♕c5 37.♖bb1 and now 37...c3 is really strong) 36...♕c5 37.♖b6 ♕xe4 35.♖c1 ♖bc8?! The other rook was better, so 35...♖ec8!? 36.♖c6 ♕c4 36.♖b7 g5? Goodness, what's this – the tables could be turning! Okay was 36...♖e5 37.♖e3 ♖e7

(not 37...♕xa4?? that's a poisoned pawn for sure: 38.♖a7! f5 (you can't save the knight as 38...♕c5 39.♖g7+ ♕h8 40.♖xh7+ ♕g8 41.♖f7#) 39.♖xa4+-) 38.♖xe7 ♖xe7=

Even better seems 36...♖b8! 37.♖c7! ♖ec8! and 38.♖c6 is the only move to stay in the game, but after 38...♕c4! and White is under a lot of pressure 37.e5!



This is a serious threat, Black could easily lose if it goes wrong here! 37...♖b8! The only move that offers any hope!

37...♖xe5? wont work: 38.♖c2 ♖e7 39.♖xb2 cxb2 40.♖xc8+-

Neither does 37...♖xe5? solve anything: 38.♖xb2! ♖e3 39.♖c2+-

37...♖xa4?? leads to disaster: 38.exf6 ♖e5 39.♖xc3 ♖c4 40.♖a3 ♖c5 41.f7+ ♕f8 42.♖f3 ♖xd5 43.♖f6 ♖xb7 44.♖xd6+ ♕g7 45.f8♖+ ♖xf8 46.♖xf8+ ♕g6 47.♖f6+ ♕h5 48.♖h6#

37...♕xa4?? is refuted by a beautiful mate 38.♖c2 ♖c7 39.♖xc7 ♖e7 40.♖xe7 ♖e4 41.♖xe4 h5 42.♖g6+ ♕f8 43.♖f7#; 38.♖xb8 ♖xb8 39.exf6 This gives White a mate threat and the pawn has rook support, but it's the wrong capture! 39.exd6! might still win, but agreed, it's complicated.

If 39...♕xa4 (or 39...♕d3 40.♖d1 ♖d8 41.a5 ♖xd6 42.♖f3 ♖xd5 43.a6±

39...♖d2?! draws in the game, but here, after 40.♖b1! c2 41.♖c1 ♖xc1 42.♖xc1 ♕xa4 43.♖xc2+-) 40.♖c2 and Black MUST find 40...♕c5 41.♖f3 ♕e4 though 42.d7 ♕c5 43.d8♖+ ♖xd8 44.♖xc3 ♕d7 45.♖c4 though White still has Black under pressure 39...♖d2 And my PC engine says 0.00, which is how the game ends. Either side could have won at one time or another, it's been both tricky and exciting 40.a5 ♕f7 41.a6 Both sides have dangerous pawns, but correct play neutralises them both

41...♙xc1 42.♞xc1 ♖a4 43.♙e4 h6 44.♙f3
♞b2+ 45.♙g1 ♞a2 46.a7



White has an extra pawn – and on the 7th – but just can't make it count. A great shame for WM-Genius which has tried so hard after getting into a difficult-to-win opening variation 46...♖c5 47.♞xc3 ♞xa7 48.♞e3 ♞a8 49.♙f2 ♙xf6 50.♙g2 ♞a2+ 51.♙f1 ♙g6 52.♙e4+ ♙f7 53.♙f3 ♞b2 54.♞e1 ♞a2 55.♞e3 ♞b2 56.♞e1 ♙f6 57.♞e8 ♞b3 ½-½

Steve: Both computers were shuffling their rooks back and forth, and each of their kings is cut off by the opposing rook! WM has been showing 0.00 for the past few moves and the ResII was scoring 0.01, so I stopped and called it a draw, leaving WM to lose the match by the smallest possible margin 4½-5½ (3-4=3).

	1	2	3	4	5	6	7	8	9	10	
ResII Rybka	1	0	1	0	½	1	0	½	1	½	5½
WM-Genius5	0	1	0	1	½	0	1	½	0	½	4½

Based upon the SSDF Rating for ResII 2.2n8 of 2632, the WunderMachine earns a performance rating for this match of 2592. Combined with the performance rating of 2635 from the first 10 game Match against Res I Fruit 05 (SSDF 2395) the WunderMachine reaches a performance rating for the full 20 games of 2614.

