Selective Search 132
CHESS PLAYED BY COMPUTERS!

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Editor: Eric Hallsworth
£3.95

HARVEY WILLIAMSON - A **HIARCS** TEAM MEMBER CURRENTLY HELPING **ZAPPA** IN ITS MATCH AGAINST **RYBKA**! (PHOTO BY ROB VAN SON)

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CHESS COMPUTERS AND PC PROGRAMS... THE BEST BUYS!

The **RATINGS** for these computers and PC programs are on the back pages. This is not a complete product listing - they are what *I* think are the **BEST BUYS** bearing in mind price, playing strength, features and quality.

Further info/photos are on my website and in **Countrywide's** colour CATALOGUE, available **free** if you ring or write to the address/phone no. shown on the front page. Postage: portable £5, table-top £7.50, software £2.

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PORTABLE COMPUTERS [por]

ADVANCED TRAVEL £34.95 - Saitek's smaller Club plug-in set 160 ECF. Scrolling info display. Great value!

MAESTRO touch screen travel £49.95 - fine Saitek product, incl. Leatherette case. Backlight switch on side for easy of use. Decent chess. est'd 130 ECF

EXPERT £99.95 - top value! 4½"x4½" plug-in board, strong Morsch program. Multiple levels, good info display & coach system. From Saitek. 175 ECF

STAR RUBY £65 - Novag's 165 ECF program in touch screen style with stylus, and secure screen cover. Batteries only. excellent pocket portable

DE LUXE TOUCH SCREEN £79.95 - Great on-screen board and graphics, easily recognisable pieces, lots of levels and good features in 140 ECF Excalibur program

TABLE-TOP PRESS SENSORY [os]

*where you see ** the price includes the adaptor!*

EXPLORER £46.95 - excellent value, neat design. Batteries only. with info display and 160 ECF program

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CARNELIAN 2 £75 - lovely Novag unit, with wood pieces - looks really good on the table. Nice 140 ECF program. display for moves. plenty of levels.

OBSIDIAN £125 - 167 ECF with nice carry case! Good Novag board. wood pieces. excellent features/chess

TABLE-TOP AUTO SENSORY [as]

CITRINE £249** - 180 ECF wood auto-sensory with improved, faster Obsidian program, 24,000 opening book. Wood felted pieces. excellent features. *New!!*

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DEEP JUNIOR 10 £75 very fast for multi & single PCs!

HIARCS 10 dvd £39.95 - Mark Uniacke's latest version. Simply outstanding: knowledge packed yet searching deeper for high powered tactical play... stronger than ever! All the latest superb *ChessBase* features + Opening Book by Eric Hallsworth.

SHREDDER 10 dvd £39.95 - Meyer-Kahlen's latest in its great ChessBase Interface. Feature-packed & knowledge-based, playing stylish chess. Plus the usual big Opening Book and Games Database etc.
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ZAP! £39.95 - the *ChessBase* version of the 2005 World Champion program. 2 engines on the CD - Paderborn and Reykjavik - with 32-bit, 64-bit and Multi-processor versions! and its own prepared Opening Book. Games Database and usual *ChessBase* features

POWERBOOKS dvd £39.95 - turn your *ChessBase* playing engine into an **openings expert!** 20 million opening positions + 1 million games!!

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new - PC PROGRAM - RYBKA on CD

RYBKA2.3 - uci engine with 'Fritz' opening book only **£29.95**. IM Vasik Rajlich's new Computer Chess World Champion RYBKA also tops every Rating List due to remarkable levels of chess understanding and excellent deep search programming. MP version **£44.95**

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NEWS AND RESULTS - *KEEPING YOU RIGHT UP-TO-DATE IN THE COMPUTER CHESS WORLD!*

Welcome to another new issue of *Selective Search*... 132! If your sub. is due for renewal at this time, can I please encourage you to subscribe again! There will be at least 6 more issues of the magazine, so your money wont be wasted!

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

If you renew by credit card, please note that I must have the security code (last 3 numbers on the back) as well as the card number and expiry date - thanks!

NEWS SECTION

RYBKA 2.3.2

If you're one of the few don't have Rybka but want it, then we have the new **Rybka2.3(.2) uci version** on CD in stock. The SP (single processor version) is £29.95 + £2 p+p, and the MP (multiprocessors) is £44.95 + £2 p+p. There's also an Opening Book for the Fritz/ChessBase interface included on these CDs, as well as the Chess Assistant engine version. I even have an advanced interface Chess Assistant MP and Chess Openings 2007 version, which also includes the uci engine, a 3 million game database and a serious Opening Encyclopaedia! This lot costs £59.95 + £2 p+p.

Finally you can go to programmer **Vasik Rajlich**'s website: **www.rybkachess.com**
... and find out about future plans, download the original beta version for free, or find out how to pay for and download the MP (multiprocessor) and 64-bit versions off the Internet. There are also options to download a major Rybka Opening Book done by Jeroen Noomen, though you probably need to have Broadband as this is a big file!

Again please remember that no uci version, Rybka or anything else, comes with ANY interface - it is just an engine, so you NEED to have, or to buy, either a *ChessBase* program, Stefan Meyer-Kahlen's *Shredder 10* with its interface, or download the free *Arena* interface in order to run and use Rybka uci!

The same subscriber is after some **old issues of** *Selective Search* which he is still missing, though a couple of readers were able to help after our request last issue. The copyright at the end of each issue prohibits photocopying etc., (especially for re-sale!), but on this occasion I will agree to it on condition that anyone who can provide either an original or a copy also does a free copy for me, as these are issues I haven't even got myself!

If anyone can help please tell me what issues you have and how much you want for doing the photocopying, and posting 2 copies of each to me. I will then sort it out with my subscriber, when I've collected a decent number of those he wants, and will organise for the appropriate payment to come to you!

Many thanks for those we've had! - some readers have phoned about issues they have, so we've got our fingers crossed they will come soon. The issues he is still missing are: 1-5, 7-9, 11-12, 37-8, and 40

RESULTS & RATINGS SECTION

The popular and important **CCRL** and **CEGT** Rating Lists now have their own page.

LUIS BARONA

I recently received an e-mail from **Luis** directing me to a Spanish website (I think some of the same folk who used to publish ANACA magazine), where I found the following interesting results from events in July:

Man v Machine match

Alexis Cabrera (GM, 2514)	1-0	Tasc R30
M Vasallo (IM, 2387)	1-0	Kasparov SPARC
C Garcia (IM, 2370)	½-½	Mephisto Lyon 68020
K Slobodan (IM, 2364)	1-0	Mephisto Montreux
C Carbonell (FM, 2250)	½-½	Novag Sapphire2

So a **4-1** victory for the strong Human team in the **Master** event.

L Solino (2176)	½-½	Fidelity Mach IV
V Penades (2157)	1-0	Sphinx Dominator
J Penarrubia (1953)	0-1	Mephisto Phantom
R Garcia (1850)	0-1	Mephisto Rebell
F Lopez (1800)	½-½	Novag Super VIP

And a measure of revenge for the Computers in the **Club** event with a **3-2** win!

Computer v Computer matches

Fidelity Mach IV	6½-3½	Mephisto Senator
Fidelity Mach IV	1-4	Mephisto Berlin 68000
Fidelity Mach III	1-4	Mephisto Senator
Meph London 68000	1½-3½	Mephisto Magellan

You can find the website at:

- http://www.meca-web.es/torneos.htm

RESULTS FROM *SELECTIVE SEARCH* READERS

FRANK HOLT

Frank has been busily catching up with, firstly, his new Rybka2.3.2 engine, and then in his second tournament, checking the various Zap versions after getting them with the Zanzibar upgrade.

How do the various Rybka versions rank? Is the Zanzibar engine much of an upgrade?

Here are your answers...

The RYBKA Tourny

Pos	Program	/48
1	RYBKA 2.3.2A	31
2	RYBKA 2.1C	28
3	RYBKA 2.3 LK	24
4	RYBKA 2.3.1	22½
5	FRITZ 10	14½

Quite a few people felt that Rybka's 2.1c was the best upgrade since the very strong 1.2f, and that neither 2.2 nor the early 2.3 versions had made that much progress. But Frank's tournament does suggest that the LK (Larry Kaufman) ideas were beneficial and, of course, these were expanded in the final 2.3.2 release which tops all rating lists.

The ZAP Tourny

Pos	Program	/20
1	RYBKA 2.3.2A	14½
2	RYBKA 2.3 LK	13½
3	ZAP ZANZIBAR	12
4	FRITZ 10	8½
5	ZAP REYKJAVIK	7½
6	ZAP PADERBORN	4

In this tournament Frank notes that Rybka 2.3.2a went 9-0=11... not a single loss. But the main thing to note is how much the Zanzibar upgrade has improved over previous Zap versions. Along with all the others it cannot catch Rybka, but there's no question that it has now become a genuine top level program.

ZAP/ZAPPA UPGRADE !

No sooner do I mention that **Zap Zanzibar** is a good improvement over the Zap Paderborn and Reykjavik versions (see last sentence previous section) than, blow me down, a <u>new</u> version comes out... **Zap Mexico!**

This is <u>a big surprise</u> - it is only a few months (issue 130) since I announced that Zappa's programmer **Anthony Cozzie** had retired to concentrate on his PhD studies. On his website (then) he said: *"if you want to wait for the next version of Zap Chess, you will be waiting for a very long time".*

However... in our last issue the long *'PC TOURNAMENT and other MAJOR issues!'* article included, on page 16, *'The RYBKA Challenge'* which was **Rybka** programmer **Vasik Rajlich**'s open letter to FIDE challenging the winner of their Deep FRITZ v Deep JUNIOR match to a 10 game $100,000 Challenge Match.

That winner proved to be Amir Ban and Shay Bushinsky's **Deep Junior**, but the planned subsequent Match has fallen through. Some Internet addicts among my readers might have read of the various accusations as to whose fault that is, but I'm not getting involved in that here as I only have what I've read on the Internet for evidence, and from that no-one can really tell who the guilty party is, or if they are both to blame.

Basically, in brief, and as far as I can tell, it all goes back to *'did someone such as Joel Benjamin influence some of Deep Blue 2's move selections against Kasparov'*, to get the computer into positions which suited it!

Now you might think that's a bit irrelevant 10 years on, but the success of some **Computer + Human** teams in the series of Internet Freestyle tournaments has shown just how well a chess+computer knowledgeable human working with a strong engine can do. The engines appear to be stronger than the humans, but the top, well organised human+computer pairings almost always come out the winners.

The Rybka camp wanted to be sure that there would be no way anyone could help Junior during the match, so they insisted that the match be played with the computers 'onsite'. But this meant that the Junior team would have to go to extra match expense, and they would only agree to play 'by remote'. The intricate arrangements needed for this to happen just fell through, so the Rybka team (which had put up the money) kept $90,000 and instead offered the match to Anthony Cozzie for a $10,000 prize fund.

So it is that we have come to the alternative $10,000 Challenge Match between the (generally) agreed TOP TWO (when on fastest hardware)... that is **Rybka2.3.2 MP+64-bit** and **Zap Mexico MP+64-bit**. The match is still taking place alongside the FIDE Mexico human World Championship Event

This stirred Cozzie into renewed activity:
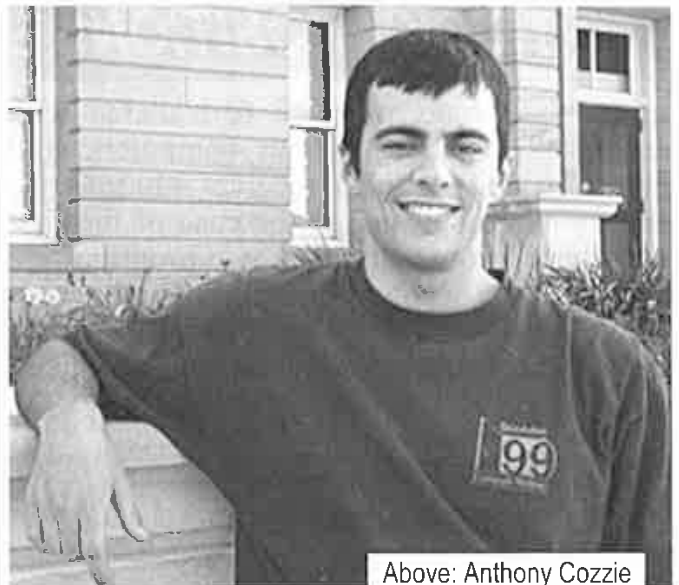
Above: Anthony Cozzie
Below: Vasik Rajlich

"I figured I sort of owed it to the sponsors to do a little work on the engine, that turned out to be about 8 days, and my opening book programmer did 1 month for the match book for me... it's all probably around 25 Elo"

On that basis you'd expect Rybka to win but, as we go to 'press', this is what has happened so far: the first game was a draw, and the second should have been but Zappa went wrong in an equal endgame. Then Zappa won game 3 to equalise. Rybka had all the chances in game 4, but with a blocked centre shed a pawn each time the 50 move rule draw approached. In the end it shed one too many and lost!! And Zappa has now won game 5 showing outstanding technique against a backward central pawn.

|	1	2	3	4	5	6	7	Tot
Rybka	½	1	0	0	0	½	½	2½
Zappa	½	0	1	1	1	½	½	4½

It's a 10 game Match at G/60+20secs in total.

Two **TRICKY POSITIONS SOLVED** FROM OUR LAST ISSUE

In our last issue, on page 6, I shared with readers 2 positions which computers find quite difficult. I didn't receive solutions for either - not a surprise in the case of the first one - but I know that one or two programs are able to do the second.

Anyway, here they are again, this time with Solutions!

Two Tricky Positions!

Harvey Williamson sent me this one - it's White to move and draw, and very clever!
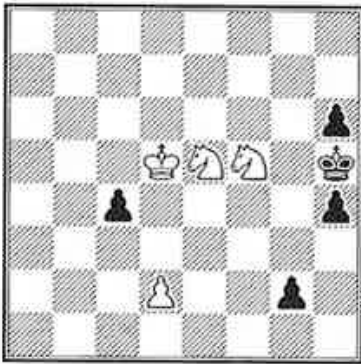
With a Black pawn poised to queen this might seem totally impossible - but it's not!

Readers may (or may not) find there's a program which can do it in reasonable time. We showed the position to a pair of GM friends, one got it and one didn't, so it's not only the PC engines which will have difficulty in finding the key move, readers probably will too!

Solution

1.♔c6!!

Anyone get that?!!

