

SELECTIVE SEARCH 163

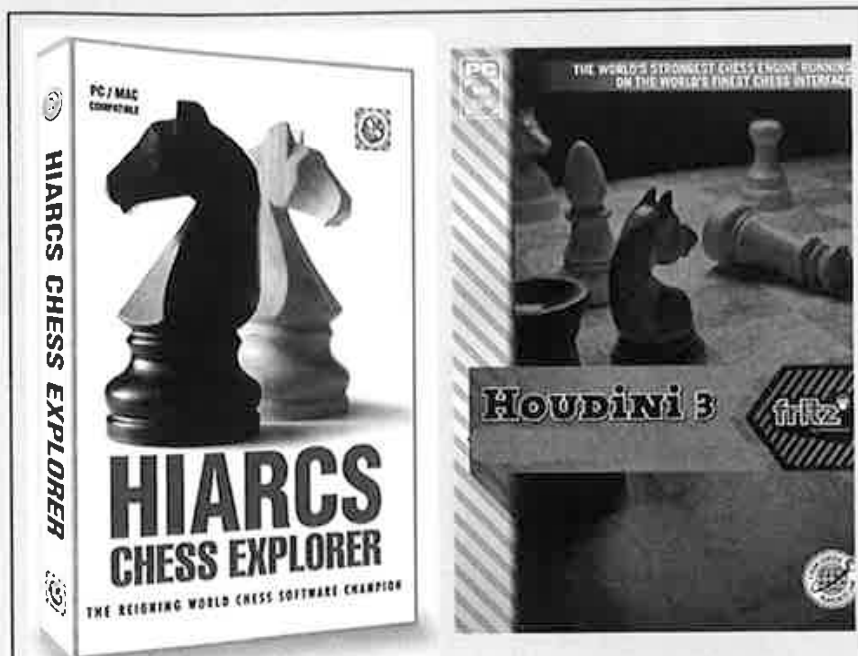
THE COMPUTER CHESS MAGAZINE!

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CHESS SOFTWARE JUST KEEPS GETTING BETTER AND BETTER!

MARK UNIACKE's **HIARCS CHESS EXPLORER**

ROBERT HOUDART's **HOUDINI 3**

- **SUBSCRIBE NOW** to get **REGULAR COPIES** of the **LATEST ISSUE** and **RATING LISTS** mailed to you as soon as they come out!
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- **ARTICLES, REVIEWS, or GAMES** sent in by Readers, Distributors, and Programmers etc. are always welcome.

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SELECTIVE SEARCH is produced by **ERIC HALLSWORTH**

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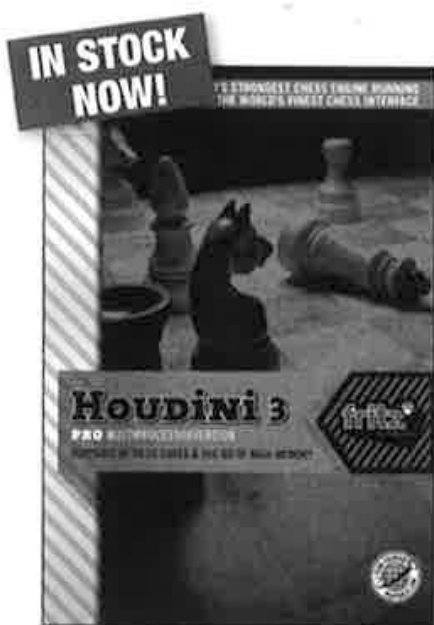
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Houdini 3



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 of 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. 163. If your sub. is due for renewal, **please** subscribe again! There will be 3 more issues of the magazine, which closes 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 in the following ways...

- 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!

I always give myself a few days off after posting out a new issue of the Magazine - eagerly (hopefully) awaiting the arrival of a few subs, and interested to see how many want to keep going to the end!

I did the same this time, but was aware of the fact that, in issues 160, 161 and 162, I have made various promises of Articles that would be "*coming soon*"... but which have still not materialised!

So I made myself a list of 'Things To Do'!

But then of course the news arrived that **Houdini 3** would soon be out, and next I

received some remarkable computer chess games involving **Fritz**, **Hiarcs**, **Houdini** and **Rybka**, as well as all the various Match and Tournament results I get over the Internet and from my Readers! Would a report on Houdini3 wait until maybe issue 164 or 165?! Probably not!! Do readers want to know how the latest engines are faring on the Rating Lists and see their best games? Mmmm - difficult.

So here was my '**To Do**' list, and I give it knowing that, once again, some of them will still be '**To Do**' when this issue has gone out!

- In issue 161 we looked at **Steve Blincoe's** first match with his **Mephisto WonderMachine** against **Resurrection1 Fruit**. The Mephisto won 8-2, but I promised we would next see how it got on against some stiffer opposition... **Resurrection2 Rybka2.2**.
- I've been covering in 161-2 **Jim Crompton's** Tournament with the Mephisto machines, **Atlanta** and **Berlin Pro**, Fidelity's **Mach4** and the Novag **Star Diamond**. We left it with one round of 4 games each to go, it should go into this issue hopefully!
- 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 the **12th. ICT Leiden** Tournament!
- Issue 161 looked at a **Robot v Human** match between **KUKA Monster** and Super-GM **Alexander Grischuk** - the Robot won 4½-1½ and was next due to play for the World Robot Title against **CHESSka**. Another still TO DO!
- In occasional past issues I've looked back at '**What Happened In...**' and did '**15 Years Ago**' (#157) and '**10 Years Ago**' (#154). I've always intended to try and do one more and maybe go back 20 years, but I don't have many complete sets from the earliest days of the Magazine. The year I'd actually like to do if I can find the issues is the one where the '**George Morris Attack**'

was embarrassing all of the top dedicated Computers. If I can find those we'll see what else happened in that year, and you can look at some games where: White doesn't castle but waits for Black to go 0-0; gets his queen on the b1-h7 diagonal and tries to keep it clear; plays Ng1-f3 and, after Black has 0-0, then Nf3-g5. If Black has already played h7-h6 then h2-h4 must be played first, but if not White waits for h7-h6 and then plays h2-h4. They all fell for it and play h6xg5 whereupon h4xg5 leaves the h-file open with White's rook still on h1. Black's knight on f6 is protecting the now very vulnerable h7 square... but this knight is attacked by the pawn on g5. It's game over! I'll try and find one of George Morris' originals of this!

Here's what I'll promise - if any of the above still haven't been covered by issue 166, then I'll do a **bumper issue** - 40, 44 or 48 pages - whatever is needed to fulfil my obligations! I think the posting weight for a 48 page issue will stay at just under 100 grams, so the UK postage costs wont go up, only the printing cost for the extra pages. Foreign postage will be horrible, but many of those readers haven't renewed since I told everyone of the closing down, so it wont cost me as much as it might have.

Another thing I'd like to do, in either issue 165 or 166, is to make a list of my **Computer Chess Sources**. These will mostly be Chess Website addresses and Chess Forums where you can find out what's new, keep a check on latest versions and upgrades, find out the latest Ratings for both the commercial engines, strong freebies and newest engines (sometimes they are quite weak but good fun, sometimes they start out very strong... and I'm sure you all know why!), keep updated with what's new on DVD where there is some great chess teaching for viewing on your PC, get latest Book releases and lists, and collect important match and tournament results for Computer Chess... and Human Chess if you want!

Talking of a 'bumper issue' it has been nice to receive e-mails from Tim Craggs, Paul Cohen, Ray Couzens and others, trying to find ways to encourage me to keep the

magazine going in some way! I don't think Paul's idea of charging £10 an issue (to make me profitable) will work, I don't much fancy having copies printed for just 6 or 7 people!

But one idea is to produce something like a 48 page issue perhaps twice a year. This could keep everyone updated on all the essential new engines, software, major tournaments and matches, with some games coverage. Would around 100 people be interested at something like £6.50 or £7.50 an issue twice a year?

COMPUTER CHESS: NEWS & NEW PRODUCTS!

NEW SOFTWARE ENGINES:

▪ Houdini 3

The arrival of the new **Houdini 3** is the big news of course. It is a UCI engine and available as a download direct from programmer Robert Houdart's website

[<http://www.cruxis.com/chess/houdini.htm>].

Please be aware that you need an Internet connection not only to download the engine but also while you are installing it, when a security verification system will want to check that your installation e-mail address is the same as the ordering e-mail address!

Many readers might well prefer to get it on a DVD and you can buy that from *Chess & Bridge*, either by mail or through their website [www.chess.co.uk] - there will be an advert with details on the inside front cover of this magazine. As Houdini3 is a UCI engine it will of course also run in the various Hiarcs Chess Explorer, Shredder and Arena GUIs.

LATEST VERSIONS:

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

- Chiron 1.2 (only 15 Elo better than 1.1)
- Crafty 23.5
- Critter 1.6a (may not be better than 1.4)
- Fritz 13
- Hiarcs 14 + Hiarcs Chess Explorer 1.2
- Houdini 3
- Junior 13.3

- Komodo 5 (SP only)
- Naum 4.2 (final engine version)
- Rybka 4.1
- Shredder 12
- Stockfish 2.3.1 (may not be better than 2.2.2)
- Strelka 5.5 (SP only)

RATING LIST CHANGES!

I discussed briefly in the last issue the **testing methods** used for the **Rating Lists**, especially as a result of **Peter Grayson's** findings.

I've tended to like **IPON's ratings** because they test the engines in SP mode, which is supposed to be more reliable, and also they test with *'Thinking in Opponent's Time/Permanent Brain'* switched on, which is more realistic, as that's how the engines play in proper Tournaments.