A very exciting match played on beautiful chess computer boards!

For our final issue Steve Blincoe is teaming up with Harvey Williamson to play a match between the TASC R30 and Mephisto LONDON 68030, the top 2 on my Rating List, the best 'original and unmodified' dedicated chess computers ever!

STEVE BLINCOE'S WEBSITE!

Steve also has an excellent Website which is well worth visiting. If you want to see what any dedicated chess computer looked like... it's there! A brilliant pictorial record of dedicated computer chess from its infancy and the first chess computers all the way through to Ruud Martin's current work!

The link is...

<http://www.flickr.com/photos/10261668@N05/sets/>

When you get there you'll find the site is extremely well organised into manufacturer's names, making it really easy to find a photo of the computer you're looking for... or just enjoy a long, lazy browse!

There's also an interesting History section as well as a Magazine section, which includes Steve's photos of his (complete and in binders) *Selective Search* collection!

Links to Steve Blincoe's photos of his *Selective Search* issues:

<http://www.flickr.com/photos/10261668@N05/8503476517/>

<http://www.flickr.com/photos/10261668@N05/8504579108/>

<http://www.flickr.com/photos/10261668@N05/8504578982/>



Steve's bound library of *Selective Search*, 1985-2013

THE CEGT AND CCRL RATING LISTS!

The very interesting **CCRL & CEGT Website Groups** have **COMPLETE RATING LISTS** for a wide range of PC hardware, and include old, new, interim and free versions, though they don't always both test exactly the SAME engines! I extract from the lists their ratings for engines when they're running on a *Single Processors*.

CEGT 40/20 32/64-bit 1cpu Rating List

■ <http://www.husvankempen.de/nunn>

CEGT, 64-bit, some 32-bit for comparison

Pos	ENGINE	RATING
1	HOUDINI 3 x64	3046
2	HOUDINI 1.5A x64	3003
3	HOUDINI 2.0c x64	2999
4	KOMODO 5 x64	2995
5	CRITTER 1.6 x64	2983
6	KOMODO 4.0 x64	2974
7	CRITTER 1.4 x64	2970
8	HOUDINI 1.5A x32	2968
9	CRITTER 1.2 x64	2967
10	STOCKFISH 2.2.2 x64	2963
11	CRITTER 1.4 x32	2953
12	RYBKA 4.1 x64	2951
13	EQUINOX 1.70 x64	2950
14	KOMODO 3 x64	2949
15	STOCKFISH 2.3.1 x64	2947
16	STOCKFISH 2.2.2 x32	2937
17	GULL II x64	2937
18	RYBKA 4 x64	2934
19	STOCKFISH 2.1.1 x64	2926
20	RYBKA 4 x32	2906
21	RYBKA 3 x64	2902
22	KOMODO 3 x32	2898
23	CHIRON 1.5 x64	2842
24	PROTECTOR 1.5.0 x64	2839
25	NAUM 4.2 x64	2835
26	DEEP FRITZ 13 x32	2817
27	HANNIBAL 1.3 x64	2814
28	CHIRON 1.1 x64	2814
29	NAUM 4.2 x32	2812
30	HIARCS 14 x32	2812
31	RYBKA 2.3.2A x64	2801
32	FRITZ 13 x32	2801
33	SHREDDER 12 x64	2800
34	SJENG CT 2010 x64	2785
35	GULL 1.1 x64	2785
36	SPIKE 1.4 x32	2776
37	HIARCS13.2 x32	2769
38	DEEP FRITZ 12 x32	2764
39	QUAZAR 0.4 x64	2762
40	SPARK 1.0 x64	2759
41	JUNIOR 13/13.3 x64	2757
42	RYBKA 1.2F x64	2756
43	JUNIOR 12.5 x64	2751