Hiarcs11.38eMP: 1.♘g7+;

Deep Fritz 10: 1.♘g7+;

*Zap!Chess Zanzibar: 1.♘g7+;*

Rybka 2.3.2a mp 32-bit : 1.♘g7+.

The engines all know that White loses with this 1.♘g7+, but their immediate reaction is that our solution move also fails! However...

1...g1♕ 2.♘xh4 ♕a7 3.♘hf3!

And the Black King is stuck!

3...♕a5 4.♔d6 c3 5.dxc3 ♕xc3 6.♔d5 ♕b4 7.♔e6 ♕b3+

... and White is impotent, all he can do is move his queen around and give fruitless checks! It's a draw, despite the fact that the engines still have big plus evaluations for Black!
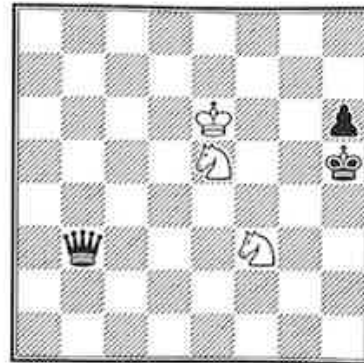
For the second one, White to play and win, the need is to find a tactical shot which again some programs find difficult.

Readers of this magazine brought up many years ago on things like *'the George Morris'* attack, will probably spot the chance of an attack by Rook and Queen up the h-file. That's part of the theme but I will tell you that the first move does not involve either rook!

Solution

1.♗f6!!

At 20 mins:

1.♗f6! Hiarcs11.45;

1.♕h4 ZapZ fails;

1.♗f6! DF10;

1.♕h4 Junior10 fails;

1.♖e3 Loop fails;
1.♗f6! Rybka2.3.2

[1] The obvious reply:

1...gxf6 2.♕h6!

After this sacrificng the queen is Black's only way of avoiding a mate, such as in given in the variation *2...♘ac5?* below

2...♕e7

2...♘ac5? 3.♖bd1 ♕c7 4.♕xf6, announcing m/12 which goes like this: *4...♖d8 5.♖d4 h5 to stop ♖g4+ 6.♖h4 ♘e4 7.♖exe4 dxe4 8.♖xh5 ♖d1+ 9.♔g2* and now a series of check sacrifices to delay the mate *9...♘f4+ 10.gxf4 ♖g1+ 11.♔xg1 ♕c1+ 12.♗f1 ♕xf1+ 13.♔xf1 ♗a6+ 14.♔g1 ♖c8 15.♖h8#*

3.♘xe7+ ♖xe7 4.♖bd1 ♘ac5 5.♕xf6

and White wins easily with the massive material advantage

[2] There is another, similar response to be considered:

1...g6 2.♕h6 ♘ac5

Forced, this knight must protect the e6/♘ which is stopping the mate on g7

3.♖bd1! ♕b7

White could now play ♘d6 to fork queen and rook, but he has even better than this available

4.f3!

To stop Black playing ♘e4

4...♕c7 5.♖d4

Announcing m/11 which goes like this:

5...♘e4 6.fxe4 ♗a6 7.exd5 ♗e2 8.♖h4 ♕c5+ 9.♘d4 ♗h5 10.♖xh5 ♕xd4+ 11.♗xd4 f6 12.♗xe6+ ♖xe6 13.dxe6 gxh5 14.♕xf6 ♖e8 15.♕f7#

[3] The best response, in which there is no immediate mate that I can find...

1...♘ac7 2.♘h6+ ♔f8

If 2...gxh6? 3.♕xh6 and the threat of ♖xe6 and ♕g7 mate forces a queen sac' with 3...♕e7 4.♗xe7 ♖xe7, and now 5.♖b4! wins easily;

Or 2...♔h8? 3.♗f5! gxf6 4.♘g4 and the threat of ♕xh7 mate forces 4...♘g5 5.♗xd7 winning the queen and the game quite easily after 5...♗xd7 6.♘xf6

3.♕f5 g6 4.♕e5

Now Black is really stuck for moves. Probably least damaging is...

4...d4

but...

5.♗g2! ♘a6

Not 5...♖b8? 6.♗c6 ♕xc6 7.♗g5 m/7

6.♘f5 h5

Black is still very short of non−suicidal moves. For example here 6...gxf5? 7.♕xf5 ♕d8. Sacrificing the queen might seem madness, but Black must stop ♕xh7 and ♕h8 mate which means he has to remove the bishop from f6. Now 8.♗xd8 ♖xd8 9.♗xa8 and of course that's all over!

7.♗xa8 ♔g8 8.♖bd1!

and though there is still no mate announce− ment in sight as yet, Black is in very big (i.e. terminal) trouble, 1-0. It is clear that **1.♗f6!** wins in all variations.

PETER GRAYSON EXPLAINS HIS BOOK BUILDER FOR HIARCS!

In our last issue I reported that regular reader **Peter Grayson** had improved a heavy 25-75 defeat of **Hiarcs11.1** against **Rybka2.3.2** to a respectable 45½-54½ by building his own HIARCS BOOK! Fancy a go?!? Here's how....

GETTING STARTED

Once a ChessBase Openings Book has been created, it is possible to add good lines but it is not possible to remove bad lines. With this in mind, the best approach is to create a book development database to enable games to be removed and added. This provides greater flexibility for the maintenance of the book. When a new updated book is created any learnt weightings are lost. This is not necessarily a bad thing. However, to keep learnt weightings from earlier games, use the Edit\Openings Book\Learn from database option, being careful to set the correct criteria. This would need another article in its own right!

DATABASE GAME SOURCES:

PowerBook 2006, available from Countrywide Computers (2007 now available)
- All wins and draws where one player was 2650+. The logic being that games played by 2650 rated players should be of a good standard even with a reversed result.
- With a bit of cleaning for short wins of 25 moves or less to remove blunders. This provided a sound basis for the book.
- Games total used = 37320

Internet Source 1: http://www.fritzserver.org/localuser/enginetourns/
In the Downloads section: 2007 Win/Losses

This file has now been updated, and has over 360,000 games (12.08.2007) which has increased its size to 93 Mb+. **I used the earlier DB** that I still have which had just 29383 games but needed cleaning up:

✗ *A word of warning. **Games need to be checked**. Some are wrong results where an engine has frozen and lost on time or inexplicable resignation. Inclusion of any of these would be detrimental to overall book strength. Do not blindly add games assuming they are OK.*

Selection criteria:
- All wins where one player is at least 2700 and both above 2400. Drop games of less than 21 moves. This got rid of many time losses and silly resignations that may have been for Elo padding.
- Drop all games exceeding 100 moves unless Hiarcs evaluation was balanced or promising around the 35 move mark. After cleaning....
- Games total used = 20429

Internet Source 2: No longer available but I have the DB's
- Early versions of Rybka wins
- Games total used = 5987

My PC's 2006/7 Internet games.
- Already cleaned up and provided
- PC1 = 8500 games

Deleting Games
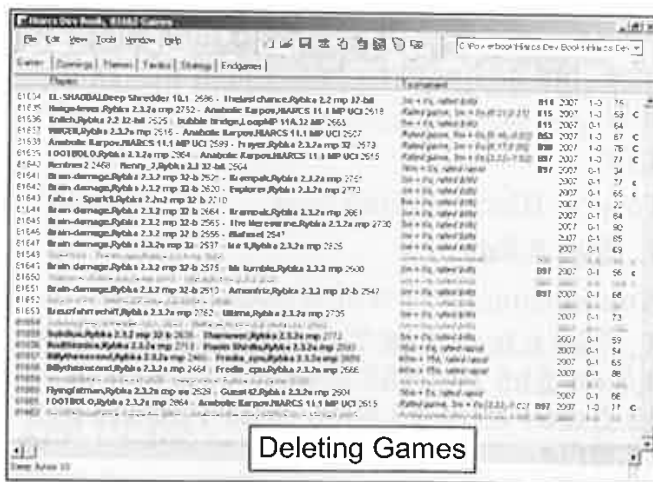
- PC2 = 5863 games
- Games total used = 14363

**Private Source of quality engine games** (DB available)
- Games total used 2996.

My PC versus PC engine games (mostly 5M blitz or 40/4)
- MP Games = 3248
- non MP games = 1840 games
- Games total used = 5088

Total sourced games = 86183

Illustrated below, there is an easy to use game selection criteria filter within the Chessbase database handler: Press CTRL + F and select/check options and values.
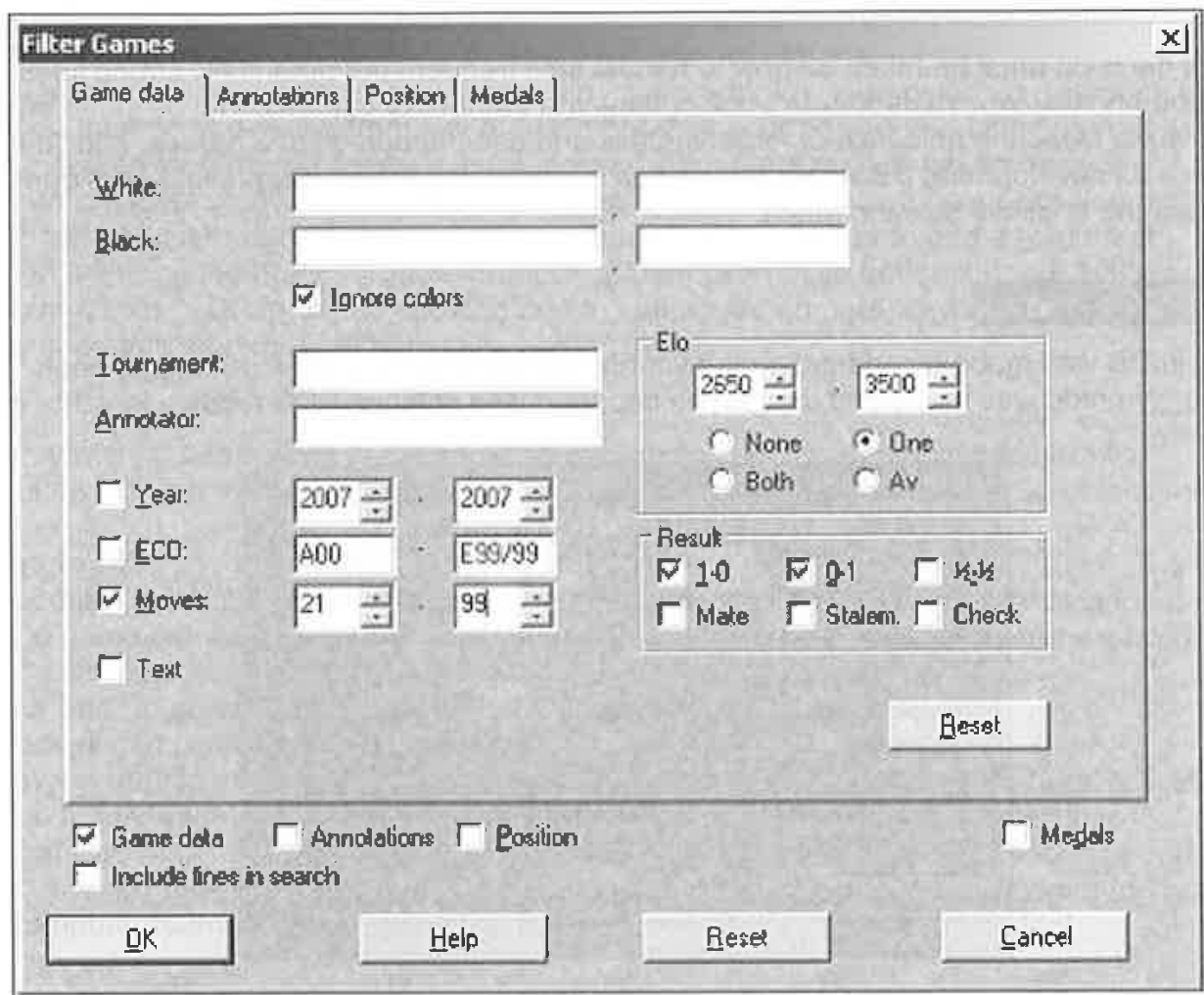
I also added in a number of Hiarcs games several times to ensure those games had a higher probability and hence larger influence than with just a single game entry so this brought the overall total to just under 87k games.

Once the reference development DB has been created and completed, BACK IT UP to a .cbv file.
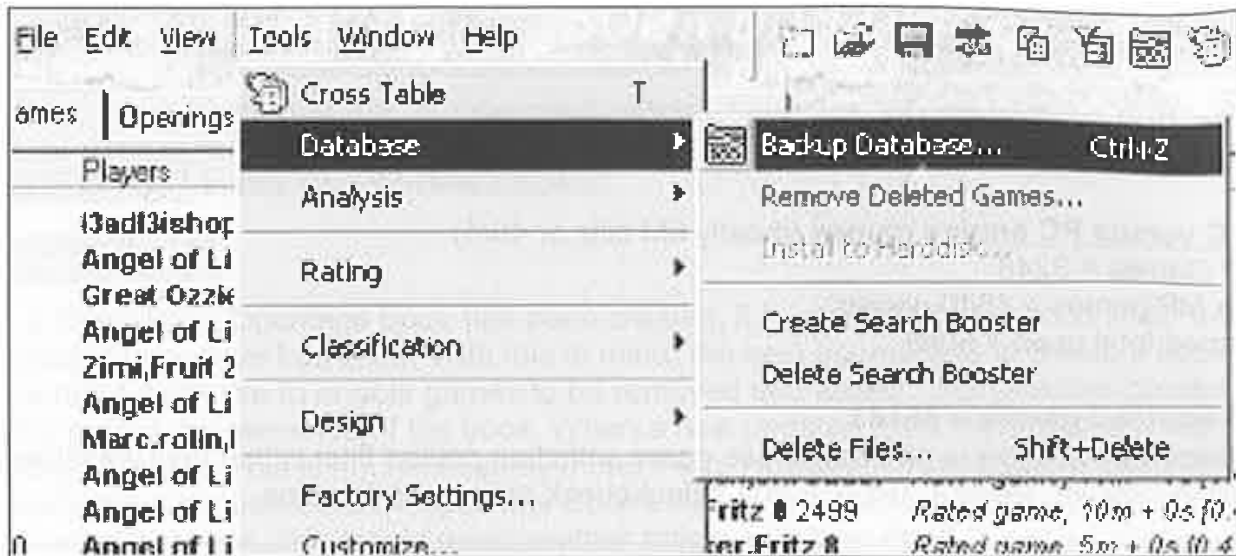
Now a decision must be taken on how to handle less frequent but potentially strong lines. After the book is constructed, from book options the number of games could be set to one. However to avoid the nuisance of forgetting this and use the default of 3 games, I decided to create a 3x development DB where the games are read in 3 times. Surprisingly this does not increase the book file size too much.