The supposed SP reliability has also affected my choice for the **PC Ratings** used on the inside back cover, where I have had the CEGT and CCRL **1cpu (SP)** figures. But Peter showed that SP is quite likely no more reliable than MP! The other reason I've used 1cpu (SP) is because it puts all the engines on the same testing platform - like the old Uniform Platform events - so it's an exact comparison of engine strength in equal conditions. But...

Nearly everyone now has Dual, Quad, Octal PCs in their home, and many have 64-bit processors as well. And some engines improve more than others when going from SP to MP, or from 32-bit to 64-bit. In the re-coding required, some engines show only small improvement whilst others gain greatly. Therefore anyone who is using MP and/or 64-bit really wants to know what the engines can do like that. If an engine (e.g. Komodo or Strelka) can't use MP, or doesn't have 64-bit code, that's the programmer's limitation - perhaps by choice or maybe because of a failure to overcome a programming difficulty - but why should a rating list reduce everyone down to the lowest common denominator, especially if SP testing isn't more reliable after all?

So there's a **different CCRL MP Table** on page 35!

PETER GRAYSON + ENGINE TESTING...

Having decided to change the PC Engine Rating Lists this late in the magazine's life, I'm now thinking of also changing my own testing method!

Over many years I've created **my own TestSuite** of openings, which makes sure a wide range of popular Openings are used in the tests, therefore ensuring the engines have to deal with many different types of development continuations and middlegame issues. Each engine's own Opening Book is switched off, so it's a plain old Engine Test which reveals quite quickly and reliably a new engine's rating or if an 'upgrade' is what it's supposed to be or, or not!

But Peter had been doing a **Houdini2 v Hiarcs14** test in issue 162, and the fact that Houdini2 was only leading by 32½-25½ will no doubt have surprised many people.

Why so close?

Partly perhaps because of the longer 40/20 time control, which can tend to close the gap between engines a little.

But mainly because Peter was letting the engines use their own supplied Books to select and play the openings. This can make a big difference, as we saw... perhaps no surprise as the Book supplied with Hiarcs 14 is rightly believed to be the strongest there is.

Peter argues, rightly I rather think; that it is only fair to use **a products' full package!** If an engine doesn't use Tablebases, or uses them badly, we don't switch the tablebases off for their games! We say it's their own fault. So why should we switch the Opening Books off? In many cases they are the result of massive amounts and many hours of hard work and specialised computer time, aiming to produce the strongest theoretical Book for both the engine's use... and yours and mine!

I haven't made the change yet, but I'm thinking of going sort of 50-50! I'll use my TestSuite to ensure the fullest range of significant Openings gets used, which I do think is important... but leave the engine Books 'on', so that when they come to the end of each of my prepared lines, they can make use of whatever is in their Books from that point. I aim with all of the Openings I use to leave them at a point where there is still a choice of

continuations - I like to look at the games afterwards to see which engines are good at finding the best theory moves. That's important if you want to use an engine for your own opening preparation! I also want to see how the engines perform when finalising development, pawn structure issues, dealing with positional and/or tactical weaknesses and correct piece placement. With this new suggestion the engine's own Opening Book will make these choices where it still has moves in it for a position. It won't be quite the same as the engine choosing its own openings, but the Opening Books will have the chance to impact the results to some degree at least. Any thoughts out there?!?

COMPUTER CHESS: RESULTS!

FRANK HOLT...

Frank maintains regular contact. Last time we saw his Houdini1.5 and 2.0c tests, in which Houdini2 just edged its predecessor in a G/1hr Tournament, but surprised him by not doing quite as well as Houdini1.5 at a faster time control in a range of individual matches against top opponents. Next he ran 2 tournaments to compare how Houdini2

Standard and Pro fared on his PC.

FRANK HOLT, 8 GAME MATCHES @ G/5

Pos	Engine	/64
1	HOUDINI 2.0c STANDARD	41
2	HOUDINI 2.0c PRO	39½
3	CRITTER 1.6	38½
4	STOCKFISH 2.2.2	38
5	HOUDINI 1.5A	34½
6	IVANHOE 63MOD5A	32½
7	CRITTER 1.4 SSE42	31
8	FIREBIRD 1.1	26
9	ZAP ZANZIBAR	7

FRANK HOLT, 4 GAME MATCHES @ G/30

Pos	Engine	/32
1	HOUDINI 2.0c STANDARD	19½
2=	HOUDINI 2.0c PRO HOUDINI 1.5A	18
4	STOCKFISH 2.2.2 SSE42	16
5	CRITTER 1.6A	15½
6	CRITTER 1.6	15
7=	STOCKFISH 2.2.2A IVANHOE 63MOD5A	14½
7	CRITTER 1.4 SSE42	13

PETER GRAYSON - LATEST HIARCS14 AND HOUDINI3 SCORES

Houdini 3 has been added to Peter's regularly updated Top Engine Tournament Table:

5'/40+5'/40+5'/40		1	2	3	4	5	6		
1	Houdini 3 Pro x64	3155	**	37.5 - 22.5	38.5 - 21.5	40.5 - 19.5	39.5 - 20.5	48.0 - 12.0	204.0 / 300
2	Houdini 2.0c Pro x64 GTB	3090	22.5 - 37.5	**	34.5 - 25.5	32.5 - 27.5	39.5 - 20.5	44.0 - 16.0	173.0 / 300
3	Stockfish 2.2.2JA 64bit	3050	21.5 - 38.5	25.5 - 34.5	**	29.5 - 30.5	34.0 - 26.0	42.5 - 17.5	153.0 / 300
4	Critter 1.6a 64bit GTB	3035	19.5 - 40.5	27.5 - 32.5	30.5 - 29.5	**	28.5 - 31.5	38.5 - 21.5	144.5 / 300
5	Deep Rybka 4.1 x64 LP	3020	20.5 - 39.5	20.5 - 39.5	26.0 - 34.0	31.5 - 28.5	**	38.0 - 22.0	136.5 / 300
6	Deep HIARCS 14	2920	12.0 - 48.0	16.0 - 44.0	17.5 - 42.5	21.5 - 38.5	22.0 - 38.0	**	89.0 / 300

Peter's results show Houdini3 to be a very strong improvement over Houdini2. It ended up well clear of all the other engines, although the Houdini2+3 scores v Rybka were the same!

Peter has also been running Hiarcs14 v Houdini matches but instead of using the Noomen's Testsuite the engines run using their own Opening Books, and at a longer time control. The extra time and the Hiarcs Book makes a big difference to the Hiarcs performance!

20'/40+20'/40+20'					
1	Houdini 2.0c Pro x64 GTB	+34/=55/-17	58.02%	61.5 / 106	+56
2	Deep HIARCS 14	+17/=55/-34	41.98%	44.5 / 106	-56

20'/40+20'/40+20'					
1	Houdini 3 Pro x64	+13/=35/-5	57.55%	30.5 / 53	+53
2	Deep HIARCS 14	+5/=35/-13	42.45%	22.5 / 53	-53
(53 Games)					now 42½-28½

Since these Frank's got **Houdini3** of course!

His first result was something of a surprise as Houdini 3 is claimed to be, and probably is, not only around 60 Elo better in standard chess, but a bit better still (75 Elo is suggested) at **Fischer Random (960) Chess**. So Frank had expected it to run away from everything in his first Tournament with it, a 4 Games v each Opponent at Fischer Random.

FRANK HOLT, G/25 '960' CHESS ON QUAD I7

Pos	Engine	/36
1	HOUDINI 2.0c PRO	21
2=	HOUDINI 2.0c STANDARD HOUDINI 3 PRO	20½
4	CRITTER 1.4 SSE42	19½
5	CRITTER 1.6A	18
6	CRITTER 1.6	17½
7=	STOCKFISH 2.2.2A SSE42 STOCKFISH 2.2.2	17
9	CRITTER 1.4A	16½
10	RYBKA 4 960	12½

"Aaah well," Frank concluded, "who's counting a ½ point?! I suppose you and Peter Grayson have the right idea - Rapid/Blitz games and plenty of them ...but you have to feel sorry for Peter - every time he finishes his Tournament a new update is released!"

PAUL COHEN...

also sends me regular updates with considerable enthusiasm, and keeps all his games on a large database on his very fast PC. This has **9 Engines** playing in a **100 game All-Play-All** at **G/5**, total 3,600 games; and other games at various time controls making a total of 8,307 database games.

He also frequently gets the **Ken Thompson rating facility** to produce a Rating List from his Game in 5 minute matches, which he then sends on to me. His ratings are lower than most others because the calculations start with a base figure of 2800 Elo, but the comparative gaps from the results still hold true of course, and readers can easily add a couple of hundred or so Elo to everything to bring the numbers up to those on other lists if they wish!

PAUL COHEN, ALL-PLAY-ALL G/5

- 2807 Houdini 3
- 2707 Houdini 2.0c
- 2678 Rybka 4.1
- 2667 Critter 1.6a
- 2663 Stockfish 2.3
- 2652 Hiarcs 14
- 2584 Komodo 5 SP
- 2569 Fritz 13
- 2563 Junior 13.3

Amongst his results I noticed...

- Houdini3 v Houdini2.0c 65½-34½
- Houdini3 v Rybka4.1 67½-32½
- Houdini3 v Fritz13 85½-14½
- Houdini3 v Critter1.6a 67½-32½
- and Houdini 3 v Stockfish 2.3 also 67½-32½

Finally on the

CHESS 2 U WEBSITE...

I spotted what's been grandly called 'The **WSCE Commercial Engine Championships**'. I'm not sure what the qualification basis for this was as there's some big names completely missing... maybe it was decided to omit known or suspected clones?