CCRL 40/40 4cpu Rating List

■ <http://www.computerchess.org.uk/ccrl>

CCRL, 32/64-bit, Best Versions only

Pos	ENGINE	RATING
1	HOUDINI 3 x64	3249
2	CRITTER 1.6A x64	3173
3	RYBKA 4 x64	3166
4	STOCKFISH 2.2.2	3164
5	BOUQUET 1.5	3143
6	KOMODO 5 [sp] x64	3123
7	STRELKA 5.5 [sp] x64	3116
8	NAUM 4.2 x64	3081
9	HIARCS 14 x32	3074
10	CHIRON 1.1A x64	3074
11	DEEP FRITZ 13 x32	3050
12	GULL R375 x64	3048
13	HANNIBAL 1.3 x64	3046
14	JUNIOR 13 x64	3044
15	SPIKE 1.4 LEIDEN x32	3036
16	SHREDDER 12 x64 OA=ON	3033
17	PROTECTOR 1.4.0 x64	2997
18	BLACK MAMBA 1.2B x64	2991
19	ZAPPA MEXICO II x64	2987
20	SPARK 1.0 x64	2979
21	SJENG CT2010 x32	2948
22	ONNO 1.2.70 x64	2943
23	THINKER 5.4C INERT x64	2935
24	TOGA II 1.4.1SE x32	2915
25	QUAZAR 0.4 [sp] x64	2912
26	BRIGHT 0.4A x32	2909
27	TORNADO 4.88 x64	2893
28	GAVIOTA 086 x64	2876
29	NEMO 1.0.1 [sp] x64	2869
30	MINKOCHESS 1.3 [sp] x64	2869
31	LOOP M1-T x64	2859
32	CRAFTY 23.3 x64	2853
33	BOOOT 5.1.0 [sp] x32	2850
34	JONNY 4.00 x32	2828
35	BUGCHESS2 1.9 x64	2824
36	TEXEL 1.01 [sp] x64	2794
37	SCORPIO 2.7.5 [sp] x64	2787
38	SMARTHINK 1.20 [sp] x64	2779
39	NARAKU 1.4 [sp] x32	2774
40	FRENZEE 3.5.19 [sp] x64	2773
41	TWISTED LOGIC 20100131 [sp] x64	2770
42	BISON 9.11 [sp] x64	2759
43	KTULU 9 [sp] x32	2757