BOOK COMPILATION

A single DB was made by addending the various filtered source games. An empty book Hiarcs_yymmdd was made and the games imported with settings ECO relative length = 40.
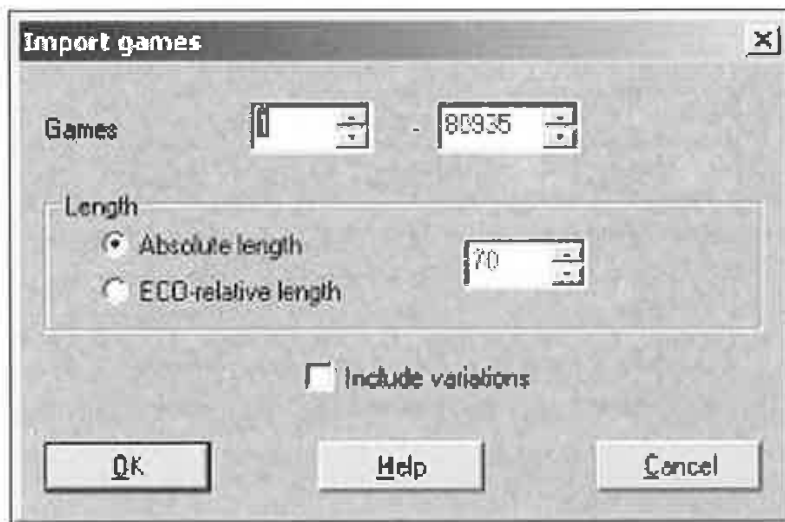
Subsequently finding a number of lines in the Sicilian and Ruy Lopez openings were cut off prematurely with this setting missing a critical move later in the line, I now use import settings of Absolute length = 70 to ensure the possibility is minimised as illustrated above.

Book Use

Book used as constructed with optimised settings within the Chessbase DJ10 GUI so moves =35. You can see **I've not made some monster book** of millions of games with moves up to 128 ply.

DB MAINTENANCE

With whatever frequency you wish, I'm using approximately once a fortnight or signs of a performance drop off but say 500 played games is sensible, games need to be deleted or added to keep the book up to date. Weed out any not so good lines for the engine/hardware set up performance.

This is where some personal judgement of what is good or bad has to be made. Be mindful of MP engine variability and how far from book line cut off point that game became lost so not all losses may need to be deleted. BEFORE MAKING ANY CHANGES, BACK UP DB!
* Important note on deleting games from DB. Close the main game\engine window first ensuring only DB window is open otherwise you may get an error message when deleting games. Happens when DB game marked for deletion is in main window and therefore trying to delete open file game.

For each loss
- Follow the game through to the point where it came out of book.
- First judgement is "did score go adverse very soon after leaving book or was it much later?"
- If soon then go to position from last move in book for <u>your engine</u> and using game position filter, search for games that show a win for your colour and mark them for deletion.
- Research game sources for position to identify if there were wins for your position but not included because with different selection criteria. Judge whether to add any of these.
- When following the game through the Book and an alternative better line with 100% score is found, search DB for better line and add the improved game(s) say a further 3 times. This improves probability of better line being played.

Draws
You may wish to treat draws in the same way as losses but it is useful to keep draws, particularly against strong opponents. I delete games that produce draws in 30 or less moves.

Adding to DB

In addition to what has previously been mentioned, once the DB has been revised for not so good game results and games deleted, it is time to add all of your quality games from the time the last book was created.
- Refer back to source DB MyPCgamesDB to identify last game used.
- Select all games since this last game.
- Copy the games and paste them into the development DB. When the new book is built, the game result %ages will be adjusted for updated games with new move selection probability.
- Also add any new source of quality games not previously included such as from top human or computer tournaments. It still pays dividends to check what is being added!

Creating New Lines

During analysis of lost games it has sometimes been found that at some point through the book line, a better move has been identified by the engine earlier in the move chain. In these instances create a pseudo game with opponents "ADDED LINE" with a 1-0, 1/2 - 1/2 or 0-1 score as appropriate for the engine evaluation. How deep the continuation is personal choice. I have added these games 3 times to the development DB. Up to now, I have not had to delete any of these added lines through losses!

Using these methods the book will become very focused for a specific chess engine. If using the book on the Playchess server, opponents are doing the same thing and books are very competitive. Patience is required because it can take some 50 to 100 games for the book

to start to tune in. A bumpy ride may be had during that phase but eventually the end results are worth it.

The end result from the 1x DB. HiarcsDevBook070825.ctg,

	N	%	Av	Perf	Fact	Prob	[%]	
HiarcsDevBook07(	81620	57	2668	2710				
1.e4	45564	59	2680	2732	0	78.8	78.8	
1.d4	23834	57	2653	2698	0	20.1	20.1	
1.Nf3	5183	55	2646	2688	0	0.6	0.6	
1.c4	4459	57	2652	2683	0	0.3	0.3	
1.b3	811	57	2704	2739	0	0	0	
1.h3	488	56	2703	2762	0	0	0	
1.Nc3	475	42	2649	2660	0	0	0	
1.g3	340	53	2631	2677	0	0	0	

HIARCS 11.2 MP   Go

Notation | Score sheet | Openings Book

For the Internet a 3x DB build

	N	%	Av	Perf	Fact	Prob	[%]	
HiarcsDevBook07(	244860	57	2668	2710				
1.e4	136692	59	2680	2732	0	78.8	78.8	
1.d4	71502	57	2653	2698	0	20.1	20.1	
1.Nf3	15549	55	2646	2688	0	0.6	0.6	
1.c4	13377	57	2652	2683	0	0.3	0.3	
1.b3	2433	57	2704	2739	0	0	0	
1.h3	1464	56	2703	2762	0	0	0	
1.Nc3	1425	42	2649	2660	0	0	0	
1.g3	1020	53	2631	2677	0	0	0	

HIARCS 11.2 MP   Go

Notation | Score sheet | Openings Book

Even with the games read in three times, the disk file size is the same.

HiarcsDevBook070825 x3.ctb	16 KB	CTB File
HiarcsDevBook070825 x3.ctg	262,700 KB	CTG File
HiarcsDevBook070825 x3.cto	1,024 KB	CTO File
HiarcsDevBook070825 x3.ini	1 KB	Configuration Setti...
HiarcsDevBook070825.ctb	16 KB	CTB File
HiarcsDevBook070825.ctg	262,700 KB	CTG File
HiarcsDevBook070825.cto	1,024 KB	CTO File
HiarcsDevBook070825.ini	1 KB	Configuration Setti...

To complete this fascinating article by Peter, here are 3 photos which he sent me with his own appropriate remarks:

<u>top</u>
"The Machine Room with clutter and beverage bottle that contains only... water... honest!"

<u>centre</u>
"The Monster (that's the one below, not above!). Built from scratch, it was a bit of a monster at the time. Just 18 months on and the CPU seems a bit old hat now compared to some hardware on the Playchess server, but still causing some embarassment to Quads. The glitzy lighting does nothing for its chess playing capability, but does add significantly to the electricity bill!"

<u>bottom</u>
"Looking very different but essentially the same AMD 64 4800x2 dual core CPU's with 2GB of DDR400 memory. The more modest later build looking a bit of a Plain Jane compared to The Monster. They are networked with an Ethernet crossover cable and both have dual O/S boot capability with one disk for XP 32 bit and another for XP 64 bit. There is no significant performance difference. The Monster has a network shared third disk used for backing up files so no need to burn CD's or DVD's"
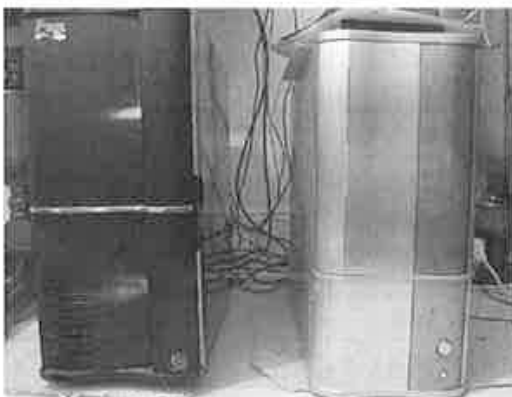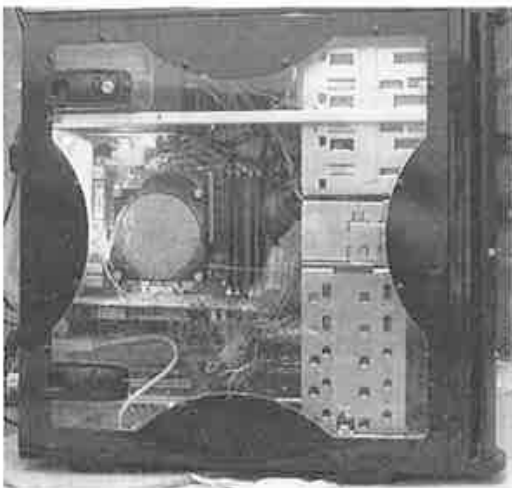
CHRIS GOULDEN's *UCI/WINBOARD* PAGE

Hi Eric

I have fixed the question I raised in my earlier e-mail about the multiple copying of PGN files. I downloaded ChessBase Light and, once the Premium facility is added, it has the ability to read PGNs and import the complete file from any Windows directory.

This will make it easier for both of us when I send you my latest set of results with the games... and you can check my additions now that you know I can occasionally get the final scores wrong, as I did the first time I sent you this set of results! Sorry :-)

This gives me a bit of time to work on my slow time project of building a chess programme!

I am having a fit of madness, learning a programming language C++ and trying to build at the same time. I am ok on the endgame table bases and opening books, it is just the calculus of the advanced evaluations. I can compute the Capablanca idea of two pawns on the 6th rank equals a rook but how the heck you compute the exchange sack, e.g. a rook for a kings side fianchetto'd bishop, and PxP ep takes some working out!

Now for the report:

I noticed recently that a lot of work had been done on the **Glaurung** program, as there had been two or three releases quite close together. I was thinking there might be a big improvement as it had recently won my 1st Division. So I brought Toga II back and Spike, and my usual collection of commercial programs including the old version of Shredder. I must ring the editor and buy v.10, having taken some friendly banter about my purchasing of engines in a recent Sel Search!

Shredder 7.04 UCI got off to an amazing start and drew as black against Rybka 2.3.2 in the first round, and Toga II drew with the Beta version of Rybka in round 3. So I was surprised to see Toga finish one from bottom after this sort of result, it also lost twice to Glaurung. Glaurung was the talk of the tournament after its win and draw against the Commercial Rybka!

Spike 1.2 Turin drew with the Beta Rybka with white in round 8, and HIARCS drew 4 blanks against the Rybka's, but got the better of Fruit in their head to head. HIARCS finished 4th in the end due to results against other engines.

You will recall that I did a test for the Fruit camp in Sel Search 127 using the Fritz 8 ChessBase interface. They were unhappy with its performance, and blamed a bug in the interface. This time we were in Winboard using the Polyglot interface for the UCI engines and a reinstalled Fruit 2.21. The Fruit camp may have a point after this showing (he says quietly), whereas Spike 1.2 Turin seems to prefer the ChessBase platforms but was up against it anyway in this sort of company.

Cheers... Chris

Pos	Engine	/14
1	Rybka 2.3.2	11
2	Rybka 1.0 beta	10
3	Fruit 2.2.1	8½
4	Hiarcs 11.1 uci	7½
5	Glaurung 2 Epsilon-5	7
6	Spike 1.2 Turin	5½
7	Toga 2 1.3x4	4½
8	Shredder 7.04	3½

Chris Goulden

The Glaurung-Rybka game and result stands out of course, and has a fascinating endgame well worth playing through and studying.

GLAURUNG 2 EPS 5 - RYBKA 2.3.2 W32
E11: Bogo-Indian

1.d4 ♘f6 2.c4 e6 3.♘f3 ♗b4+ 4.♗d2 ♕e7 5.g3 ♘c6 6.♘c3 ♗xc3 7.♗xc3 ♘e4 8.♕c2 d5

8...f5 9.♗g2 0-0 10.0-0 d6 11.b4 ♘d8 12.♗b2 ♗d7, Grabarczyk–Hulak 2001, 0-1 in 68 moves.

Also 8...♘xc3 is in the DF10 book, then 9.♕xc3 0-0 10.♗g2 d6 11.d5 ♘d8 12.0-0 but this has quite a good 60% record for White

9.e3N

9.♗g2 0-0 10.0-0 ♘xc3 11.♕xc3 ♘b8 12.♘e5 c6 13.e4 dxe4 14.♗xe4 ♘d7 15.c5 ♘f6 16.♗g2 ♗d7, Roeder–Tolhuizen 2002, 1-0 in 42 moves, but White had much the higher grade

9...0-0 10.♗d3 f5 11.0-0 b6 12.cxd5 exd5 13.♕b3 ♕e6 14.♗b5

14...a5

On the basis that bishops are better than knights you might expect 14...♘xc3? but 15.♕xc3 ♗d7 16.♖fc1! ♘d8 17.♘g5! ♕d6 18.♗xd7 ♕xd7 19.♕xc7 wins a pawn

15.♗xc6 ♕xc6 16.♖fe1 ♗a6 17.♘e5

A good outpost square for the knight

17...♕e6 18.♕a4 ♘d6 19.♕d7 ♕xd7 20.♘xd7 ♖fe8 21.f3 a4 22.♘e5 ♘f7 23.♔f2 ♘xe5

Black has managed to exchange the outpost knight, but gives White a central passed pawn. However as it is doubled it wont be so easy for White to support it when it wants to advance

24.dxe5 ♗c4 25.♖g1 h5 26.h3 ♔f7
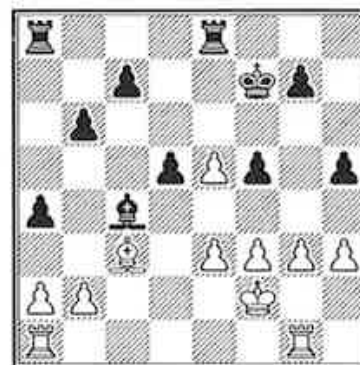
Over the next few moves Glaurung will obtain connected passed pawns on the king-side, and we need to watch how that happens

27.g4! fxg4 28.hxg4 ♖h8 29.gxh5 ♖xh5 30.♖g2

To stop ♖h2+ followed by ♖ah8

30...g5?!