Anyway the result of this double-round Event, **time control 40/40...**

Pos	Engine	/28
1	KOMODO 5	20
2	HIARCS 14	19½
3	NAUM 4.2	17½
4	CHIRON 1.1	16
5	JUNIOR 13.3	15½
6	SHREDDER 12	15
7	SJENG CT2010	14½
8	ZAPPA MEXICO II	13
9	FRTZ 13	12½
10	ONNO 1.2.70	11½
11=	SMARTHINK 1.20, CHESS TIGER 2007.1	8
13	KTUTLU 9	7
14=	CHESSMASTER 11, AIGLOS II	4

AAAAH... THERE WAS ONE MORE THING:
MY WIFE CHRIS AND I WISH ALL MY READERS
A VERY HAPPY CHRISTMAS

HOUDINI 3 chess engine released !



Life is so complicated. Nothing new in that I guess, I remember the days of the early Novag, Fidelity, Conchess, SciSys and Mephisto computers, and the claims, wild claims, even wilder claims... and the many counter-claims. *Selective Search* began its life trying to separate the truth and the facts from the pages of, errr "optimism", and I got myself into trouble easily enough then on more than one occasion.

Handling the PC market had seemed fairly straightforward in comparison. The manual testing required for dedicated computers, where an operator had to be both present and vigilant to transfer the moves from one board to the other, and vice-versa, meant that the number of testers was few, matches took ages without shortcuts, and progress towards rating lists was slow. But PC engines changed all that as testers only had to set the matches up and read-off the results at the end if that was all they wanted to do. As a result it only needed 2 or 3 weeks to establish a pretty close estimate, based on a hundred or more games, of a new engine's likely rating, and everything sailed along quite smoothly.

There was the occasional problem when one or two engines were found to be basically copies, with only one or two minor adjustments, to an already existing engine written by someone else. But these were usually 'found out' pretty quickly when they tried to enter a major Tournament, where the usual entry requirement was that a copy of the code had to be provided for scrutiny.

And then came Rybka!

I think there was a lot of wishful thinking in the early Rybka days - everyone (except rival programmers!) wanted it to be pure and clean because it was so strong, clearly a good improvement on anything else that existed. So early warnings were unwanted, and went largely unheeded.

I could always understand a dedicated computer manufacturer or major distributor getting a bit upset with me when I criticised claims made for their latest production, but I

was surprised when users and purchasers sometimes got quite uptight, even rude, when I made remarks about an engine they had bought. Maybe it's like supporting a football team?! My warnings that I believed that Rybka might well be a (much improved) copy of Fruit were largely ignored, except for a few rather unpleasant letters and e-mails and the loss of half a dozen angry subscribers. When a few years later it was found that I'd been right, and copies of code were being produced to prove the allegation, then the ICCA stripping Rybka of its World Titles, my inclusion of some further facts at the time earned me some more less than charming correspondence and the loss, running into double figures (!), of some more subscribers.

As this magazine is coming to the end of its time in the not-too-distant future, I suppose the loss of a few more readers over 'Houdini truths' might be considered of less importance, but I really don't enjoy annoying people and would rather have been able to steer clear of trouble and ride off calmly into the sunset by telling you that everything is just fine. But sadly I can't.

So here's what I'm going to do.

[1]. As the **Internet Clone coverage** dates back to 2011, first I share some samples from nearly 30 pages of 'proofs' which appeared on the Internet during 2011 under the heading '**Computer Chess, Biggest Liar**'.

[2]. Print the complete **Interview Article** which *ChessBase* did with Houdini's programmer **Robert Houdart** in November 2012 to coincide with the launch of **Houdini 3** - this contains some response to the accusations, and I'll also include Robert's own choice of his favourite Houdini game, which you will enjoy.

Hope that sounds fair! Readers can take whichever side they wish, that doesn't matter to me, but please don't get too cross!

In response to an accusation on the Internet that Houdini contained much code taken from Ippolit and Robbolito,

Houdini (Robert Houdart) had written:
Houdini does NOT contain any Ippolit code.

Contrary to the other open-source engines mentioned, even if it did, it wouldn't make any difference with regards to the legal side of the issue.

Robert

At this point the subject heading of the discussion was changed to...

Re: Computer Chess Biggest Liar, 2011

Who currently holds the title as computer chess biggest liar? I think positions number 1 & 2 are quite tough; could it be a tie?

Jeremy Bernstein

Location: University of Alabama at Birmingham, Site Admin

Re: Computer Chess Biggest Liar

Note from Eric: The thrust of the Forum had changed... instead of it being a discussion as to what degree Houdini was a clone of another engine or engines, a new subject heading appeared at the top of the comments made on the subject. I hope readers will agree that it's sufficient to include it just the twice here, its message is clear enough without repeating it a dozen times.

Someone asked:

Where did you get that quote? "Houdini does NOT contain any Ippolit code".

Jeremy Bernstein replied:

The quote is from

<http://talkchess.com/forum/viewtopic.php?p=427819#427819>

I'm pretty appalled by the... new dippy majority who just says "who cares, as long as it's strong?", opposing those e who think this is a big deal as a "bitter, aggravated"

minority. It is a big deal: it's only the tiny amounts of money at stake in commercial computer chess (although I presume that R.H. is making a decent living on someone else's hard work), and the relatively small clientele, that keep this stuff out of court.

People should know what they're buying. Houdart is a genius for adding some tasty, buttery Elo to someone else's code, but how can anyone defend this? Just look at the output comparisons posted between Robbo 08g3 and Houdini 1: there is no room for doubt. They are (in many cases) identical.

Jeremy Bernstein

by veritas » Mon Oct 10, 2011 6:01 am

Houdart wins title of ~~x~~ 2 faced plagiarizing liar with comparative ease now. Anyone remember him posting "I will post source code as soon as I have "cleaned it up" ?

by kingliveson » Tue Oct 11, 2011 1:11 pm

Robert said there are no IPPOLIT codes in Houdini... but Houdini is RobboLito (which is openly acknowledged by its author to be based on IPPOLIT) modified).

Shall we start from main and compare Houdini 1.0 (build 2010-05-15) to RobboLito?

Eric: After 20 pages of algorithm comparisons showing conclusively that Houdini 1.0/1.5 was based on Robbolito, with many exact matches, he then asks

"Is there really much point in going through the eval and search? It would be a huge waste of time as I am sure most reasonable people can already recognize that Houdini base code is RobboLito".

Jeremy Bernstein again:

Someone needs to post the link to your post on this, although some might consider that a witch hunt. Those 20 pages of code comparison are pretty definitive evidence.

Not that it matters. ChessOK will continue to sell it, Houdart will continue to deny it, folks will continue to buy it...

Jeremy Bernstein

Eric: In fact as readers will find in the *ChessBase* interview, Robert has now admitted (though he makes it sound voluntary rather than as a response to a year of accusations) that he has *'made much use of'* ideas and available code from other sources. But apart from being wrong about *'Houdart will continue to deny it'*, Bernstein was right that.... *'ChessOK will continue to sell it (now add ChessBase) and folks will continue to buy it.'* I must even confess that I have.

Bob Hyatt had joined the discussion...
by hyatt » Tue Oct 11, 2011 4:53 pm
And the Rybka folks will use all this as a justification for "Rybka is OK" of course...
Bob Hyatt

Eric: I'll leave the last post to Jeremy Bernstein whose efforts, along with those of "kingliveson", have provided conclusive proof that Houdini was originally Robbolito

Location: University of Alabama, Birmingham, by Jeremy Bernstein » Tue Oct 11, 2011 5:09 pm

*Hyatt wrote:
And the Rybka folks will use this as a justification for "Rybka is OK" also, of course...*

Fascinating is that, not 6 months ago, the very mention of "Houdini" on the Rybka forum was grounds for immediate removal of a post. Now Houdini is essentially replacing Rybka as the official engine of ChessOK, or at least providing strong competition for consumer's attention. Houdini 2 is powering ChessBomb.com. And so on and so forth.

The entire story stinks. I'm pleased to see another engine displace Rybka at the top, just for the sake of competition. But I can't really say that I'm happy with the way it's happened. ChessOK's line is, approximately, "If we didn't market it, someone else would".

And although I'm confident that, if the Rybka case goes to court, Vas will lose, I don't see any way for Houdart to be taken to task. He saw an opportunity ("ownerless" software, a stagnant market) and took it, and it seems like he'll get away with it.

Well that's enough, I've shortened the whole discussion considerably of course, it would have taken over the whole of this magazine issue... and probably the next one!

Let's now move on to the *ChessBase* Interview with **Robert Houdart**, quoted in full and without alteration.

HOUDINI 3 – THE WORLD'S STRONGEST CHESS ENGINE IN THE FRITZ INTERFACE

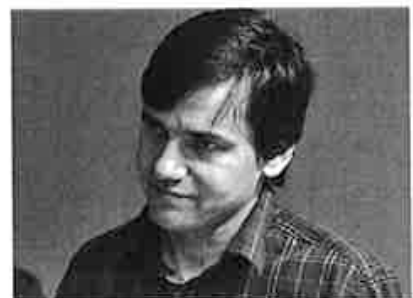
29.10.2012 – In 2009 Robert Houdart, a Belgian structural engineer working on nuclear power plants and astronomy, wiled away his time waiting for a telescope mirror by writing a chess program. To everyone's surprise (sic) it turned out to be the strongest engine around. Now version three is out and will be soon available from ChessBase. We asked the author to explain the genesis of this remarkable chess engine.

Interview with Robert Houdart, author of Houdini

Robert, you are not primarily a programmer. What exactly is your background?