DEDICATED *CHESS* COMPUTER RATINGS

Tasc R30-1995	2330	Mephisto Milano	1953	SciSys Turbostar 432	1762
Mephisto London 68030	2301	Mephisto Montreal+Roma68000	1951	Mephisto MM2	1757
Tasc R30-1993	2297	Novag Star Ruby+Amber	1948	Fidelity Excellence/3+Des2000	1754
Mephisto Genius2 68030	2292	Mephisto Amsterdam	1946	Novag Jade1+Zircon1	1744
Mephisto London Pro 68020	2269	Mephisto Academy/5	1945	Kasparov A/4 module	1740
Mephisto Lyon 68030	2265	Mephisto Mega4/5	1931	Conchess/4	1734
Mephisto Portorose 68030	2256	Fidelity 68000 Mach2B	1931	Kasparov Renaissance basic	1729
Mephisto RISC2	2247	Kasparov Barracuda+Centurion	1931	Kasparov Prisma+Blitz	1729
Mephisto Vancouver 68030	2245	Novag SuperForte+Expert B/6	1923	Novag Super Constellation	1728
Meph Lyon+Vanc 68020/20	2237	Kasparov Maestro D/10 module	1921	Mephisto Blitz module	1716
Mephisto Berlin Pro 68020	2233	Fidelity 68000 Mach2C	1920	Novag Super Nova	1701
Kasparov RISC 2500-512	2232	Kasparov GK2000+Executive	1915	Fidelity Prestige+Elite A	1688
Meph RISC1	2220	Kasparov Explorer+TAdvTrainer	1915	Novag Supremo+SuperVIP	1684
Mephisto Montreux	2211	Kasparov AdvTravel+Bravo	1915	Fidelity Sensory 12	1681
Kasparov SPARC/20	2208	Mephisto MM4	1904	SciSys Superstar 36K	1667
Mephisto Atlanta+Magellan	2206	Kasparov Talk Chess Academy	1900	Mephisto Exclusive S/12	1665
Kasparov RISC 2500-128	2192	Mephisto Modena	1899	Meph Chess School+Europa	1664
Mephisto London 68020/12	2178	Kasparov Maestro C/8 module	1891	Conchess/2	1658
Novag Star Diamond/Sapphire	2173	Meph Supermondial2+College	1888	Novag Quattro	1650
Fidelity Elite 68040v10	2164	Mephisto Monte Carlo4	1888	Novag Constellation/3.6	1646
Mephisto Vancouver 68020/12	2156	Novag Super Forte+Expert A/6	1883	Fidelity Elite B	1637
Mephisto Lyon 68020/12	2150	Fidelity Travelmaster+Tiger	1882	Novag Primo+VIP	1631
Mephisto Portorose 68020	2136	Fidelity 68000 Mach2A	1882	Mephisto Mondial2	1610
Mephisto London 68000	2130	Novag Ruby+Emerald	1879	Fidelity Elite original	1609
Novag Sapphire2+Diamond2	2120	Kasparov Travel Champion	1867	Mephisto Mondial1	1597
Fidelity Elite 68030v9	2113	CXG Sphinx Galaxy	1866	Novag Constellation/2	1591
Mephisto Vancouver 68000	2108	Conchess Plymate Victoria/5.5	1865	CXG Super Enterprise	1589
Mephisto Lyon 68000	2107	Mephisto Monte Carlo	1860	CXG Advanced Star Chess	1589
Mephisto Berlin 68000	2104	Kasparov TurboKing2	1855	Novag AgatePlus+OpalPlus	1575
Mephisto Almeria 68020	2102	Novag Expert/6	1854	Kasparov Maestro+Cosmic	1550
Meph Master+Senator+MilPro	2101	Kasparov AdvTrainer+Capella	1848	Excalibur New York touch	1530
Novag Sapphire1+Diamond1	2081	Conchess Plymate Roma/6	1844	Fidelity Sensory9	1528
Mephisto MM4/Turbo18	2080	Fidelity Par Excellence/8	1843	Kasparov Astral+Conquistador	1520
Mephisto Portorose 68000	2077	Fidelity 68000 Club B	1843	Kasparov Cavalier	1520
Fid Mach4+Des2325+68020v7	2075	Novag Expert/5	1840	Chess 2001	1500
Fidelity Elite 2x68000v5	2052	Novag Super Forte+Expert A/5	1830	Novag Mentor16+Amigo	1494
Mephisto Mega4/Turbo18	2042	Fidelity Par Excellence	1829	GGM+Steinitz module	1490
Mephisto Polgar/10	2034	Fidelity Elite+Designer 2100	1829	Excalibur Touch Screen	1485
Mephisto Dallas 68020	2033	Fidelity Chesster	1829	Mephisto 3	1479
Mephisto Roma 68020	2028	Novag Forte B	1829	Kasparov Turbo 24K	1476
Mephisto MM6+ExplorerPro	2023	Fidelity Avant Garde	1829	SciSys Superstar original	1475
Kasparov GK2100+Cougar	2022	Mephisto Rebel	1827	GGM+Morphy module	1472
Kasparov Cosmos+Expert	2022	Kasp Stratos+Corona+B/6mod	1824	Kasparov Turbo 16K+Express	1470
Kasparov Brute Force	2022	Novag Forte A	1819	Mephisto 2	1470
Mephisto Almeria 68000	2018	Fidelity 68000 Club A	1816	SciSys C/C Mark6	1428
Novag Citrine	2014	Excalibur Grandmaster	1814	Conchess A0	1426
Novag Scorpio+Diablo	2002	Kasparov Maestro A/6 module	1810	SciSys C/C Mark5	1419
Kasp Challenger+President	1994	Kasparov TurboKing1	1804	CKing Philidor+Counter Gambit	1380
Fid Mach3+Des2265+68000v2	1983	Conchess/6	1802	Morphy Encore+Prodigy	1358
Mephisto MM4/10	1979	Mephisto Supermondial1	1801	Sargon Auto Response Board	1320
Meph Dallas 68000	1974	Conchess Plymate/5.5	1794	Novag Solo	1270
Mephisto Nigel Short	1970	SciSys Turbo Kasparov/4	1791	CXG Enterprise+Star Chess	1260
Nov EmClassic+Zircon2+Jade2	1965	Novag Expert/4	1790	Fidelity Chess Challenger Voice	1260
Mephisto MM5	1964	Kasparov Simultano	1790	ChessKing Master	1200
Mephisto Polgar/5	1963	Fidelity Excellence/4	1783	Fidelity Chess Challenger 10	1175
Novag Obsidian	1960	Conchess Plymate/4	1778	Boris Diplomat	1150
Mephisto Mondial 68000XL	1958	Fidelity Elite C	1777	Novag Savant	1100
Nov SuperForte+Expert C/6	1957	Fidelity Elegance	1765	Boris2.5	1060