Quite a few of the programs choose this, but I'm not sure it's correct to advance pawns into the opponent's majority

31.♖ag1! ♗xa2

The alternative would be 31...♖g8 32.a3 ♗b5 33.f4! and now 33...♗d7 to stop f4, or maybe 33...c5!? Either would be finely balanced, but White's kingside pawns should give Glaurung the better chances

32.♖xg5 ♖xg5 33.♖xg5

The Rybka evaluation is equal, but I'm sure that White is ahead here. Of course Black has 3 v 1 on the queenside, but there is still some work to do before any of them will gain passed status!

33...♗b1 34.♖g4 a3! 35.♖f4+

35.bxa3 seems almost vital, but 35...♖xa3 gives Black a pair of connected passed pawns. So White has tried something else
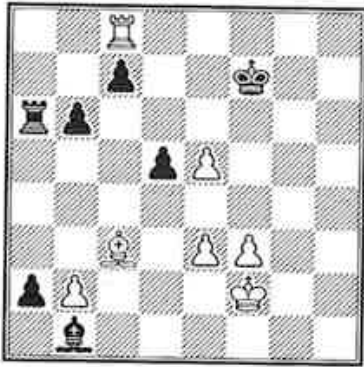
35...♔e8 36.♖g4

Played in preference to 36.bxa3 but as it threatens ♖g8+ winning Black's rook, axb3 can still come next

36...♖a6 37.♖g8+!?

Amazing, but as White wins what can I say?! I'd definitely have chosen 37.bxa3 ♖xa3 38.♗e1 even though Black would now have connected passers

37...♔f7 38.♖c8 a2

The key now is that there a bishops of oppo—site colours! So Black has a pawn on the 7th. but the promotion square is the wrong colour!

39.♖xc7+ ♔e8 40.b4!

Saving the day and Glaurung is also a pawn to the good

40...b5?

I think the best chance is 40...a1♗ 41.♗xa1 ♖xa1, leaving White with a bishop to fight against the passed pawns. Okay White will win another with 42.♖b7 ♗d3 43.♖xb6 but the game might not yet be lost after 43...♖f1+ 44.♔g3 ♗e2 45.f4 ♖f3+ 46.♔g4 ♖xe3+ 47.♔f5 ♗c4!

41.♖c5! ♗d3

Rybka still believes itself just ahead here. Do my readers agree?... I don't!

42.♖xd5 ♗c4 43.♖d6

Finally forcing Black into the promotion. Will it still gain a draw?

43...a1♕ 44.♗xa1 ♖xa1 45.f4! ♖b1 46.♔f3 ♖xb4 47.f5
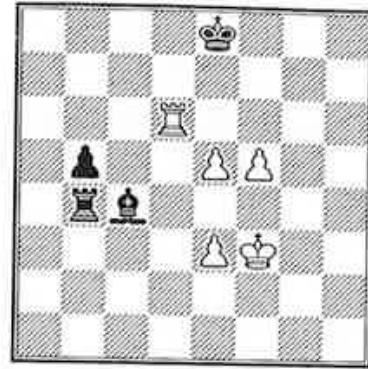
47...♔f8?!

Why not try 47...♖b1 giving his own passed pawn with a chance to run?! Then 48.♔e4 ♔e7 49.f6+ ♔f7 50.♖d7+ ♔f8 and Black is still hanging in there

48.e4 ♖b1 49.e6! ♖f1+ 50.♔g4 ♔e7! 51.e5
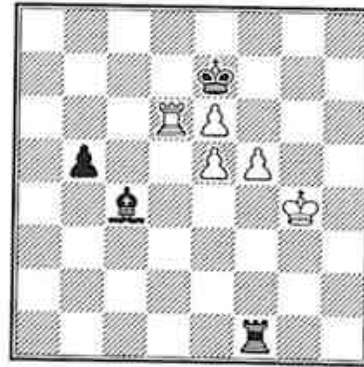
51...♖g1+?!

The best way to draw here seems to me to be 51...b4! Would this be enough to keep Black in with a chance? Let's see... 52.♖b6 b3 53.♖b7+ *(53.f6+ just seems to draw: 53...♖xf6 54.exf6+ ♔xf6 55.♖xb3 ♗xb3)* 53...♔e8 54.♔g5 ♗xe6 draw.

The very strange thing is that on my Dual2Core laptop, Rybka shows 51...b4 as =, but 51...Rg1+ as an advantage to White of +0.25 after only a very few seconds. Maybe Chris's hardware it a bit slower, and I do know he uses a fairly fast time control, so that is probably the reason as, by move 50, the engines may not have had much time left!

52.♔f4 ♖f1+ 53.♔e4 ♖e1+ 54.♔d4
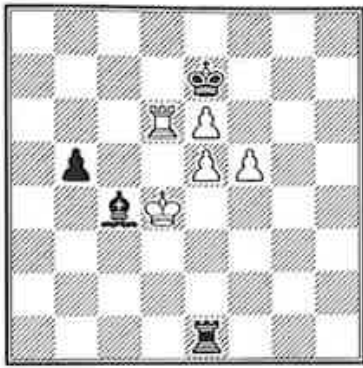
54...♚e8?

What if Black tries to continue the checks with 54...♖d1+ then 55.♚c5. Now there are no checks, but well worth trying and best is 55...♖f1! Now what for White? 56.♖d7+ *(56.f6+? ♖xf6 57.exf6+ ♚xf6= followed by ♗xe6 much as in the line under Black's 51st for 51...b4!)* 56...♚f8. Is there a win for White here? I don't think there is 57.♖f7+ ♚e8 58.f6 ♖e1 *(Absolutely not 58...♗xe6?? 59.♖e7+ ♚d8 60.♖xe6 1-0)* 59.♚d4 ♖d1+ and I think Black gets the draw again!

These variations show that although I've felt for many moves that White has much the better position, that doesn't ensure the win... but it does force Black to continually find the best moves to retain any drawing chance

55.♖b6 ♖d1+ 56.♚e3 ♖d8 57.♚f4 ♖c8

58.♚g5!?

The other and more certain winning way was 58.f6! b4!? 59.♚f5! ♗d3+ 60.♚g5 ♗c4 61.♚g6 b3 62.e7. Now there is nothing Black can do to save the day. 62...♗d5 63.♚g7 ♗c4 64.♖d6 ♖b8 *(64...b2 65.♖b6!)* 65.e6 b2 66.♖d8+ ♖xd8 67.exd8♕+ ♚xd8 68.f7 ♚c7 69.f8♕ b1♕ 70.♕c5+ with mate announcements

58...♚d8??

The wrong way, and that finishes it. There were still two alternatives:
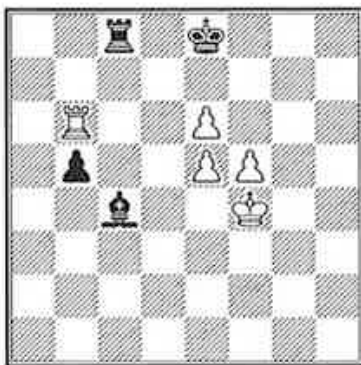
[1] 58...♚f8 59.♚f6! ♗d3! 60.e7+ ♚e8 61.♚e6 ♗c4+ *(61...♗xf5+ 62.♚xf5 is a known win for White)* 62.♚d6 ♗d3 63.f6 ♚f7 64.♖b7 ♗e4! 65.♖xb5 ♖a8. And you'd think with the three well–advanced pawns that White must have a win, but I don't think he does! Perhaps I should send this line to Bill Reid and see if he can get that *"Time for Adjudication"* chap to have a look at it!!

[2] and best... 58...b4! 59.f6 b3 60.♚g6 ♚d8! 61.e7+ ♚c7 62.♖b4 ♚d7 appears to draw

59.f6! ♚e8?!

Confirming it went the wrong way last time. But when you lose 2 tempii in a tricky endgame, you lose everything. Even 59...b4 wont help now: 60.e7+ ♚d7 *(60...♚c7 61.e6 ♗xb6 62.f7 ♗xe6 63.f8♕ 1-0)*

60.♚g6!
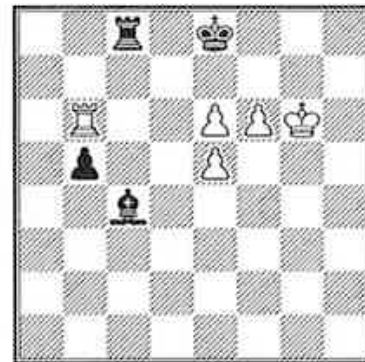
60...♚f8 61.e7+ ♚e8 62.♚g7 ♗a2 63.♖d6! b4 64.e6

With mate announcement

64...♗c4 65.♖d8+! ♖xd8 66.exd8♕+ ♚xd8 67.f7 ♗xe6 68.f8♕+ ♚d7 69.♚f6 ♗d5 70.♕xb4 ♚c7 71.♕c5+, and now it's show—ing m/7 so I think we can leave it there **1-0**

A photo as promised of our new dog Connor, with my wife Chris

PETE BLANDFORD: 4 x ALL-PLAY-ALL ON 2xP4/2100 AT G/60

Pete's 2nd. Tournament on his older P4/2100 machines has been running since 2003.
Rybka 2.2 has now been added

Blitz 60-1 MyTown 2003

				Total
1	Rybka 2.2 32-bit	2840	+5	79.0
2	Junior 10	2830	+4	77.5
3	Rybka 1.2f 32-bit	2827	+4	77.0
4	Hiarcs 10	2794	+3	72.0
5	Junior 8	2745	+2	64.0
6	Fritz 9	2739	+1	63.0
7	Shredder 10	2736	+1	62.5
8	Shredder 9	2730	+1	61.5
9	Shredder 7.04 active	2722	0	60.0
10	Junior 9	2722	0	60.0
11	Shredder 7.04	2707	0	57.5
12	Fritz 8 Bilbao	2701	0	56.5
13	Hiarcs 9	2701	0	56.5
14	Shredder 8 active	2693	0	55.0
15	Deep Fritz 8	2690	0	54.5
16	Shredder 8	2687	0	54.0
17	Fritz 7	2687	0	54.0
18	Junior 7	2687	0	54.0
19	Fritz 8	2687	0	54.0
20	Hiarcs 8 Barcev'	2681	0	53.0
21	Gambit Tiger 2.0	2666	0	50.5
22	Chess Tiger 14.0	2660	0	49.5
23	Tiger 15.0 normal	2660	0	49.5
24	Shredder 7	2643	-1	46.5
25	Hiarcs 7.32	2643	-1	46.5
26	Chess Tiger 15.0	2621	-1	46.5
27	Hiarcs 8	2606	-2	43.0
28	Fritz 6	2580	-3	40.5
29	Fritz 5.32	2577	-3	36.5
				36.0

Average Elo: 2688 <=> Cat: 18
gm = 44.50 % := 22.40

(1624 Games)

PETE BLANDFORD: 2 x ALL-PLAY-ALL ON 2x4800MHz AT G/60

Pete's 2nd. Tournament on his very fast 2 x 4800 PC has been running since 2006.
Rybka 1.2f and 2.2 have now been added

G60 2x4800 XT64 2006

#	Engine	Elo		Score	Perf
1	Rybka 1.2f 32-bit	2937	+1	46.0 / 60	1085.00
2	Rybka 2.2 32-bit	2929	+1	45.5 / 60	1063.00
3	Rybka 2.1o 32-bit	2907	+1	44.0 / 60	1063.00
4	Fritz 10	2873	0	41.5 / 60	
5	Hiarcs 10	2829	+1	38.0 / 60	1085.00
6	Zap!Chess Zanzibar	2829	+1	38.0 / 60	1063.00
7	Shredder 10	2811	+1	36.5 / 60	1038.75
8	Shredder 9	2811	+1	36.5 / 60	994.00
9	Junior 10	2794	0	35.0 / 60	
10	Fritz 9	2777	0	33.5 / 60	
11	Junior 9	2771	0	33.0 / 60	
12	Shredder 8	2743	0	30.5 / 60	871.00
13	Shredder 7.04	2743	0	30.5 / 60	849.75
14	Fritz 8 Bilbao	2737	+1	30.0 / 60	
15	Deep Fritz 8	2726	0	29.0 / 60	823.75
16	Chess Tiger 15.0	2726	0	29.0 / 60	813.00
17	Gambit Tiger 2.0	2720	+1	28.5 / 60	803.00
18	Fritz 7	2720	+1	28.5 / 60	783.00
19	Junior 8	2715	0	28.0 / 60	
20	Fritz 8	2709	+1	27.5 / 60	
21	Junior 7	2698	0	26.5 / 60	
22	Hiarcs 9	2686	+1	25.5 / 60	
23	Hiarcs8 Bareev	2669	0	24.0 / 60	
24	Hiarcs 8	2663	+1	23.5 / 60	
25	Shredder 7	2658	0	23.0 / 60	
26	Chess Tiger 14.0	2652	0	22.5 / 60	
27	Fritz 6	2640	0	21.5 / 60	609.50
28	Zap!Chess Reykjavik	2640	0	21.5 / 60	557.50
29	Hiarcs 7.32	2633	+1	21.0 / 60	
30	Fritz 5.32	2568	0	16.0 / 60	443.50
31	Crafty 19.19	2568	0	16.0 / 60	441.75

Average Elo: 2738 <=> Cat: 20

gm = 19.80 => m = 7.80

(930 Games)

THE *CCRL* AND *CEGT* RATING LISTS!

The CCRL and CEGT Website Groups each has a **COMPLETE RATING LIST** which includes old, new, interim and free versions - you name it! - and on a wide range of hardware. Their sites are very interesting. I extract from the lists the main Single Processor 32-bit ratings, so they can be compared with my *"SelSearch"* Rating List.