My main academic background actually lies in structural mechanics and heat transfer. I graduated from university in 1991 and then went on to work for Tractebel Energy Engineering, in the design of the Belgian and Swedish Nuclear Power Plants. For eight years my job was to design nuclear piping systems that were resistant to earthquake and airplane crashes. For that we developed some new computational methods with fancy names like "Twin Mode Rotation" and "Adaptive Modal Summation".

After that period I moved on to a completely different sector, business software known as "Customer Relationship



Management". Since 1999 I've developed two CRM applications "eLink" and "Efficy" that are used today by some 25,000 people, mostly in Europe. While I've never had any formal programming education, I have always been programming, since I was 13 or 14 years old. It's in my blood and I've always given a "programming" touch to whatever professional activity I was occupied in.

So how did you suddenly come up with Houdini, which was from the start a very strong chess program?

Since the middle of the 1980s I've more or less constantly been writing chess related software as a hobby – be it chess engines or a program to print chess diagrams on a matrix printer for the magazine of the Leuven chess club. I've written several private engines, mostly not too strong and not very complete.

The work on Houdini started in 2009. At the time I was waiting for the mirror of a big telescope project I was engaged in. The mirror was significantly delayed, and I was in a way looking for an outlet for the creative energy that was building up. I started with this idea to build the best chess engine that I could – and I was helped a lot by the open culture that has come with the Internet. You know, two decades ago you had to invent every part of a chess engine from zero (and I've done my fair share of that), but today we're in a situation where techniques, ideas and examples are readily available on the Internet. You can call it a coming of age of the computer chess scene – as an engine author you're no longer obliged to sit in your corner reinventing the wheel. The computer chess Wikipedia, some strong open source engines, and discussions on Internet forums about chess programming techniques and ideas make the design and development of a strong engine a lot easier than, say, twenty years ago.

What is the secret of Houdini, what makes it so strong?

Two key concepts: good evaluation and even better selectivity. It's self-evident that good

evaluation of a position is the key for a good chess engine. Houdini is probably the best engine to evaluate piece mobility and space control on the board. It has a very balanced evaluation in all phases of the game. I've always tried to link Houdini's evaluation to a probability of winning the game. For example, when Houdini 3 shows a +1.00 evaluation in the middle game it has an 80% chance to win the game against an equally strong opponent at blitz time controls. I believe this is a very useful aspect of the engine.

Selectivity is another key feature in Houdini. Just like a human player, an engine doesn't look at all the moves to the same depth. Potentially good moves are examined exhaustively, whereas apparently weaker moves are only given a quick, shallow look. Some moves are examined 40 or 50 plies deep, other only five. Houdini has a good ability to identify which moves in the position have some potential. It's similar to the instinct and experience of a strong human chess player – looking at just a handful of moves in a position, discarding nearly instantaneously and without thinking the 30 other moves.

This ability – or “instinct” if you like – has been significantly refined and optimized in each version. Compared to Houdini 1.03, Houdini 1.5a added more breadth to the search, identifying more potentially interesting moves. Houdini 2.0 added an improved tactical layer to the breadth of Houdini 1.5a, converting more of the potential of the "interesting" moves. Houdini 3 now brings additional depth to this whole search tree. This also explains why Houdini is already very strong at blitz time controls: its "instinct" makes it pick better moves, even when the time is very limited.

How much do you owe to other programs and programmers? Did you collaborate with anybody, did you receive any advice and assistance?

As I mentioned earlier, the Internet community is a great source of inspiration and the information that is now available in seconds

would have taken ages to collect twenty years ago. Other than the Computer Chess Wiki, which is an awesome resource for any aspiring chess engine developer, I must credit the Stockfish open source engine, which was the inspiration for the multi-threaded implementation of Houdini, and the IPPOLIT open source engine that provided a whole array of search and evaluation techniques. The development effort is done entirely by myself, but I'm supported by people from around the world that send ideas for improvement, very often positions in which Houdini doesn't perform well. Some fans even have donated hardware for engine testing. It's amazing how supportive the community has been over the past two years.

For the development it helps that I've been a decent chess player myself (around 2250 during the 1990s). It assists in assessing weaknesses and to devise improved evaluation terms to correct them.

What are the specific strengths of Houdini – apart from the fact that it can beat all its rivals in one-on-one matches? Chess amateurs and professionals are more interested in how it can specifically help them.

Houdini builds on the Rybka legacy in the sense that it provides accurate and useful assessments in nearly every chess position that occurs in games. It's great for opening preparation and post-mortem analysis. It will show you precisely (and without mercy) what went well and what went wrong in your games – from opening to end game.

Houdini is very good in defending difficult positions (even against other top engines), and its tactical prowess is literally super-human. I've always tried to keep the style of Houdini quite aggressive – it consistently has the lowest draw rate of all the engines in the rating lists. Against 3000+ opponents Houdini has a lower draw rate than what you can observe in the average human GM tournament.

Can you show us some examples of how Houdini comes up with interesting and useful



ideas that other chess engines cannot find?

The most impressive performance I've seen from Houdini was in the TCEC match against Rybka about 18 months ago. It was short (sic) after the release of Houdini 1.5a, and Martin Thoresen organized this fun match – kind of non-official World Champion – on some very strong computer hardware using classical time control. The games could be followed live on the Internet, and so I was watching how this game developed – Houdini sacrificed a pawn, two pawns, three pawns in a queen-less middle game, to end up winning the game in convincing fashion. During the game I wasn't sure at all that what we were seeing was a brilliant game – and not some obscure bugs I'd left in the engine... I don't think any other engine could have played this game the way Houdini did. The blend of aggressiveness with superb tactical and positional evaluation makes this probably the best engine game ever – especially against a former five time Computer Chess World Champion. There's this very interesting video that has been published about the game, which expresses very well the awe and wonder of the performance.

The game, with most of the verbal commentary that I managed to grab, is at the end of this Article.

Do you plan to continue work on the program, keep making it stronger and more useful for chess players? Or will you at some stage return to engineering and astronomy?

I love chess and programming, so what better way to express this than in creating and

improving a chess engine that is used by thousands of chess fans over the world. After the very demanding release of Houdini 3 I do hope to take some time off for the family and to go out observing stars and planets with the big telescope. But early 2013 I'll start again working for Houdini 4.

So how strong is the current version, which ChessBase will release next week?

From the initial public version of May 2010 I've now been able to add about 150 Elo strength improvement. That's over 50 points per year, a rate any human GM would be delighted with. It's gratifying to look back at this evolution, as every Elo point that is won represents a lot of creativity and hard work. I certainly did not expect in 2009 that Houdini would be dominating the chess engine scene for several years, but now that we're at this point I'm happy to continue the dream.

Eric: Understandably, as the game chosen was played by **Houdini 1.5**, readers will be like me - would the **new Houdini** have played with the same enterprise and excitement?!

So I analysed the game for both sides with **Houdini 3** and have left all the Black evaluations in with its move improvement recommendations. It did make some for White (Rybka), but there were none for Black, so H3 would play the same moves! I've included my transcript of notes from the *analytical commentary* on the video *in italics*, and added some extra comments of my own.

In the YouTube commentary the analyst discussed the fascinating fact that, originally (with dedicated computers) humans used to use kingside attacks and sacrifices to take advantage of their opponent's lack of knowledge in this area. Then, with the emergence of PC engines and faster PCs, humans turned to a solid style of play - wild attacks no longer worked, the engines saw them coming, now long term strategy creating small long term advantages became the winning route... creating outside passed pawns ready for the endgame, giving the engine static (poorly placed or wasting away) pieces in its

position, giving it poor pawn structure, blocking the centre for a wing attack, and things of that nature. But now several Engines are showing that they can make some, even sacrificial, kingside attacks work! They understand them enough to use them!

In this game, Houdini sacs no less than three pawns to energise its own pieces, and to open up long range routes against its opponent's king whose pieces are still struggling to develop properly. How good must an attack be to be measured by a computer to be worth more than three pawns by move 22?!!

Rybka 4.0 - Houdini 1.5a

B22: Sicilian with 2.c3

1.e4 c5 2.c3 ♘f6 3.e5 ♗d5 4.♗f3 ♗c6 5.♙c4 ♗b6 6.♙b3 c4 7.♙c2 ♖c7 8.♖e2

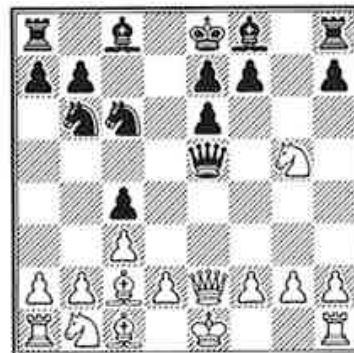
I don't know who the YouTube video analyst is, though he sounds as if he's well up with issues relating to computer chess. But probably not a titled player as here he did say: "*I wonder if 8.. ♖e2 is new, it's certainly logical*".

Of course while analysing myself I have the advantage of a PC engine and PowerBooks running, and there are 242 games for this in my database

8...g5 9.e6

The commentator liked this: "*The point is it disrupts Black pawns, and the vulnerable h7 pawn is en pris, though White's pieces are still in the box*"

8...dxe6 10.♗xg5 ♖e5



Though a theory move this was the last Book move from the engines. It's not (yet) an h7 pawn sac' as, if 11.♗xh7? then ♙h6! leaves the knight with no retreat squares

11.d4

As mentioned both engines are now out of their Books and on their own, though there is a top GM game, among others, going down this route, as noted below

11...♞xe2+

11...cxd3 12.♙xd3 ♞xe2+ 13.♙xe2 h6
14.♗e4 e5 has been played quite often, most notably in Michael Adams v Peter Svidler, Groningen 1997, won by Black

12.♗xe2 e5 0.06/20

This does sacrifice the h7 pawn, so the first sac' of the game, and Houdini3 would choose it as well. As you can see it's evaluation in doing so is virtually equal at 0.06

13.dxe5 ♗xe5 -0.01/19

I found 13...h6 14.♗f3 ♙g7 in my Power-Book, but it doesn't get Houdini's vote, it shows White +0.55 playing 15.♗a3

Now the sac' has been made and the h7 pawn can be taken. The commentary asks: "Is Houdini's sac' due to search depth - it can see how to recover it - or to chess understanding and piece quality appreciation?"