CEGT 40/20 32-bit Rating List

Here is the **CEGT web address** for those who want to visit the site for themselves:

- http://www.husvankempen.de/nunn

Pos	Engine	Rating
1	RYBKA 2.3.2	2974
2	RYBKA 2.3.1	2959
3	RYBKA 2.2N	2938
4	RYBKA 1.2F	2935
5	RYBKA 2.1C	2908
6	RYBKA 1.1	2901
7	HIARCS 11.1	2831
8	NAUM 2.2	2828
9	FRITZ 10	2826
10	LOOP 10.32F	2817
11	SHREDDER 10.1	2811
12	TOGA II 1.3x4	2804
13	ZAP! ZANZIBAR	2796
14=	FRUIT 2.3.1	2795
14=	JUNIOR 10.1	2795
16	FRITZ 9	2781
17	FRUIT 2.2.1	2778
18	SPIKE 1.2 TURIN	2772
19	HIARCS 10	2770
20	NAUM 2.1	2769
21	KTULU 8.0	2760
22	SHREDDER 9.1	2750
23	GLAURUNG 2-E/2-5	2732
24	CHESS TIGER 2007.1	2729
25	THINKER 5.0B	2728
26	NAUM 2.0	2720
27	FRITZ 8 BILBAO	2714
28	DEEP SJENG 2.5	2711
29	ALARIC 707	2706
30	SMARTHINK 1.0	2703
31	JUNIOR 9	2689
32	CHESS TIGER 2004	2687
33	HIARCS 9	2675
34	CHESS TIGER 15	2671
35	SCORPIO 1.8	2668
36	GANDALF 6	2662
37	DELFI 5.1	2661
38	CHESSMASTER 10000	2656
39	RUFFIAN 2.1.0	2650
40	PRO DEO 1.1	2644

CCRL 40/40 32-bit Rating List

Here is the **CCRL web address** for those who want to visit the site for themselves:

- http://www.computerchess.org.uk/ccrl

Pos	Engine	Rating
1	RYBKA 2.3.2A	3015
2	RYBKA 2.2N	2987
3	RYBKA 1.2F	2976
4	RYBKA 2.1C	2970
5	RYBKA 1.1	2959
6=	HIARCS 11.1	2894
6=	NAUM 2.2	2894
8	ZAP! ZANZIBAR	2885
9	LOOP 13.6	2884
10	FRITZ 10	2881
11=	SHREDDER 10	2871
11=	TOGA II 1.3.4	2871
13=	LOOP 10.32F	2868
13=	STRELKA 1.8	2868
15	LOOP 12.32	2854
16	SPIKE 1.2 TURIN	2851
17	JUNIOR 10	2846
18	NAUM 2.1	2844
19	DEEP SJENG 2.7	2843
20	FRITZ 9	2842
21	FRUIT 2.2.1	2840
22	HIARCS 10	2836
23	SHREDDER 9	2824
24	JUNIOR 10.1	2821
25	KTULU 8	2803
26	NAUM 2.0	2801
27	FRITZ 8 BILBAO	2800
28	GLAURUNG 2-E/5	2798
29	CHESS TIGER 2007	2793
30	ZAP! PADERBORN	2782
31	JUNIOR 9	2779
32	SCORPIO 1.84	2776
33	ZAP! REYKJAVIK	2766
34	PETIR 4.9999	2762
35	SMARTHINK 1.0	2757
36	ALARIC 707	2751
37	SLOWCHESS BLITZ WV2.1	2742
38	DELFI 5.1	2740
39	CHESSMASTER 10000	2734
40	CHESS TIGER 15	2733

GRAHAM MACKLAM - INTERESTING FINDINGS ABOUT RYBKA's PAWN AND PIECE VALUES

Hi there Eric,

I hope you have the time to read what I believe is some VERY interesting findings by myself.

I know from reading your *Selective Search* magazine that the above subject has been the cause of much bewilderment and below I present my explanations which are backed up by fact as well as evidence from various articles (including one from Larry Kaufman himself.)

Additionally the one word to bear in mind when thinking of piece values is RELATIVE.

So before I launch head first into this thesis, I really have to thank a recent game played by Harvey and Hiarcs 11.45e MP over the Playchess server for fuelling my interest in this area of chess programming.

THE ROOK

As a beginner we are told a rook is worth 5 pawns. This of course is only meant as a rough guide for beginners starting the game to avoid gross blunders when exchanging. *"The value of a rook is less in the opening and middlegame than in the endgame. In the middlegame, a bishop or knight can easily be a match for a rook, and is sometimes superior"* (Smith. R, 2004)

This is understandable when exchange sacrifices occur when there are few or no open lines for the rooks. Larry Kaufman even says you can *"lower the rooks value by 1/8th for each pawn above five for the side to be valued, with the opposite adjustment for each pawn short of five."* (Kaufman. L, 1999). World correspondence chess champion Hans Beliner also adds that the rook can lose up to 20% of its value in closed positions...

- http://en.wikipedia.org/wiki/Chess_piece_point_value

... but doesn't elaborate any further.

RYBKA VALUES

What does this mean in relation to the Rybka piece values in the initial starting position?

In the start position if you remove the A1 rook the P.V is -2.91 for Rybka 2.3.1. Using the above information we can start to see how this value can come about. If we start with the rook being worth 5 points (Kaufman. L, 1999) we can straight away use L.K's reduction of 1/8th of a pawn thingey to arrive at a value of 3.13 pawn units (5 * 0.625 = 3.125).

As you can already see this is quite close to Rybka's value! The extra 0.21 or so most likely coming from a small deduction for the amount of material left on the board (try removing the queens as well and see the value for the rook increase!) and a deduction for the lack of open files present. There could be other knowledge that accounts for the initial value for the A1 rook rather than what I have just stated but again the above is probably the most plausible. Also don't forget that L.K's work is based on the findings from a million game database with players having a F.I.D.E rating of 2300 or higher.

I believe even recent programs fail to take the above points into account. Hiarcs 10 for instance thinks the removal of the rook in the initial start position is a whopping 5.18 pawn units in favour of black! I believe this simply isn't the case. Shredder 9 isn't much better stating -5.08 pawn units in black's favour.

This is only a very small selection of what I have discovered so far. Even the section on the rook could be expanded to include:

- The exchange (rook for knight or unpaired bishop)
- The exchange with no minor pieces traded
- The exchange with the queens and a pair of rooks gone

Explanations for the above can be seen at ...

- http://mywebpages.comcast.net/danheisman/Articles/evaluation_of_material_imbalance.htm

Other bits of information I have got from books and includes:

- What is rook and 2 pawns worth in the opening and middle game?
- What is rook and pawn worth in the endgame?

There really is an enormous amount of information available on the relative value of the chess pieces and this can only help a chess engine's evaluation (Hiarcs!).

Please let me know what you think to the above comments. Feel free to ask any questions. My apologies if most of it is already known to yourself.

Lastly the book by Andrew Soltis *"Rethinking the Chess Pieces"* is highly interesting in relation to computer chess.

Keep up the good work! All the best

Graham Macklam
(a.k.a. macgra on PlayChess)

The **Chess Piece Point Value** article at en.wikipedia.org (full address given on first page of this article) is very interesting, although Larry Kaufman's paper is more up-to-date and computer checked using massive current databases of course.

But as well as getting various Historical Material Valuations, starting with some in an 1813 book (knight 9.25, bishop 9.75, rook 15.00, queen 23.75, king as an attack piece in the endgame 6.50, pawn 2 at the start, 3.75 in the endgame), and moving on through Howard Staunton's figures in *The Chess Player's Handbook*, 1870 where he shows figures close to the popular guide of 1, 3, 3, 5 and 9, and comments that *'the piece values are dependent on the position'*, the article also shows Larry Evan's, Larry Kaufman's and Hans Berliner's findings in brief, and then gives some further sources for those interested in this sort of thing.

Of course the cause of this interest is the success of Rybka! In issue 125 I pointed out that Rybka had many values quite different to other engines, and encouraged readers to check this out for themselves. **Frank Holt** came up trumps and tested many programs, and in issue 126 I was able from his work to produce various tables showing the big differences. Frank kindly updated everything for us in a Chart printed in issue 130... and in fact he's sent me one since to include Rybka 2.3.1 which hasn't yet found its way into the magazine. Next time perhaps!

TIME FOR ADJUDICATION - BY BILL REID

Tuesday, October 23, 1956 did indeed turn out to be a *'thumbing your twiddles'* day at GCHQ. With hundreds of thousands of demonstrators on the streets of Budapest, there had to be total focus on the latest coded messages. This meant that, while the computers were processing the most recent intercept, it wasn't possible just to turn away and work on something else, as would have been the case on a normal day. You had to be completely on the alert to follow up on any breakthrough. So, how to keep the team's brains active while they were waiting for something to happen?

Hugh Alexander's solution was to bring along a chess problem.

Practically all of his team were players of various strengths, and enjoyed looking at interesting positions which could be put aside immediately when they needed to get back to code-breaking. Here is the one he chose for October 23.
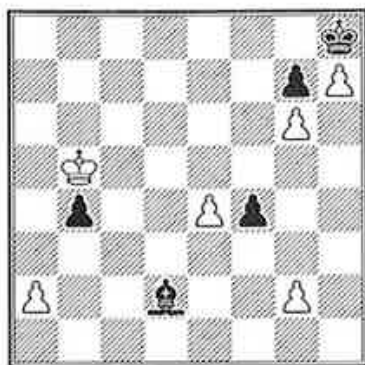
White to Play

He was sure about the basic idea. In this bishop versus two pawns ending, the pawns will win if they are four files apart, but not if they are three or fewer. However, there's quite a bit of play in the position and, even after the key move (actually two in this case, which means it wouldn't count as a problem), there's still a fair bit of analysis to be done. So, a good way to fill up some *'thumbing your twiddles'* time, with the extra advantage that some of the weaker players might well come up with something he had missed. All good for team spirit!

And, indeed, that was how it worked out. It wasn't long before someone saw that the first move must be **1.♔c4** or **♔a4** - the point being that if White plays another king move, or 1.e5, then 1...b3! draws for Black. White must take the pawn (check that the b-pawn does indeed queen in time to stop White's e-pawn winning the game!) and then the bishop can cover the advance of both b- and e-pawns, because, if the b-pawn goes to b4, Black can force capture of the f-pawn with f3 and then, after the bishop captures the b-pawn, White can't retake with the King because that would be stalemate..............

Phew! And what then happens after 1.♔c4? Plenty there to keep codebreakers' brains on the alert. But I guess a modern chess program like Rybka would have it all sorted in a minute or two and be back to twiddle thumbing?

Here are two conclusive lines, one for 1.e5? and the other for 1.Kc4!

1.e5? b3! 2.axb3 ♗c3 3.e6 ♗f6 4.♔c4

Here's another line, where White goes to capture the ♙/f4: 4.♔c6 ♗e7 5.♔d5 ♗a3 6.♔e5 ♗b4 7.♔xf4 ♗d6+ 8.♔e4 ♗b4 9.♔d5 ♗e7 10.♔c6 ♗a3 11.♔d7 ♗e7. It can't be taken because of stalemate, so it is easy to see this is a draw

4...♗e7 5.b4 f3! 6.gxf3 ♗xb4

It can't be taken of course, as that would result in stalemate. So the only try is:

7.f4 ♗e7 8.f5 ♗f6! 9.♔d5 ♗e7 10.♔c6 ♗f6 11.♔d7 ♗e7 and again White is getting nowhere and it's a **draw**

1.♔c4! ♗c3 2.♔b3 ♗e1 3.e5! f3 4.gxf3 ♗g3 5.e6 ♗d6 6.♔c4! ♗e7 7.f4 ♗f8 8.f5 ♗e7 9.♔d5 ♗f8 10.♔c6 ♗e7 11.♔d7 b3 12.axb3 ♗b4 13.f6 gxf6 14.e7 ♗xe7 15.♔xe7 and mate looms **1-0**

Bill's conclusions were confirmed unanimously by the programs when they played [Shootout] engine-engine games. 1.Kc4

always won, and 1.e5 always drew. However the truth is that many of the programs, <u>at the root position</u>, would have played 1.e5? and only when they were put on [Shootout] mode did they realise the error of their ways!

I know, you want to know which engine chose what! I didn't test too many, but at the 10 minute mark...

1.♔c4!
Deep Fritz 10
Hiarcs11 MP
Zap Zanzibar MP
1.♔a4!
Those that got 1.Kc4 had this as 2nd. best!
1.e5?
Deep Junior 10
Deep Shredder 10
Rybka 2.3.2 MP
1.♔c5? (against which 1...b3 draws)
Shredder 10

A New Position from Bill

It had been a long day for Alexander, but quite a successful one, both on the code breaking and the chess fronts.

But, sure enough, when he finally got home, another of those division three adjudication positions had arrived in the mail. And Bishops and pawns again! Not what he wanted after a hard day at GCHQ!
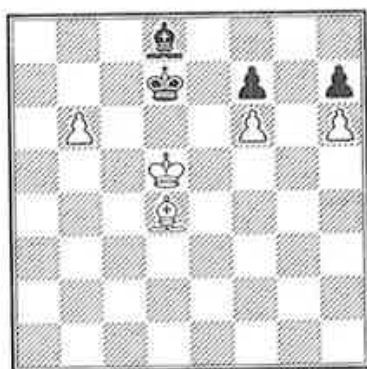
Black to Play

But this one is dead easy. After 1...Bxb6 it's a draw. Just a couple of minutes to complete and sign the form and the job is done! But I wonder, would the programs agree with that?

15TH GEBRUIKERS FOR DEDICATED COMPUTERS - REVISITED BY ERIC!

Finding that I need to correct a small mistake in the final **15th Gebruikers** table which I gave in our last issue, gives me a good excuse to also share a couple more of **Rob van Son**'s photographs, and have a look at another game! First, here is the corrected table:

Pos	Computer	/7
1	REVELATION FRUIT '05/500	7
2=	RESURRECTION II RUFFIAN/500 RESURRECTION RYBKA/200	4½
4	MEPHISTO BERLIN PRO	3½
5	MEPHISTO MAGELLAN	3
6	FIDELITY ELITEAG VII 68060	2½
7	MEPHISTO LONDON PRO	2
8	NOVAG STAR DIAMOND	1

I'd missed the 'Pro' off **Berlin Pro** in the table last time, and of course there is a big difference between a Berlin 68000/12MHz and a Berlin Pro 68020/24MHz!

This was the strongest Gebruikers event <u>ever</u>, with the 3 new **Revelation/Resurrection** models from Ruud Martin taking part - last time we had a look at some of their games.
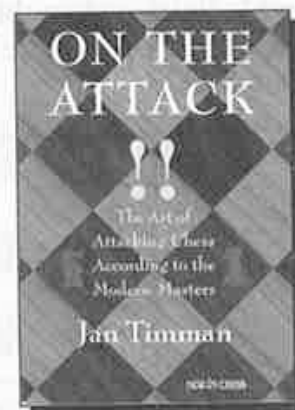
But there were other interesting ones, such as the one I've put some analysis to here between the **London Pro** and the monster **Fidelity Elite** with its 68060 processor and its program based on the Mach3/4 engine.