14.♗xh7 0.10/24

Houdini 3 Pro wouldn't have taken the offered pawn, but the evaluation at the end of the line doesn't differ by much, in fact by move 26 it implies taking the pawn was, perhaps, slightly better: 14.♗a3 f6 15.♗f3 ♗d3 16.♙e3 ♗xb2 17.♞ab1 ♗2a4 18.♗b5 ♗f7 19.♞hd1 e5 20.♗f1 ♙e7 21.♗h4 ♗g7 22.♗g1 ♙c5 23.♙d2 ♞g8 24.♗f5+ ♙xf5 25.♙xf5 ♗d5 26.♙e6 ♞gd8 -0.01/19

14...♙g7 0.06/22

The commentary comes to life again: "Engines are usually clinical, exclude Gambits or any reckless play - or is this sac' for real - and how do engines understand such dynamism"

15.♗g5 ♙d7 0.01/20 16.♗a3 -0.07/21

The commentator didn't like this very much: "This 16.Na3 looks pretty awful, but Rybka's evaluation is still showing a plus. Probably 16.Nd2, it looks better than a knight on the edge".

This remark indicates he was going through the game using Rybka for analysis, worth noting as we include other relevant YouTube commentary remarks along the way.

Readers can compare the Houdini3

evaluation which shows -0.07... it's very close, but it is still perfectly happy about the h7 pawn it has saced.

What about the suggested 16.♗d2? Houdini3 shows 16...♙d8! 17.♗gf3 ♗d3 as looking good for Black

16...♗d3!? -0.05/20

A second pawn offer, and again it is taken.

This one certainly shocked the video analyst who had just observed that "Black's knights are much better"! But Houdini has decided to exchange one of them in order to give its second pawn away!

And the video commentary adds: "How do we assess the compensation - does Black's piece energy compensate for 2 pawns - we are told to play solidly against engines, yet here is an engine playing dynamically, and against another engine... this isn't supposed to work anymore"

17.♙xd3 cxd3+ -0.02/21 18.♗xd3 ♗a4 0.04/19

"Another knight on the edge," went the commentary, this time it's Houdini's!

19.f3 -0.10/24

Houdini 3 suggests 19.♗e4 ♙d8 20.♗e2 ♙f5 21.f3 ♙xe4 22.fxe4 ♞h4 23.♞b1 ♞xe4+ 24.♙e3 f5 25.♗f2 ♙d3 26.♗c2 f4 27.♙c1 ♗c5 28.g3 fxg3+ 29.hxg3 ♞a4 30.♞h7 ♗e4+ 31.♗e2 ♞xg3 0.04/19

The video analyst thought, "As White is 2 pawns up it should have consolidated its defences with 19.♗f3" but if so Houdini would reply with 19...b5 20.♗e2 (if 20.♗d4 ♞h5! 21.♗dc2 a5) 20...b4. Black's position, with 5 active pieces against White's 2, would be looking promising with this continuation as well!

19...a5 -0.08/19



If anything I think the balance of the game

really changed here, Houdini believes that White moved the wrong knight

20.♖e4?! -0.30/22

Houdini 3 Pro: 20.♖c2 ♖h6 (20...♞d8 would also be good) 21.b3 ♗f5+ 22.♖e4 ♖c5+ 23.♗d4 ♖e6+ 24.♗d3 ♖c5+ 25.♗d4 -0.08/19

Another idea I looked at was 20.h4 when 20...b5 21.♖c2 also looks a little better for White than in the game

20...f5! -0.33/20

The Houdini3 evaluation has improved nicely towards Black

21.♖f2 -0.59/22

Houdini 3 prefers: 21.♖g3 ♞c8 22.♖b1 b5 23.♖e2 b4 24.♗e3 ♖c5 25.a3 ♖h6+ 26.f4 ♖b3 27.♞a2 bxc3 28.bxc3 ♗c6 29.♞g1 ♖xc1 30.♖xc1 ♗e4 31.♖e2 e5 32.♞b2 exf4+ 33.♖xf4 ♗f8 34.♞h1 ♗c5+ 35.♗e2 ♗d6 36.♖e6 ♗xg2 37.♞d1 ♗e7 -0.33/20

21...b5! -0.45/20

Another move which quite amazed our video commentator as he entered into a discussion of "Material Count-up v Piece + Pawn Quality" and expressed the wish "to know how Houdini evaluated these as Rybka still thought it was pleasantly ahead. What is happening regarding Positional Gambits and Sacrifices? How can a PC Engine, supposedly a material counter, do this?" he asked.

22.♖c2?! -0.94/20

Houdini3's suggested line shown below indicates that it is well aware of the need for White to already be taking king safety very seriously

Houdini 3: 22.♗c2 b4 23.♖b1 ♞c8 24.♖d1 ♗f7 25.♗g5 ♗b5 26.a3 ♖c5 27.axb4 axb4 28.h4 ♞hd8 29.♖f2 ♗a4+ 30.♞xa4 ♖xa4 31.♞e1 ♞c7 32.♞d1 ♞xd1 33.♖xd1 bxc3 34.♖dxc3 ♖xc3 35.♖xc3 ♗g6 36.♗e3 ♗xc3 37.bxc3 e5 38.g4 fxg4 39.fxg4 -0.45/20

22...b4 -0.78/19

And Houdini sacs another pawn, that's one... two... three! And interestingly the Rybka evaluation for its reply, that our commentator was following, dropped to 0.15... still in its own favour, but going down! Readers of course will note that Houdini3 on my PC would play this and have shown 0.78 for Black! "It's saced another pawn! It's 3 pawns down! We've

entered a new age of Romantic Engines – recognising king safety problems and opportunities?" gasped (that's not an overstatement!) the video commentary.

23.cxb4 ♗f7 -0.72/18

24.bxa5 -1.17/22

Houdini 3 suggested: 24.f4 axb4 25.♗e3 ♗c6 26.h4 ♖xb2 27.♗xb2 ♗xb2 28.♞ab1 ♗f6 29.♖xb4 ♗xg2 30.♞h2 ♞hg8 31.♖fd3 ♞g3+ 32.♗e2 ♗e4 33.♞b3 ♗d5 34.♖xd5 ♞xa2+ 35.♗f1 ♞f3+ 36.♗e1 ♞xh2 37.♖e5+ ♗xe5 38.♞xf3 ♗d6 39.♖e3 -0.72/18

24...♞xa5 -0.96/19



25.♗d2 -2.11/23

Now White has left a pawn (on b2) en pris, so Rybka is offering some material back to get its pieces out, but as we see Houdini refuses it

The YouTube commentary noted that Rybka's evaluation goes negative here for the first time, and Houdini we see is showing a massive +2.11! "White's pieces are still spectators, but the opportunity window to take advantage of the better development may not last for long, whereas the material is more permanent, even if White offers some of it back".

I checked 25.♞b1?! which would have held the pawn, but 25...♞e5! 26.♗e3 ♗b5+ 27.♖d2 f4 leaves White in all sorts of trouble, -3.67/21, so the attempted return of some material was the right idea.

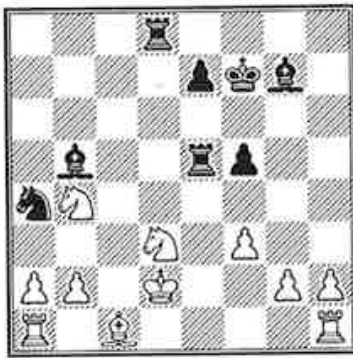
Actually doing a very quick BlunderCheck it had seemed that there might be a better continuation for White with the H3 recommendation of: 25.f4! The initial Blunder-Check line went 25...♗c6?! 26.h4 ♖xb2+ 27.♗xb2 ♗xb2 -0.96/19, which would have been more comfortable for White!

However a few moments into the analysis

of 25.f4 Houdini3 came up with 25...♞c8! which is much better! 26.♗e1 ♖xb2+ 27.♙xb2 ♙xb2 28.♞b1 ♞xa2 -2.63/24, now worse than the line chosen in the end! **25...♞d8!** -1.85/20

What if Houdini had taken the offered pawn with 25...♗xb2?! Not as good at all: 26.♙xb2 ♙xb2 and after 27.♞ab1 ♙g7 (or 27...♞xa2 28.♗b4 ♙c1+ 29.♗xc1 ♞c8+ 30.♗d1 ♞xf2 -0.93/24), and Black is suddenly only a pawn ahead after 28.♗b4 -0.95/21

26.♗b4 ♞e5 -2.38/24 **27.♗fd3 ♙b5!** -2.31/25



"A vicious pin" which enables Houdini to recover material while still retaining a dynamic advantage

28.♞e1 ♗c5 -2.39/25 **29.♞xe5**

No choice, there is nothing better **29...♙xe5** -2.12/23 **30.f4** -2.67/27

Houdini 3 prefers 30.a4 ♗xd3 31.axb5 ♗xb4+ 32.♗e2 ♗c2 33.♞a4 ♗d4+ 34.♗e1 ♗xb5 35.f4 ♙f6 36.♞c4 ♞h8 37.h3 ♞g8 38.♗f1 ♗d6 39.♞c7 ♞g3 40.♞c5 ♞b3 41.♞c2 ♗e4 42.♗e1 ♙d4 43.♗e2 ♗e6 44.♞c6+ ♗d5 45.♞c2 ♗d6 46.♗e1 ♞g3 47.h4 ♗c5 48.♗f1 ♗d3 -2.12/23

30...♙f6 -2.84/24 **31.♗e1 ♗xd3+** -2.73/24 **32.♗xd3 ♙xd3** -2.64/26

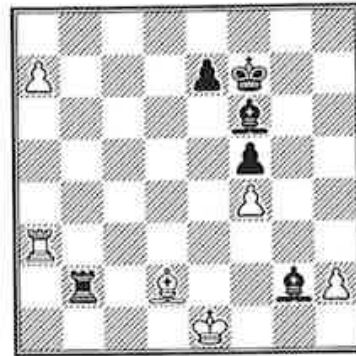


Black now has a bishop for the 3 pawns, and its three pieces are all still active, whereas



White's ♞+♙ are almost useless. The conclusion of the game is of interest, due to the gallant effort of Rybka's a-pawn, but the result is inevitable

33.a4 ♞c8 -2.67/24 **34.a5 ♞c2** -2.69/25 **35.♙d2 ♞xb2** -2.58/23 **36.a6 ♙e4** -2.97/26 **37.♞a3 ♙xg2** -2.94/24 **38.a7**



38...♞b1+ -2.95/28 **39.♗e2 ♙a8** -2.84/24 **40.♙e1 ♙d4** -2.87/23 **41.♞a2 ♞b3** -3.20/22 **42.♙g3 ♗e6** -3.38/23 **43.♗f1 ♙c5** -3.37/26 **44.♗e2 ♗d7** -3.56/24 **45.♗f1 ♞b4** -3.69/23 **46.♗e1 ♙d6** -3.65/21 **47.♗f2 ♙xf4** -4.29/21 **48.h4**

Exchanging bishops would only serve to help Black with tablebases running **48...♙h6** -4.78/21 **49.♗f1** -6.75/22

Houdini 3 showed 49.♙e5 ♞e4 50.♙a1 ♞xh4 51.♞a3 ♙f4 52.♞d3+ ♗c8 53.♙d4 ♞h2+ 54.♗e1 ♞a2 55.♞c3+ ♗d7 56.♞h3 ♙g2 57.♞d3 ♗c7 58.♞b3 e5 59.♙c5 ♙c4 60.♙b6+ ♗d6 61.♙f2 ♙d5 62.♞b6+ ♗c7 63.♞b8 ♙g5 64.♙b6+ ♗d6 65.♞c8 ♙g2 66.♞b8 ♙h4+ 67.♗d1 ♙f3+ 68.♗c1 f4 69.♞h8 ♙g5 -4.78/21. A little better but the game was still going to end 0-1.

49...♞b1+ -6.80/23 **50.♙e1 e5** -4.93/22 **51.h5 51...f4** -8.76/22 **52.♞d2+ ♗c7** -11.04/24 **53.♞c2+ ♗b6** -10.94/22 **0-1**

Houdini 1.5 won the match by 23½-16½.

SELECTIVE SEARCH SUBSCRIBER JIM CROMPTON RUNS A STRONG TOURNAMENT WITH 4 TOP DEDICATED COMPUTERS - pt.3

We've been looking at the best games from **Jim Crompton's** Dedicated Computer Tournament. It's been an All-Play-All with the computers playing each other 4 times, so 24 games in all, 12 for each computer. The time control for the games is **Game in 1 hour**.

Here's the list of the computers, with their *Selective Search* ratings from issue 160 - it's a strong group as you can see!

- Mephisto Berlin Pro (2235)
- Mephisto Atlanta (2207)
- Novag Star Diamond (2175)
- Fidelity Mach 4 (2071)

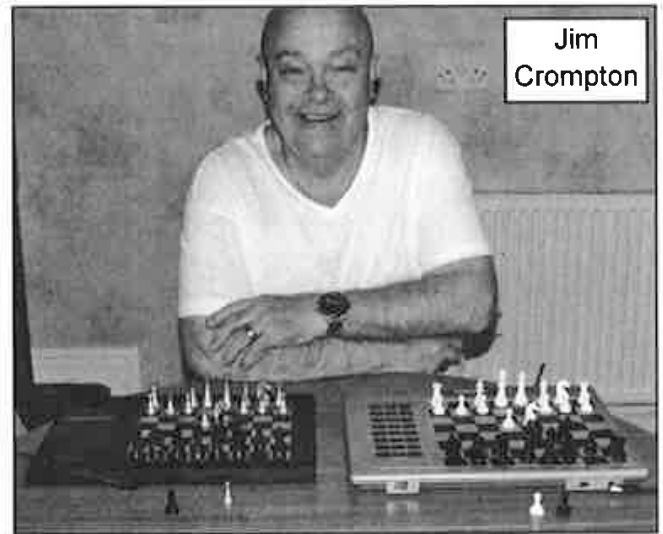
It's been especially interesting to see how the older, but aggressive **Mach4** (Dan and Kathe Spracklen) has managed in such company, especially against the quieter and more positional styles of the **Berlin Pro** (Richard Lang) and, this time, the **Star Diamond** (Dave Kittinger). The fourth member of the group, the **Atlanta** (Franz Morsch) also has an aggressive engine, so we have 2 aggressive and 2 positional computers!

By the end of our last issue, 162, we had looked at the best games from the first 4 matches, with the following results:

	Elo	At	BP	SD	M4	
Atlanta	2207	x		1½	3	4½
Berlin Pro	2235		x	2½	2	4½
Star Diamond	2175	2½	1½	x		4
Mach 4	2071	1	2		x	3

... which has worked out very nicely for us - the Match for top spot between the **Atlanta** and the **Berlin Pro** comes now and, unexpectedly (for me anyway), the **Star Diamond** lies in wait - if the top 2 draw it can win the Tournament with a good result against the old tactical expert, the Fidelity **Mach4**!

So let's start off the final round by seeing how well the Novag responded to that challenge!



Star Diamond - Mach 4

Game 1. ECO E12: Queen's Indian, unusual 4th & 6th moves

1.d4 ♘f6 2.c4 e6 3.♗f3 b6 4.a3 d5 5.cxd5 exd5 6.♗c3 ♘d6 *Unusual and presumably played out of Book. 6...Bb7 or ♗e7 are usual* 7.♗g5! c6 8.e3 0-0 9.♗d3 ♞e8 10.0-0 ♗g4 11.h3 ♗h5 12.♗f5 12.e4 ♗e7 13.♞e1 *would have put more pressure on Black* 12...h6 13.♗h4 g5 14.g4 gxh4 15.gxh5 ♗xh5 16.♖h1! *I remember criticising this sort of move in our last issue, but here it has an aggressive purpose!* 16...♗g7 17.♞g1! ♖h8 18.♗c2 ♗d7 19.♞d3 ♗f8 20.♞g4! *Excellent*



20...h5 21.♞gg1? *Understandable from a dedicated machine, but having seemed to prepare such a possibility with its earlier moves the Star Diamond now misses this wonderful opportunity: 21.♞xg7!! ♖xg7*

22. ♖g1+ ♕g3 (22... ♜g6 doesn't work because of 23. ♖xg6+! and if 23... fxg6 24. ♗xg6+ ♜f8 25. ♜g5 and Black must resign) 23. fxg3+- 21... ♜g8? Gives the Star Diamond the same . ♖xg7! opportunity as in my previous note, but again White misses it 22. ♖ae1 ♜g6? And now White has a third and similar chance to close in on the win, and this time it is taken! 22... ♗d7 was the best try, but White would still have a definite advantage after 23. ♗f1 ♜f6 24. ♗g2! 23. ♖xg6! fxg6 24. ♗xg6 ♜f8



25. ♗h6?? Both 25. ♜g5! followed by ♖g1, or the immediate 25. ♖g1 virtually win outright 25... ♖e6! A good find by the Mach4, Black is right back in the game, you could almost call it Houdini! Well, perhaps not! 26. ♗h8+ ♜f7 27. ♜g5+ ♗xg5 28. ♗xa8 ♗f6 29. ♜g2 ♗e7? Enabling White to take over again. Best was the strong 29... ♜f5! 30. ♗b7+ ♕e7 and either side can win! 30. ♗xc6 ♕xa3 31. ♗xd5 ♕xb2 32. ♜e4 ♜g8 33. ♜g5 ♗d6 34. ♕b3 ♗xd5+ 35. ♕xd5



White now has a simple win, though it takes a little longer than it might have 35... ♕a3 36. ♖a1 ♕e7 37. ♜xe6 a5 38. ♜xg7+ ♜xg7 39. f4 ♕b4 40. ♜f3! The best way to secure the full point 40... ♜f8 41. ♖c1 ♕d2 42. ♖c7 ♕b4 43. f5 ♕d6 44. ♖c6 My PC engine

announces m/16! 44... ♜e7 45. f6+ ♜d7 46. ♖xb6 a4 47. f7 47. e4! would have been m/8 47... ♕e7 48. ♖b7+ ♜d6 49. e4! ♕f8 49... a3 would have delayed the end for a few more moves: 50. e5+ m/8 50. ♜e3 m/5 50... ♕g7 51. ♜d3 51... ♕h6 52. ♜c4 ♕g7 53. e5+ ♕xe5 54. f8 ♗#. 1-0

Exactly the start the Star Diamond wanted, but game 2 went to the Mach4 in a marathon! So with the score standing at 1-1 we'll now have a look at game 3.