Mephisto London Pro - Fidelity Elite 68060 v11

B42: Sicilian: Kan Variation: 5 Bd3

1.e4 e6 2.d4 c5 3.♘f3 cxd4 4.♘xd4 a6 5.♗d3 ♘f6 6.0-0 d6 7.f4

Above: Peter Schimmelpennink operates Rob's London Pro
Below: Ries van Leeuwen operates Hans Mierlo's Elite 68060v11

7...d5?!N

The start of Black's troubles, and probably indicating that the Fidelity is out of book. The program was always positive in central-ising its pawns, but this allows the Berlin Pro to block the centre with a gain of space.

Known Book moves/lines are: 7...♘c6 8.♘xc6 bxc6 9.♔h1 ♗e7 10.♘c3 0-0=

7...b6 8.♔h1 ♗b7 9.e5 dxe5 10.fxe5 ♕d5?!±

7...♕b6 8.♔h1 ♗d7 9.♘b3 ♘c6 10.♕e2 ♕c7=

7...e5 8.♘f3±

7...g6 8.♘c3 ♗g7±; 7...♘bd7 8.♘c3 ♕b6

9.♗e3 ♕xb2!?∞

As you see there were plenty to choose from!

8.e5 ♘fd7 9.c3 ♗c5 10.♗e3 ♘c6 11.♘d2 0-0 12.♕h5 h6?!

Was 12...g6 a better choice, then 13.♕e2 ♗e7. There's a hole at g7 where the fian−chetto bishop should be, but the locked pawn centre minimises the disadvantage of this

13.♘2b3

13.♖f3 aiming for a later ♖g3 was also good

13...♗e7 14.♕g4 ♕c7 15.♘xc6 bxc6 16.♖f3! ♔h8 17.♖g3

17...♖g8

The only defence! If 17...g6? 18.♗xg6! fxg6 19.♕xg6, and only 19...♗g5 stops mate, but of course 20.fxg5 ♘xe5 21.♗d4 ♕g7 22.♕xg7+ ♔xg7 23.♗xe5+ wins easily

18.c4

18.♕h5 looks tempting, but I concluded that 18...f5!? would slow the attack down quite nicely, at least for now

18...a5?

Not exactly where the action is! 18...dxc4 would appear to be best, then after 19.♗xc4 ♘b6± is more in keeping

19.cxd5!

How should Black recapture?!

19...exd5?!

Not best. Even though Black now has a passed pawn, so does White potentially and, in fact, those e+f pawns look seriously dangerous and mobile in support of the ongoing attack.

19...cxd5 20.♕h5 f5! 21.♕f7 ♕d8 is a better way to try and hold the attack back, though 22.♘d4! looks strong and White may still break through

20.♕h5 a4 21.♕xf7

I also like the look of 21.f5!

21...axb3 22.♕xe7 ♖xa2 23.♖c1 ♕b7 24.♖g6 ♘f8 25.♖xg7 ♕xe7 26.♖xe7 ♖xb2
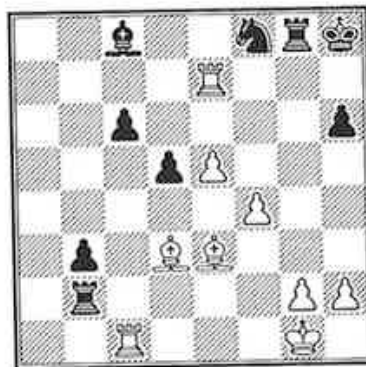
Surely the pair of Black rooks attacking g2, and the queening potential of the b3/♟ can't save the day at the last moment!?

27.g3!

No, they can't after this!

27...♗e6 28.♖xc6 ♖g4 29.f5! ♖a2 30.fxe6 ♖a1+ 31.♔f2 ♖a8

The desperate 31...b2 has become a waste of time: 32.♖c8 ♖g8 33.♗xh6 would see White announcing mate in a few moves

32.♖ec7 d4 33.♗xh6 ♖g6 34.♖c8

The Berlin Pro may not have announced mate, but in fact it is unavoidable!

34...♖a2+ 35.♔f3 ♖g8 36.♖6c7 ♖xh2 37.♗xf8 ♖xg3+ 38.♔xg3 ♖g2+ 39.♔xg2 ♔g8 40.♗d6#. **1-0**

As always my thanks to **Rob van Son** for regularly collecting the games and sending them to me, with his report which we had in our last issue, plus photos from these excel−lent bi-annual Gebruikers events!

THE SICILIAN DEFENCE - INVESTIGATING A TRICKY POISONED PAWN

As reported briefly in our last issue, 2 critical games were played - one in the **Deep Junior v Deep Fritz** Challenge Match, and the other **Rybka** v **Shredder** in the 2007 Computer Chess World Championship - using exactly the same opening moves for 22 moves.

As far as I can ascertain **Shredder** was well out of Book by this critical moment, **Fritz** and **Junior** had some last minute moves to help added, but **Rybka** was well tuned as its Opening Book programmer **Jeroen Noomen** had been keeping some prepared analysis in reserve for the day when this tricky opening would be played against it!

In fact he says: *"After 14.Rd1 Shredder was on its own already and I knew the game would be 1-0"*! (Underlining is mine).

For our Opening experts, the ECO code for this opening is B97 or, in older more descriptive terminology, it would be known as a Sicilian Najdorf: Poisoned Pawn variation.

First then, here are the 2 games with no notes at all.

DEEP JUNIOR - DEEP FRITZ

Ultimate Computer Challenge Elista RUS
(Game 3), 08.06.2007

1.e4 c5 2.♘f3 d6 3.d4 cxd4 4.♘xd4 ♘f6 5.♘c3 a6 6.♗g5 e6 7.f4 ♕b6 8.♕d2 ♕xb2 9.♖b1 ♕a3 10.e5 h6 11.♗h4 dxe5 12.fxe5 ♘fd7 13.♘e4 ♕xa2 14.♖d1 ♕d5 15.♕e3 ♕xe5 16.♗e2 ♗c5 17.♗g3 ♗xd4 18.♖xd4 ♕a5+ 19.♖d2 0-0 20.♗d6 ♖e8 21.0-0 f5 22.♕g3 ♘c6 23.♕g6 ♕d8 24.♗c4 ♔h8 25.♘g5 ♕xg5 26.♕xe8+ ♔h7 27.♗f4 ♕g6 28.♕xg6+ ♔xg6 29.♗xe6 ♘f6 30.♗c4 ♔h7 31.♗c7 a5 32.♖a1 a4 33.♗b5 ♘e4 34.♖d3 ♘b4 35.♖d8 a3 36.♗d7 ♘xc2 37.♖f1 ♗xd7 38.♖xa8 ♗e6 39.♗e5 ♘g5 40.♖f2 ♗b3 41.♖xf5 ♔g6 42.♖f1 a2 43.♖a7 ♘e3 44.♖xb7 ♗d5 45.♖xg7+ ♔h5 46.♖c1 ♘xg2 47.♔f2 ♘h3+ 48.♔e2 ♘h4 49.♗a1 ♗e4 50.♖c4 ♗b1 51.♖g3 ♘g5 52.♖b3 ♘f5 53.♔d1 ♘e4 54.♔c1 ♔g5 55.♖f3 ♔g4 56.♖a3 ♔f4 57.♖c8 ♘f2 58.♖cc3 ♘e4 59.♖f3+ ♔g4 60.h3+ ♔g5 61.♖a5 ♘ed6 62.♖a4 ♘e4 63.♖b4 ♘fd6 64.♔b2 ♘f5 65.♖b5 ♘ed6 66.♖c5 ♘b7 67.♖c4 ♘bd6 68.♖g4+ ♔h5 69.♖gf4 ♔g6

70.♔c1 ♔g5 71.♖g4+ ♔h5 72.♖a4 ♔g6 73.♖ff4 ♘c8 74.♖a5 ♘cd6 75.h4 ♔f7 76.♖e5 ♔g6 77.♔b2 ♔f6 78.♔b3 ♔f7 79.♖a4 ♔g6 80.♖a6 ♔f7 81.h5 ♔f6 82.♔b4 ♔f7 83.♖a7+ ♔f6 84.♖d7 ♔g5 85.♖xd6 1-0

RYBKA - SHREDDER

WCCC 15th Amsterdam (Round 11), 18.06.2007

1.e4 c5 2.♘f3 d6 3.d4 cxd4 4.♘xd4 ♘f6 5.♘c3 a6 6.♗g5 e6 7.f4 ♕b6 8.♕d2 ♕xb2 9.♖b1 ♕a3 10.e5 dxe5 11.fxe5 ♘fd7 12.♘e4 h6 13.♗h4 ♕xa2 14.♖d1 ♕d5 15.♕e3 ♕xe5 16.♗e2 ♗c5 17.♗g3 ♗xd4 18.♖xd4 ♕a5+ 19.♖d2 0-0 20.♗d6 ♖e8 21.0-0 f5 22.♕g3 fxe4 23.♕g6 ♖d8 24.♖f7 ♕c3 25.♗g4 ♘f8 26.♗xf8 ♕a1+ 27.♖f1 ♕xf1+ 28.♔xf1 ♖xf8+ 29.♖f2 ♘c6 30.♗h5 ♖xf2+ 31.♔xf2 ♘e5 32.♕e8+ ♔h7 33.♗e3 b5 34.♔f4 ♗b7 35.♕e7 ♗d5 36.♔xe5 a5 37.g4 e3 38.g5 hxg5 39.♕xg5 ♔g8 40.♕xe3 ♖f8 41.♗e2 b4 42.♗d3 ♖f3 43.♕g5 b3 44.♗g6 ♖f6 45.♕h5 ♖xg6 46.♕xg6 b2 47.♕e8+ ♔h7 48.♕b5 ♔h6 49.♕xb2 ♗a8 50.♕c1+ ♔h5 51.♕f4 ♗d5 52.c4 ♗c6 53.♕f7+ ♔g4 54.♕xe6+ ♔f3 55.♕xc6+ ♔e3 1-0

Okay, now let's have a closer look at the first 22 moves, as played in both games, to see whether this Poisoned Pawn variation needs to be avoided altogether, or whether Black has any improvements that might help.

DEEP JUNIOR-DEEP FRITZ + RYBKA-SHREDDER

1.e4 c5 2.♘f3 d6 3.d4 cxd4 4.♘xd4 ♘f6 5.♘c3 a6 6.♗g5 e6 7.f4 ♕b6

Although there are many games in the databases for this move, it hasn't been played very much since around 1972! Nowadays ♗e7 is the main move

8.♕d2

Since the early 1970's 8.♘b3 has become the move here and its win % sufficient to turn folk away from 7...♕b6, as per previous note.

It is interesting that in 2007 the line has been resurrected, 4 times in quick succession: Junior–Fritz, Rybka–Shredder,

Shirov–Ftacnik, and <u>Anand–van Wely</u>. There are further notes about the last pair of games later!

8...♛xb2

8...♞c6 avoids the Poisoned Pawn variation altogether, and now White has a choice of 9.Bxf6 (my preference) or 9.0-0-0 (the Fritz book choice)

[1] 9.♗xf6 9...gxf6 10.♞b3 ♗d7 11.0-0-0

[2] 9.0-0-0 ♛xd4 *(9...♞xd4 10.♛xd4 ♛xd4 11.♖xd4 ♗e7 transposes)* 10.♛xd4 ♞xd4 11.♖xd4 ♗e7)

Both these lines show as good for White

9.♖b1 ♛a3

10.e5!?

Not totally new. In fact even before the series of four 2007 games the basic DF10 book already had quite a few games supporting its reply, and was in its supplied theory for many more moves, so the folk behind Fritz have seen that this line is playable!

In my Big Database ♗xf6 has 55 games and scores 47%, e5 has 47 games and scores 46%, and f5 has 26 games for 58%!

10.f5 ♞c6 11.fxe6 fxe6 12.♞xc6 bxc6 is the better known line, but Noomens has had the tricky 10.e5 heavily analysed and prepared and in waiting for a game such as this!

10...dxe5 11.fxe5 ♞fd7 12.♞e4

They used to play ♗e4 here, but this proved to be better

12...h6 13.♗h4 ♛xa2
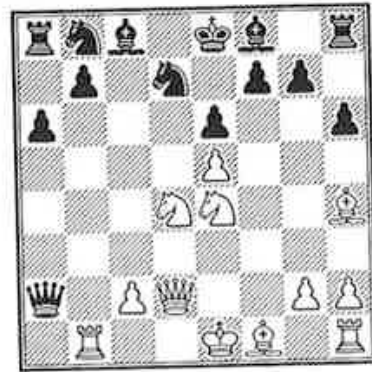
14.♖d1!

I think this is the key to this variation of the line. According to my database, previous to the rush of games in 2007, only 14.♖b3 had been played here with a dismal 0-4=1 record! 14.♖b3? ♛a1+ 15.♔f2 ♛a4∓

Although in the DJ–DF game BOTH programs remain in Book here, in the Rybka–Shredder game, Shredder now started thinking on its own, an almost impossible task against a prepared opponent.

14...♛d5

In Analysis mode all (!) the programs evaluate that Black's pawns are worth more than the White attack at this stage

At last I have a genuine alternative in the search to 'rescue' the Poisoned Pawn variation for Black – 14...♞c6!? is the Junior10 antidote. The Junior Book is known for restricting choices to only those that give best chances. So let's see how that develops...

14...♞c6!? 15.♞xc6 bxc6 16.♗e2 ♛a4.

We now break into 2 variations! The move in the Junior and Fritz books: 17.♛f4?! and the move the latest Hiarcs11 versions and Rybka choose: 17.♗f3!? Hiarcs gives White a small plus but, though Rybka has this =, one anticipates Jeroen has preferred this over ♛f4

in his book, but we wont know until some—one dares to play the line against Rybka! And if 17.♗f3 is his choice, programs will need to find the best continuation for Black!!

So if [i] 17.♗f3!? I propose 17...♕c4

(17...♗b4 looks tasty for only a moment as 18.c3 drives the bishop to c5, so it would be better to place it there immediately with 17...♗c5, which is an alternative)

18.c3

(or 18.♗f6!? ♕b4 (18...gxf6?? 19.♘xf6+! 1-0; 18...♘xf6?? 19.♕d8#) 19.c3 ♕b6)

18...♗c5. And that's as far as I'm going here, some possible Hiarcs' lines need to be kept close to the chest!)

[ii] Did you notice that I said that the move in the DJ and DF books is 17.♕f4?! Yes, DF is back in its book... a shame that it didn't have the actual 14...♘c6 also in Book and it could have tested DJ with the stronger line for Black.

And if 17.♕f4?! ♕a5+ but the DJ book ended here at which point a recent Hiarcs11 version chooses 18.c3 -0.21, and I found it is also in the DF10 book with a 50% record.

(But I think if 18.♔f1?! ♗e7∓)

So let's go back to 18.c3 after which 18...g5 19.♘f6+ *(19.♖xd7? is in the Fritz book, but 19...♗xd7 20.♘f6+ ♔d8 21.♕d4 ♕c7 looks pretty good for Black!)* 19...♘xf6 20.♕xf6 gxh4 21.♕xh8 ♕xc3+ 22.♔f2=

It would seem to me that the 17.♗f3 from Hiarcs+Rybka is a better move for White than the one suggested by the DJ and DF Books. Okay, back to the actual game.

15.♕e3

15...♕xe5 16.♗e2 ♗c5 17.♗g3 ♗xd4
18.♖xd4 ♕a5+ 19.♖d2 0-0 20.♗d6

20...♖e8?!

Shredder, Fritz and Ftacnik choose this, but really 20...♘c6! is better. Unfortunately Computer programs wont give up the exchange because they underestimate White's growing attack and think they are winning. But this is the right move as in Anand—Van Wely, Corus 2007. It would be very interesting to know what Jeroen had up his sleeve for this! Let's have a peep at what happened in Anand—Van Wely...

20...♘c6! 21.♗xf8 ♘xf8

21...♔xf8 would also be okay: 22.0-0 ♔g8 (22...♕e5=) 23.♘d6=

22.0-0 ♘g6

This is my suggestion (with computer help!). Van Wely played 22...Bd7?!, which is not as good and White won after 23.♘d6±.

Maybe there are other possibilities as well as 22... ♘g6, such as: 22...♕e5!? 23.♕f2=; 22...♘e7 23.♗f3=. Plenty to check out for anyone who wants to 'risk' finding himself in these lines over the board!

23.♘d6 ♘ge5

21.0-0 f5

The computer engines all still think Black is winning here. Black is 3 pawns up, and they

recognise that White has attacking compen-sation but they don't (yet) see it as equal to the 3 pawns

Now let's have a look at the position at move 22 and compare both games to see what happened next.

22.♕g3!

Some engines – not many, I'll leave readers to find out for themselves! – find this, and some of them also start to show that White might indeed be ahead here. This is the move played by Rybka using Jeroen's book, by DJ against DF, and Shirov against Ftacnik, and it looks to be better than ♕f4, which is popu-lar with some of the programs

We now break into two lines: 22...fxe4 as played in Rybka–Shredder, and 22...Nc6 as played in DJ–DF

RYBKA - SHREDDER

22...fxe4? 23.♕g6!

Here White is now definitely winning the game

23...♖d8

23...♕xd2 is another try, but then 24.♖xe8+ ♔h7 25.♗h5! is very good for White. Black

must react to the threat of ♗g6 mate, which means 25...♕e3+ 26.♔h1 ♕g5 27.h4! ♕xh4+ (no choice) 28.♔g1 ♕g5 29.♗e7! 1-0

24.♖f7 ♕c3

Appears to be best
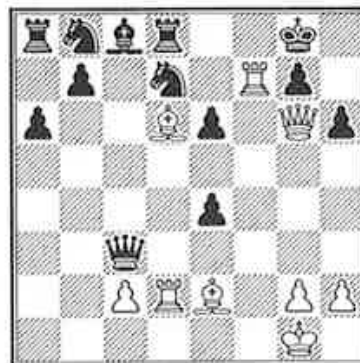
25.♗g4!?

The last move in the Rybka book, and it leaves White with a winning/won advantage.

However as Jeroen Noomens later pointed out, bemoaning the 'slow' speed of his Dual Core laptop (which sounds as if it's about the same as mine), 25.♗b4 was even better. Actually if he'd run Rybka and Hiarcs11 side–by–side doing the analysis he'd have seen Hiarcs11 choose the better move within only a few seconds, whereas on my machine Rybka takes 10 mins which is why he'll have missed it. We have to boast a little when 'our' program occasionally does best! Here's why the move is so much stronger...

25.♗b4! ♕e5 26.♗g4. The e6 pawn must be defended, so 26...♖e8, but now 27.♖xg7+! ♕xg7 28.♕xe8+ ♔h7 29.♕xe6, threatening ♗f5+ and it's already 1-0

Here's how the actual game continued, with some Shredder evaluations from the game record in brackets...

25...♘f8 26.♗xf8 26...♕a1+ (+1.60/20 8:19m)

Or 26...♖xf8 27.♖xf8+ ♔xf8 28.♗h5 ♕a1+ 29.♖d1 ♕xd1+ 30.♗xd1, and with ♗h5 to follow White will win some pawns before Black can unravel the queenside pieces, though this line still gives Black slightly better longevity!

27.♖f1 27...♕xf1+ (+2.08/22 51s) **28.♔xf1 ♖xf8+ 29.♖f2 ♘c6 30.♗h5 ♖xf2+** (+2.21/24 1:53m) **31.♔xf2**

31...♘e5 (+2.95/25 12:34m) **32.♕e8+ ♚h7 33.♔e3 b5** (+3.19/23 0s) **34.♔f4 ♗b7 35.♕e7 ♗d5** (+3.79/24 3s) **36.♔xe5 a5** (+4.05/24 0s. As you can see from the quick response times of Shredder, it knows all too well what is coming and that the game is lost) **37.g4 e3 38.g5 hxg5** (+4.79/23 2:41m) **39.♕xg5 ♚g8 40.♕xe3 ♖f8** (+5.82/24 1:42m) **41.♗e2 b4 42.♗d3 ♖f3 43.♕g5 b3** (+7.14/22 3:11m) **44.♗g6 ♖f6** (+18.42/22 8:35m. and we can leave it there!) **1-0**

DEEP JUNIOR - DEEP FRITZ

After 22.♕g3!

22...♘c6!

... was DJ–DF, 2007, and is considered better. Some programs evaluate it quite close to fxe4 (and some don't!). But as we follow it through for a while we soon see that Black retains good fighting chances!

23.♕g6! ♕d8

This DJ–DF game is now following Shirov–Ftacnik, 2007, and I conclude that it is clear that programmers from both sides are auto-matically updating their engines with latest theory. As Shirov–Ftacnik was drawn I guess both sides allowed the moves to be played, but in truth the position greatly favours White. However Shirov missed the best line at move 27!

24.♗c4 ♚h8 25.♘g5! ♕xg5 26.♕xe8+ ♚h7 27.♗f4!

A new move to theory it seems, so this means that the DJ programmers checked the Shirov line and found an improvement! Well done indeed!

(Here Shirov had played 27.♕xe6?! but after 27...♘f6 his attack was seen to be over and the game was drawn)

27...♕g6

Somewhat astonishingly this was also played from the DF book! This means they had found the improvement for White and had prepared a defence against it, which they presumably thought was adequate.

28.♕xg6+ ♚xg6 29.♗xe6 ♘f6

Everything to here was in the DFritz match book from their last minute updates based on the Shirov–Ftacnik game! But in ending the line here they've left their program in what is surely a very tricky position! Probably they never thought others would be doing just the same and didn't expect the game to be played.

Now Hiarcs11.38e would play 30.♗b3 whereas DJ played, as I think would Rybka....

30.♗c4

Either way White is on top with the 2 rooks and Deep Junior indeed eventually went on to win!

So it seems we have shown that the whole Poisoned Pawn line, unless 14...♘c6 or 20...♘c6 saves the day, is losing for Black!

Maybe so, but as well as checking up further on the ...♘c6 moments, one program, after 22.♕g3! came up with the idea of...

22...♖f8!?

So that also might be worth looking at for both programmers and intrepid Poisoned Pawn addicts! The best try might be

23.♗h5

(Note that 23.♗xf8 ♘xf8 24.♘f6+ ♚f7 25.♗h5+ g6 26.♘e4! is a draw)

Updating current theory! :-))

LATEST RYBKA V HUMAN MATCHES

JAAN EHLVEST (GM) AND JOEL BENJAMIN (GM) TAKE ON THE ALL-CONQUERING ENGINE!

Rybka has already beaten **Ehlvest** once of course - see issue 130, the computer won 5½-2½ in a handicap match where it gave away a pawn at the start of every game - so what on earth does the GM want to take it on again for?!

The feeling was, I think, that firstly, as Rybka had White in every game and, secondly took a different pawn off at the start of every game, it meant the GM had no opening theory to draw on, and the pawn advantage was a bit of a mixed blessing!

So for their 2nd. Match the rules were changed, the main ones being....

- Opening Book: Rybka's book limited to 3 moves deep!
- Endgame Tablebases: none allowed
- Hardware: Multi-processor 4-Core
- 6 games and EHLVEST gets WHITE every game!
- Time Limit: G/90mins + 30secs per move for Ehlvest, but G/45+15 for Rybka

So, 'proper' chess, and the rules strongly favour the GM who gets $11,000 for a Match victory - this sounds interesting! Let's start with game 1 then....

Ehlvest - Rybka

E44. Nimzo-Indian Rubinstein variation.

1.c4 b6 2.♘c3 e6 3.d4 ♗b4 4.e3 ♗b7 5.♘ge2 ♘f6 6.a3 ♗d6

Rybka's 3−move Book and then Rybka since move 3 have done their job, and Ehlvest departs from theory (7.♕d3, or 7.♘g3) first!

7.d5!?

This is very sharp − is it wise?!

7...♘a6 8.g3 ♕e7 9.♗g2 h5 10.h3 exd5 11.cxd5 ♘c5 12.b4 ♘ce4 13.♕d3 ♘xc3 14.♘xc3 h4 15.g4 a5 16.b5 0-0-0 17.♖a2 g5

18.♖c2!?

You've got to admire Ehlvest's courage again here, with a fine (and sound?!) pawn sacri−fice!

18...♗xa3 19.♗xa3 ♕xa3 20.0-0 ♔b8 21.f4 gxf4 22.♖xf4 ♘e8 23.♖xf7 ♘d6 24.♖f4 ♖he8 25.♔h2 ♖e7 26.♕d4 ♖de8 27.e4 ♕b4 28.♕f2 ♖e5

Watch carefully!

29.♕xh4!?

Again very bold! 29.♖f6 a4 30.♕xh4 ♘xe4 31.♘xe4 ♖xe4 32.♗xe4 ♕xe4 33.♕f2 ♗xd5 34.♖xb6+ cxb6 35.♕xb6+ ♔a8 is a draw, most moves being pretty much forced

29...♗xd5 30.♘xd5 ♖xd5 31.g5 ♖xb5

Ehlvest has 2 connected ♕−side pawns,

Rybka has 3 connected ♔-side. Anything could happen

32.e5!

Brilliant

32...♛b3 33.♖xc7?

Ehlvest was close to a masterpiece. With 33.♖c2! ♘c8 (Rybka) 34.g6! White might even have been winning!

33...♔xc7 34.exd6+ ♔xd6 35.g6

35.♖d4+ has been proposed as still saving the game for Ehlvest, but 35...♔c7! 36.♛f4+ ♖be5 looks to hold, though it's definitely complicated by the ♔-side White pawns, so I'd class it as uncertain but probably Black's winning

35...♛e3 36.g7 ♛e5

The only move that wins the day

37.♛g3 ♖g8 38.♔h1 ♖xg7 39.♖f6+ ♔c7

Perhaps Ehlvest was hoping for 39...♔e7? when 40.♛xg7+ wins for White. But pretty unlikely against Rybka! The finish would be 39...♔c7 40.♛xe5+ ♖xe5, and Black wins easily **0-1**

Game 2 was a draw, and now I'm joining game 3 with White to move and a draw likely

Ehlvest - Rybka

32.h4?!

Better was 32.♖d5 h4 33.♛e5!? You'd normally think that White should keep the major pieces on, being a pawn down, but this time it seems to be okay: 33...♛xe5+ 34.♖xe5 b5 35.g3! ♔b7 36.♔g2. But Black still has winning chances and Ehlvest would have to play very accurately for a while longer

32...gxh4 33.♛xg7 ♖xg7 34.a4?!

It isn't usually correct to advance pawns

where your opponent has the majority. 34.♖xh5 ♖g4 35.♔h3 looks better

34...♖g4 35.a5 b5 36.♖f8+ ♔b7 37.♖f7+ ♔c6 38.♖f6+ ♔c5 39.♖xa6 ♔b4?!

I thought 39...b4! looked strong, but after 40.♖a8 ♔b5 41.a6 ♔b6 42.♔h3 it's not too clear how Black progresses.

The move strongly recommended as best was 39...♖a4! and the analysis given now goes 40.♖a8 b4! But I was unsure what happens if 40.♖h6!? b4 41.♖xh5+ ♔c4 42.♖xh4+ ♔c3 43.♖h3+ ♔c2 44.♖h4, which looks to be heading for a draw to me

40.♖a8 ♔a3?!

It doesn't look right moving away from the pawns, but it's beginning to look drawish even with something like 40...♖g5

41.♖b8! b4 42.a6 ♖g7 43.♖b7?!

43.♔h3! should draw

43...♖g5 44.♔h3 ♖a5 45.♔xh4 b3 46.a7 ♔b2

If 46...b2 47.g3! only saving move! 47...♔a2 48.♖b5! ♖xa7 49.♔xh5 draw.

Or 46...♔a2 47.♖b8 ♖xa7 48.♔xh5 draw

47.g3?!

47.♖b8 ♖xa7 48.♔xh5 would have drawn, as per previous note

47...♔c3
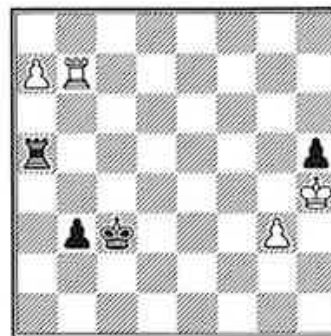
48.♖c7+ ♔b4 49.♖b7+ ♔a4! 50.♖h7?

A fatal mistake, the rook HAS to stay on the b-file. 50.♖b8 is the same saving move as in earlier examples: 50...♖xa7 51.♔xh5 ♖a5+ 52.♔g6 ♖b5 53.♖a8+ ♔b4 54.♖a1! b2 55.♖b1 draws

50...b2!

It's suddenly all over!

51.♖b7 ♔a3 52.♖b5 ♖xa7 53.♔xh5 ♖a4 54.♖xb2 ♔xb2 55.g4 ♔c3 56.g5 ♔d4 57.g6

♔e5 0-1

Rybka also won game 4, and then Ehlvest dropped into a more defensive shell and the final 2 games were drawn, leaving **Rybka** the winner by 4½−1½.