Star Diamond - Mach4

Game 3. ECO A39: Symmetrical English vs ...g6: 4 Bg2 Bg7 5 Nf3 Nf6 6 0-0 0-0 7 d4

1. c4 c5 2. ♜c3 ♜c6 3. g3 g6 4. ♕g2 ♕g7 5. ♜f3 ♜f6 6. 0-0 0-0 7. d4 cxd4 8. ♜xd4 ♗a5 9. ♜b3 ♗h5 10. e4 ♗xd1 11. ♖xd1 d6 12. c5 dxc5 13. ♜xc5 All well known theory to here, and a drawish type of position. Usual now is 13... e5, ♖b8 or ♕g4, and... 13... ♖d8 is also fine 14. ♖xd8+ ♜xd8 15. ♕f4N 15. e5 ♜d7 16. ♜xd7 ♕xd7 17. f4 is a decent line which has been seen in practice 15... ♜c6 16. ♖d1 ♜g4 17. h3 e5 18. ♕c1 ♜f6 19. ♕e3 b6 20. ♖d6 ♜a5 Exchanging knights with 20... bxc5? 21. ♖xc6 would just leave its own pawns in a mess 21. ♖d8+ ♕f8 22. ♕h6 ♕b7 23. ♖xf8+ 23. ♜xb7 was certainly possible as well, perhaps even better: 23... ♖xd8 24. ♜xd8 ♕xh6 25. ♜b5± 23... ♖xf8 24. ♕xf8 ♜xf8 25. ♜xb7 ♜xb7



It looks like a simple enough position, and a likely draw. But we are about to see the first real turning point 26. ♜d5?! 26. f3 would have been fine, and 26. ♕f1 also maintains equality 26... ♜xd5 27. exd5 White has been left with an isolated pawn which is bound to

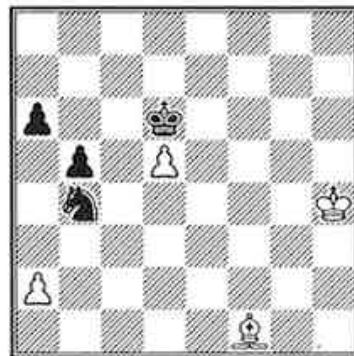
get into trouble with Black's ♔ being so much nearer 27...♖d6 28.♗f1 ♕e7! 29.♕e2 f5! 30.♕d3 h6 31.♙h1 31.f4 was worth a try: 31...♗f6 (31...exf4?! 32.gxf4 ♖b5 33.♕c4=) 32.a3 g5! 33.fxe5+ ♕xe5 34.g4 ♖31...b5 32.g4 fxg4 33.hxg4 h5



The pawns are all over the place and I'd have loved to know how the computers each evaluated this! As it is White now makes its second mistake of the more serious kind, and gives Black a big chance 34.gxh5?! With 34.g5 b4 35.b3 it would still have been in the game with good drawing chances 34...gxh5 A passed pawn! 35.♙f3?! A bit of a waste of time, this just encourages Black to move the pawn. But note that the game is still not decided! Instead 35.♙g2 restricting the pawn's progress, and after 35...♖c4 perhaps 36.b3 ♖a3 37.♕e4 ♖35...h4 36.♙g2 Ha! 36...♖c4 37.♕e4 What?!?! Surely, I thought, 37.b3 – but in fact 37...♖b6 38.♕e4 ♖d6-+ winning the d5 pawn instead 37...♖xb2 38.♕f5? Sorry, but that deserves another 'What?!?!' – and this time I'm right. Correct of course is 38.♕xe5 ♖d3+ 39.♕e4 ♖xf2+ 40.♕e3 ♖g4+ 41.♕f4 ♖f6. But what now? If 42.♕f5 ♖d7



43.♕g4 ♖d6
44.♕xh4 ♖b6!
Black wins the d5 pawn and the game 38...♕d6 39.f4 exf4 40.♕xf4 ♖d3+ 41.♕g4 ♖b4 42.♙f1 a6 43.♕xh4



Might as well, but 43...♖xa2 44.♕g4 ♕xd5 45.♕f3 ♖c3 46.♕e3 a5 47.♙g2+ ♕c4 48.♙f1+ ♕b3 49.♕d4 a4 50.♙h3 a3 51.♙e6+ ♕b2 52.♕c5 a2 53.♙xa2 ♕xa2 Note there was a blunder available: 53...♖xa2?! 54.♕xb5=. But now tablebases are showing m/14. 0-1

2-1 down, the Novag's hopes are dashed and both machines are on 5/11, so can only get to 6 anyway if one of them wins the last game.

Mach4 - Star Diamond

Game 4. ECO E55: Nimzo-Indian: Rubinstein: Main Line: 7...dxc4 8 Bxc4 Nbd7

1.d4 ♖f6 2.c4 e6 3.♖c3 ♙b4 4.e3 0-0 5.♖f3 d5 6.♙d3 c5 7.0-0 dxc4 8.♙xc4 ♖bd7 9.♗e2 b6 10.♗d1 cxd4 11.exd4 ♙b7 12.d5 ♙xc3 13.dxe6 ♙xf3 14.gxf3 fxe6 15.bxc3 ♗c7 16.♙xe6+ They'd have stayed in top class theory with 16.♙a3 ♖c5 17.♗d4 ♕h8 18.♗e1, 1-0. Aronian L (2773)–Karjakin S (2722), Bilbao 2009 16...♕h8 17.♙e3

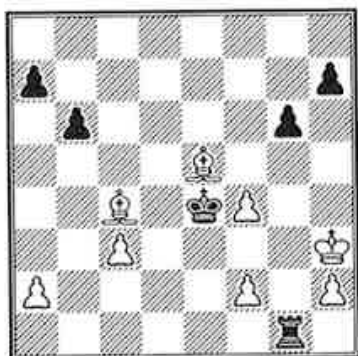


Whether the engines were still in their Books or not, I don't know – probably not. But it is all theory to here. You can see that White is a pawn up so Black must play actively and usually plays ♖c5, though ♗ae8 also looks

good 17...♖ad8N If 17...♞xc3?? looked tempting to anyone (not my readers!), then please note 18.♞ac1! ♞e5 19.♙xd7 and White is a piece up and has a pair of deadly rooks on open files 18.♞c4 ♞xc4? Being a pawn down Black should not be exchanging queens when it was easily avoidable with 18...♞b7, and if 19.♞f4 ♞de8 retaining some counterplay 19.♙xc4 ♖e5 20.♞xd8 ♞xd8 21.♙e2 ♖g8 22.f4 ♖c6 23.♙c4+ ♖f8 24.♞e1 ♖d5 25.♙c1



Despite being a pawn up with the queens gone – and having the 2 bishops – the truth is that the Mach4 hasn't been able to make much progress yet, partly because the extra pawn on f4 is doubled and hard to protect. And the Novag has defended cleverly. But after Black's next the Mach4 gets its chance 25...♞d7? 25...g6 looks best, or ♖a5 which isn't so bad. After 25...g6 26.♖g2 ♖g7 there is still hope 26.♙a3+! ♖de7 Not 26...♖f7? 27.♞d1! and Black IS in big trouble 27.♙b5 ♖f7 28.♞xe7+! Well done! This is a great find by the Mach4! 28...♞xe7 The ♖/c6 is pinned so not 28...♖xe7? 29.♙xd7 29.♙xc6 ♞e2 30.♙d5+ ♖f6 31.♙b3 ♞e4 32.♙d6 ♞e1+ 33.♖g2 g6 Excellent defence, will it be enough?! 34.♖f3 ♞h1 35.♖g3 ♞g1+ 36.♖h3 ♖f5 37.♙c4 ♖e4 38.♙e5

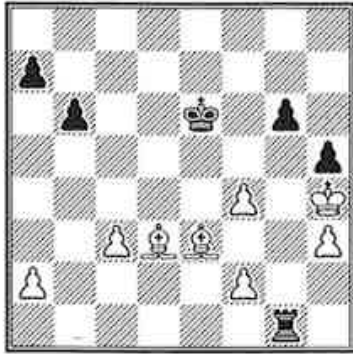


It's a shame in some ways, the Novag defence has been very good and only now does the game suddenly get finally taken away from it, after the following poor move.... 38...h6?? There were one or two better moves: 38...♖f5 looks good, and after 39.♙g8 now 39...h6 40.♙c4 ♞d1 41.♖g2 g5 is still making it hard for the Mach4 to complete the win 39.♙g7?! This is okay, but not best! 39.f3+! would finish the Novag off, but perhaps seeing 39...♖xf3 40.♙d5+! is not so easy for the older dedicated machines. However after 40...♖e2 41.♙d4 ♞d1 42.♙e4 and White's f-pawn will soon be passed and running! 39...h5 39...♖xf4 40.♙xh6+ g5 41.♙g7 g4+ 42.♖h4 ♞g2 would have made the Mach4's task more difficult 40.♙e5