I've not left myself much room for the keenly awaited **Rybka - Joel Benjamin** match. Remember Benjamin had a 2-0 score against Deep Blue no less, and was believed (accused?!) to have been very influential in the controversial re-match, Kasparov v Deep Blue2. So he's something of a computer chess student and expert!

The terms this time were different again. Whereas in the first match against Ehlvest the computer had White (but minus a different pawn) each game, this time they would have 4 Whites each, and Rybka would still be without a pawn in every game.... i.e. it would play 4 games with Black and without one of its pawns.

Surely this had to be as good a chance as you'll get for a GM! So here's game 1!

Rybka (^d2) - GM Benjamin

1.e4 ♞c6 2.♞f3 ♞f6 3.♞c3 e5 4.♗c4 ♗b4 5.0-0 ♗xc3 6.bxc3 d6

7.♞g5?!

Not the end of the world, but 7.♗g5 or 7.♖e1 are clearly better, and playing a pawn down Rybka can't afford many mistakes

7...0-0 8.♞xf7?

Very strange, but apparently there was a mistake made with the contempt settings, causing Rybka to behave strangely! 8.♖e1 is best, or at least better, but White seems to be struggling whatever

8...♖xf7 9.♗xf7+ ♔xf7 10.f4 and **0-1**.

Both sides agreed to set the result of the game and to restart it from move 7 as an Exhibition game, as the contempt mechanism bug in the program settings had now been found − and the forward analysis showed more blunders on the horizon!

The Rybka eval. would be around -1.50, though Hiaercs11 shows it as −2.58! I checked myself what my Rybka2.3.2MP would have played at moves 7 and 8 just to verify that it was a genuine fault 'on the day'. At move 7 it seemed to prefer ♕d3 to the ♖e1 played in the exhibition game, but of course I'm not on anything like the same hardware as in the match! At move 8 I asked for the 'top 5' moves to be shown, and at depth 17 they were, in order, ♕d3, ♖e1, ♗d3, ♕e2, ♕e1, with evaluations from -0.70 to -0.85. ♞xf7 never appeared in the top 5 and, as soon as it is played, the evaluation jumps to Black +1.37, so clearly it was a fault with the contempt settings (I wonder who caused that?!). **Anyway it's 1−0 to Benjamin!**

Here are the moves in the Exhibition game: **7.♖e1 h6 8.♞h4 g5** *I'm a little surprised Benjamin didn't want to castle, but maybe he wanted to see how Rybka reacted to a king−side pawn push while there was no risk!* **9.♞f3 ♗e6 10.♗xe6 fxe6 11.♖b1 b6 12.♕d3 ♕d7 13.♞d2 ♞e7 14.♕f3 ♔f7 15.♕d3 ♞g6 16.g3 ♔g7 17.c4 ♕c6 18.h3 ♖hf8 19.♖b3 ♖f7 20.♖a3 a5 21.♖b3 ♖af8 22.♕e2 ♞d7 23.♖f1 ♞f6 24.♖e1 ♞d7.** *Draw agreed, neither side is trying anything, so that ended things. If Benjamin had wanted to press his chances, then 24...h5 would look as active as anything. Then Rybka would respond 25.♖f1 and now perhaps 25...♖h8 and things might have opened up a little.*

The rest of the Match in our next issue!

PC Programs - *RATING LIST* and Notes

The HEADINGS:

ECF. These are English Chess Federation ratings. They are calculated from Elo figures by (Elo - 600) /8.

Elo. This is the main Rating system in popular use Worldwide. The ECF and Elo figures shown in *Selective Search* are calculated by combining each Computer's results v computers with its results v humans. I believe this makes the *SelSearch* Rating List the most accurate available anywhere for Computer Chess.

+/-. The maximum likely future rating movement, up or down, for that particular program. The figure is determined by the number of games played and calculated on standard deviation principles.

Games. The total number of Computer v Computer games played.

Human/Games. The Rating obtained and no. of Games played in Tournaments v rated humans.

A GUIDE to PC Gradings:

The RATINGS shown represent the programs on a Pentium4/AMD at approx. **1200**MHz, or Centrino 1000MHz, with 256MB RAM.

USERS will get slightly more (or less!) if their PC speed differs significantly:
A doubling/halving of 1200 **MHz speed** = approx. **+/-30** Elo.
A doubling in **MB RAM = 3-4** Elo.

The GUIDE below will help readers calculate approximately what rating their program should play at when used on such alternative hardware.

Comp-v-Comp PC GUIDE, if Pentium4/1200 = 0

Deep prog on 8x2000	100
Deep prog on Quad 4x2000	80
Deep prog on Dual 2x2000	60
P4-Ath/2800 Centrino/2000	40
P4/1200	0
P3-K7/500	-60
PPro2-K6/300	-100
PPro2-K6/233	-120
Pent/200	-140
486DX4/100	-200
486/66	-240
386/33	-320

ECF	Engine	Elo	+/-	Games	Pos	GamesvHumans
288	Rybka 2.3.2	2903	28	300	1	
286	Rybka 2.2n	2890	21	456	2	
285	Rybka 2.1o	2880	30	226	3	
283	Rybka 1.2f	2857	17	663	4	
275	Fritz 10	2803	30	261	5	
274	Zap Zanzibar	2799	30	235	5	
270	Shredder 10	2758	15	942	7	
269	Hiarcs 10	2749	12	1359	8	
268	Junior 10/10.1	2744	18	625	9	
266	Fruit 2.21	2735	12	1388	10	
266	Fritz 9	2733	12	1304	11	2670/4
264	Shredder 9	2713	12	1483	12	2640/20
263	Shredder 8	2705	14	1049	13	2619/21
261	Shredder 7.04	2687	11	1668	14	2703/20
258	Fritz 7	2669	11	1587	15	
258	Junior 9	2666	11	1697	16	
258	Junior 8	2664	12	1481	17	2401/4
257	Fritz 8	2658	8	2678	18	2769/14
256	Hiarcs 9	2647	11	1761	19	
255	Gambit Tiger 2	2640	11	1720	20	2542/2
254	Chess Tiger 14	2638	12	1344	21	2705/13
254	Zap Paderborn	2636	22	445	22	
253	Chess Tiger 15	2627	10	2029	23	
253	Fritz 6	2627	10	2081	24	2616/53
252	Shredder 6	2622	12	1356	25	2478/7
252	Hiarcs 8	2618	11	1642	26	2651/14
251	Gambit Tiger 1	2611	22	430	27	
251	Junior 7	2609	12	1419	28	2701/12
251	Rebel Tiger 12	2608	15	872	29	
250	Gandalf 6	2604	13	1182	30	
250	Junior 6	2604	10	1891	31	2621/22
249	Rebel Century 4	2596	21	480	32	2674/4
249	Hiarcs 7-DOS	2596	12	1397	33	
248	Hiarcs 732	2590	9	2347	34	2467/19
247	Fritz 516	2578	12	1375	35	2513/6
247	Chessmaster 6000/7000	2575	24	353	36	2594/22
246	Fritz 532	2574	12	1480	37	
247	Shredder 4	2572	16	760	38	2600/15
247	Shredder 5	2570	14	1018	39	2642/15
246	Nimzo 98	2568	12	1308	40	2475/10
246	Nimzo 7	2566	13	1208	41	
246	Nimzo 8	2565	12	1326	42	
245	Rebel Century 3	2565	25	340	43	2655/6
244	Junior 5	2554	11	1537	44	
244	Hiarcs 6	2550	13	1207	45	2592/24
243	Gandalf 5	2545	20	513	46	
243	Gandalf 4	2544	13	1147	47	
242	Rebel 9	2542	14	1063	48	2677/14
242	Rebel 10	2539	25	333	49	2598/17
242	Nimzo 99	2538	14	1051	50	

DEDICATED *CHESS COMPUTER* RATINGS

Tasc R30-1995	2354	Novag EmldClassic+Zircon2	1961	SciSys Turbostar 432	1760
Mephisto London 68030	2314	Mephisto Milano	1958	Mephisto MM2	1759
Tasc R30-1993	2311	Mephsto Montreal+Roma68000	1956	Fidelity Excellence/3+Des2000	1755
Mephisto Genius2 68030	2305	Mephisto Amsterdam	1950	Novag Jade1+Zircon1	1750
Mephisto London Pro 68020	2278	Mephisto Academy/5	1950	Kasparov A/4 module	1740
Mephisto Lyon 68030	2273	Fidelity 68000 Mach2B	1933	Conchess/4	1735
Mephisto Portorose 68030	2270	Novag Super Forte+Expert B/6	1931	Kasparov Renaissance basic	1730
Mephisto RISC2	2261	Kasparov Barracuda+Centurion	1930	Kasparov Prisma+Blitz	1730
Mephisto Vancouver 68030	2255	Kasparov GK2000+Executive	1930	Novag Super Constellation	1730
Meph Lyon+Vanc 68020/20	2251	Mephisto Mega4/5	1927	Mephisto Blitz module	1717
Mephisto Berlin Pro 68020	2247	Kasparov Maestro D/10 module	1923	Novag Super Nova	1713
Kasparov RISC 2500-512	2242	Fidelity 68000 Mach2C	1919	Fidelity Prestige+Elite A	1688
Meph RISC1	2232	Kasparov Explorer, TAdvTrainer	1907	Novag Supremo+SuperVIP	1688
Mephisto Atlanta+Magellan	2223	Kasparov AdvTravel, Bravo	1907	Fidelity Sensory 12	1682
Mephisto Montreux	2219	Mephisto MM4	1906	SciSys Superstar 36K	1668
Kasparov SPARC/20	2218	Kasparov Talk Chess Academy	1903	Mephisto Exclusive S/12	1666
Kasparov RISC 2500-128	2200	Mephisto Modena	1901	Meph Chess School+Europa	1664
Mephisto London 68020/12	2195	Kasparov Maestro C/8 module	1894	Conchess/2	1660
Novag Star Diamond/Sapphire	2186	Novag Super Forte+Expert A/6	1888	Novag Quattro	1652
Fidelity Elite 68040v10	2179	Fidelity Travelmaster+Tiger	1885	Novag Constellation/3.6	1650
Mephisto Vancouver 68020/12	2167	Fidelity 68000 Mach2A	1884	Novag Primo+VIP	1638
Mephisto Lyon 68020/12	2162	Meph Supermondial2+College	1884	Fidelity Elite B	1638
Mephisto Portorose 68020	2147	Mephisto Monte Carlo4	1884	Mephisto Mondial2	1611
Mephisto London 68000	2138	Novag Ruby+Emerald	1882	Fidelity Elite original	1609
Novag Sapphire2+Diamond2	2133	Mephisto Monte Carlo	1874	Mephisto Mondial1	1598
Fidelity Elite 68030v9	2122	Kasparov Travel Champion	1870	Novag Constellation/2	1594
Mephisto Vancouver 68000	2119	CXG Sphinx Galaxy	1870	CXG Super Enterprise	1589
Mephisto Berlin 68000	2118	Conchess Plymate Victoria/5.5	1869	CXG Advanced Star Chess	1589
Mephisto Lyon 68000	2116	Kasparov TurboKing2	1859	Novag AgatePlus+OpalPlus	1580
Mephisto Almeria 68020	2115	Novag Expert/6	1859	Kasparov Maestro touch screen	1560
Meph Master+Senator+MilPro	2105	Kasparov AdvTrainer+Capella	1850	Kasparov Touch+Cosmic	1540
Novag Sapphire1+Diamond1	2092	Conchess Plymate Roma/6	1847	Fidelity Sensory9	1527
Mephisto MM4/Turbo18	2089	Fidelity Par Excellence/8	1845	Kasparov Astral+Conquistador	1526
Mephisto Portorose 68000	2088	Fidelity 68000 Club B	1845	Kasparov Cavalier	1526
Fid Mach4+Des2325+68020v7	2077	Novag Expert/5	1845	Chess 2001	1500
Fidelity Elite 2x68000v5	2059	Novag Super Forte+Expert A/5	1837	Novag Mentor16+Amigo	1497
Mephisto Mega4/Turbo18	2050	Fidelity Par Excellence	1834	GGM+Steinitz module	1496
Mephisto Polgar/10	2047	Fidelity Elite+Designer 2100	1834	Excalibur Touch Screen	1480
Mephisto Dallas 68020	2045	Fidelity Chesster	1834	Mephisto 3	1479
Mephisto Roma 68020	2039	Novag Forte B	1833	Kasparov Turbo 24K	1476
Kasparov Brute Force	2027	Fidelity Avant Garde	1829	SciSys Superstar original	1475
Mephisto Almeria 68000	2025	Mephisto Rebell	1826	GGM+Morphy module	1472
Novag Citrine	2022	Novag Forte A	1822	Kasparov Turbo 16K+Express	1472
Mephisto MM6	2016	Fidelity 68000 Club A	1818	Mephisto 2	1470
Kasparov Challenger+Cougar	2016	Kasp Stratos+Corona+B/6mod	1813	SciSys C/C Mark6	1428
Kasparov Cosmos+Expert	2016	Kasparov Maestro A/6 module	1811	Conchess A0	1426
Novag Scorpio+Diablo	2014	Kasparov TurboKing1	1806	SciSys C/C Mark5	1419
Kasp President+GK+TC2100	1993	Conchess/6	1805	CKing Philidor+Counter Gambit	1380
Fid Mach3+Des2265+68000v2	1989	Mephisto Supermondial1	1802	Morphy Encore+Prodigy	1358
Mephisto Nigel Short	1987	Excalibur Grandmaster	1799	Sargon Auto Response Board	1320
Mephisto MM4/10	1985	Conchess Plymate/5.5	1798	Novag Solo	1280
Meph Dallas 68000	1983	SciSys Turbo Kasparov/4	1793	CXG Enterprise+Star Chess	1260
Novag Obsidian	1974	Novag Expert/4	1792	Fidelity Sensory Voice	1250
Mephisto MM5	1972	Kasparov Simultano	1792	ChessKing Master	1200
Mephisto Polgar/5	1971	Fidelity Excellence/4	1784	Boris Diplomat	1150
Mephisto Mondial 68000XL	1968	Conchess Plymate/4	1779	Fidelity Chess Champion 10	1140
Nov Super Forte+Expert C/6	1968	Fidelity Elite C	1778	Novag Savant	1100
Novag Star Ruby+Amber+Jade2	1961	Fidelity Elegance	1764	Boris2.5	1060