Readers will find it interesting to play the game out from the diagram. With the computers no doubt running low on time there are some bad misses in the next few moves, and then they suddenly start playing better again! Through it all you feel that 'White must win in the end', but it needs to know that it must find a way of exchanging the more forward of its 'nuisance' doubled pawns for Black's on g6 40...♞c1? 40...♞d1 41.♙f7 ♖f5 is much better 41.♖h4?! The Fidelity misses the clear winning chance Black has just given it. 41.f3+! ♖xf3 42.♙d5+ 41...♞c2? 41...♞g1!? 42.♙f7?! 42.f3+! ♖xf3 43.♙d5+ ♖e3 44.♖g5 42...♖f5 43.♙d4 ♞d2 44.h3?! 44.♙b3! ♞e2 (not 44...♖xf4?? 45.♙e3+ wins the rook) 45.♙e3 ♖f6 46.♙d4+ ♖f5 47.♖g3. Although you feel sure that White will win, we can continually see what a nuisance the doubled pawns are, and how much extra fiddling around is required as a result. But after this series of poor defence and missed

opportunities, just as suddenly the playing standard improves 44...♖d1 45.♗b3 ♖g1 46.♗e3 ♗e4 47.♗c2+ ♗d5! If 47...♗f3?! 48.f5! gxf5 49.♗xf5 and the exchange of one of those wretched doubled pawns for one of Blacks simplifies the win considerably 48.♗d3 ♗e6



49.f5+! Realisation and breakthrough at last, the 'nuisance' pawn is exchanged for the h-pawn, which works just as well as my suggestion of exchanging it for the g-pawn! 49...gxf5 50.♗xh5 ♖d1 51.♗c4+ ♗e5 52.h4 ♗e4 52...♖h1!? 53.♗g5 ♖g1+ 54.♗h6 ♖g4 53.♗g5 ♖g1+ 54.♗h6 f4 55.♗d4! The only move that keeps the win 55...♖e1 56.h5 ♗f5 57.f3 ♖h1 58.♗d3+ ♗e6 59.♗g5 59...♗f7 60.h6 ♗g8 61.♗g6. 1-0

	1	2	3	4	
Star Diamond	1	0	0	0	1
Mach4	0	1	1	1	3

Not what we'd expect from the Rating Lists, but the Mach4's good match at last leaves it with 6/12, and the Star Diamond has 5.

So what will happen in the match for 1st. place?! Both the Berlin Pro and Atlanta start it on 4½/8. Game 1 was a very long 3-fold repetition draw, so now they have 5/9.

Berlin Pro - Atlanta

Game 2. ECO B00: Queen's Fianchetto Defence, Nimzowitsch Defence

1.e4 b6 2.d4 ♗b7 3.♗c3 e6 4.♗f3 ♗b4 5.♗d3 ♗f6 6.♞e2 c5 7.♗d2 cxd4 8.♗xd4 ♗c6 9.♗xc6 dxc6 This is all in theory, though not the main line which was 6...d5. Now 10.a3 is known and also the best choice

10.0-0 ♞e7 11.e5 ♗xc3 12.♗xc3 ♗d5 13.♗d2 0-0-0 14.a3 ♖d7 15.c4 ♗c7 16.♖fd1 f6 17.b4



The Berlin Pro has the pair of bishops – it correctly appears to consider the bishop to be worth more than a knight as there were three occasions in this match where it obtained ♗ for ♗ in one way or another 17...fxe5? 17...f5 was better. White has more space but Black is well protected on the queenside and might have chances of a kingside pawn attack later in the game, so White's advantage is minimal 18.♗c3! g5 19.♗xe5 ♖f8 20.♗e4 The BPro now has a visibly strong attack with excellent piece mobility, and is well on top 20...h6?! 20...♖fd8 would have given White a harder task. If 21.♖e1 (best, but 21.♖xd7 ♖xd7 22.♞f3 would also be winning) 21...♞f7 with some tactical chances. It is hard to believe that the Berlin Pro didn't win quickly from here, but over the next few moves we see too many 'not best' choices that allow the Atlanta to fight its way back into the game 21.c5?! Just 21.♖xd7 ♞xd7 22.♖d1+- will win, surely 21...♖fd8 22.♖xd7 ♖xd7 23.cxb6?! Best was 23.♖c1 bxc5 24.♖xc5+- 23...axb6 24.♞f3 ♗d5 25.♞h3 h5 26.♞xh5 ♗a6 27.♖c1 ♗b5



White is still winning despite the mistakes, but sadly there are more to come 28. ♖g4? The queen would be more mobile after 28. ♖h3 ♖f7 and then 29. ♖a1 preparing to make inroads on the queenside 28... ♗f6! 29. ♖f3?! Despite its ♗ over ♗ preference, best here was 29. ♗xf6 ♖xf6 30. h4 threatening both a pawn breakthrough on the king-side and winning material with 31. ♗xc6 29... ♗xe4 30. ♖xe4 ♖d5! 31. ♖e1 ♗d3 32. ♖e3 c5 33. f4?! White would still have the better chances after 33. bxc5 bxc5 and 34. h3! (which is better than 33. a4) 33...g4!

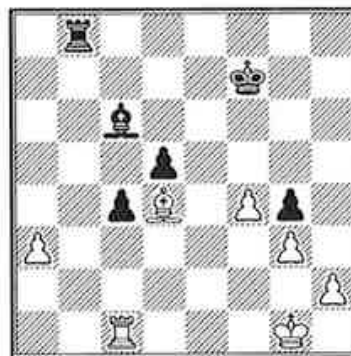


If 33...gxf4 the best reply was 34. ♖xf4. O.k. the BPro is still a pawn up, but Black has done very well to take every opportunity presented to it by those '2nd. best' White moves, and has created complications and definite counterplay! 34. ♖c1 ♗d7? Oops! After all the hard work the Atlanta puts the draw it has worked so hard for at risk. 34... ♗b7! was correct as the king needs to help with the defence against White's queen-side pawns. Then 35. bxc5 ♖xc5± 35. ♖g3 Here 35. a4! was the right way to take advantage of Black's last move, and after



35... ♗c6 36. a5 bxa5 37. bxa5 ♗b5 38. ♗c3 it maintains an advantage 35... ♗f5 36. ♖b3 ♗e8 37. g3 ♗d3?! My PC engine shows 37... ♖d7! as 0.00, expecting 38. ♗c3 b5 39. bxc5 ♖xc5=. But Black can still manage to get the

draw after its weaker move, the opposite coloured bishops reduce White's hopes considerably, as we see... 38. bxc5 bxc5 39. ♖a4+ ♗f7 40. ♖e1 c4 41. ♗c3 ♖d8 42. ♖a5 ♖d5 43. ♖a6 ♖d6 44. ♖a8 ♗f5 45. ♗b4 ♖d8 46. ♖a6 ♖c7 47. ♖c1 ♖c8 48. ♗d6 ♖d7 49. ♗e5 ♗e4 50. ♗c3 ♗c6 51. ♖a5 ♖d5 52. ♖xd5 exd5 53. ♗d4 ♖b8



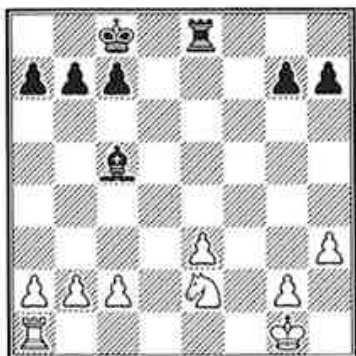
Should be a draw barring accidents 54. ♗f1 ♖b3 55. ♖c3 ♖b2! The rook keeps White's ♗ on the first rank, the draw is safe 56. ♗g1 ♖e2 57. ♖c1 ♗e6 58. ♗c3 ♗f7 59. ♗e5! ♗e6 60. ♗c3 ♗f7 61. ♗b4 ♗f6 62. ♗d6 ♗f5 63. ♗c5 ♖d2 64. ♗d6 ♖e2 65. ♗c5 ♖d2 66. ♗d6 ♖e2 3-fold repetition 1/2-1/2

Phew – very tense. On my PC the evaluation favouring the Berlin Pro had gone to over >4.00 after Black's 20th move, so that was a serious missed opportunity. The score stands at 1-1, and it's still all to play for.

Atlanta - Berlin Pro

Game 3. ECO C56: Two Knights: 4 d4 exd4 5 0-0 Nxe4

1. e4 e5 2. ♗f3 ♗c6 3. ♗c4 ♗f6 4. d4 exd4 5. 0-0 ♗xe4 6. ♖e1 d5 7. ♗xd5 ♖xd5 8. ♗c3 ♖a5 9. ♗xe4 ♗e6 10. ♗eg5 0-0-0 11. ♗xe6 fxe6 12. ♖xe6 ♗d6 13. ♖e2 ♖h5 14. h3 ♖de8 15. ♗d2 ♗e5 16. ♗xd4 ♖xe2 17. ♖xe8+ ♖xe8 18. ♗xe2 ♗c4 19. ♗e3 ♗xe3 20. fxe3 ♗c5 Though we're just about into the endgame already we are still in theory to here, and I can believe the 2 computers might well have been in their own books for most of this well-tested line, certainly up to move 18 or 19 with the Berlin Pro's big book. Here, 20... ♖xe3 has a slightly better record than ♗c5, though both have been played.



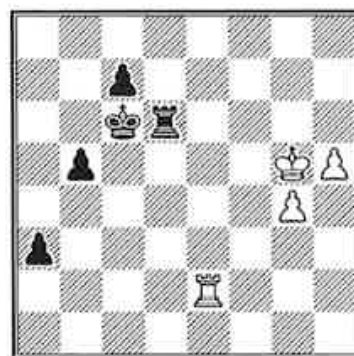
In the diagrammed game position theory now has 21. ♖f2 (e.g. Ian Roger v Michael Adams, Germany 1996), but I can see that my PC engine shows 21. ♖d1 as 2nd best, so it should be okay 21. ♖d1 ♙xe3+ 22. ♖h2 ♖f8 23. ♖g3 ♙c5 24. ♗d4 If a human played this it would be hoping for ♙x♗, but the Berlin Pro isn't falling for that 24... ♙d6+ 25. ♖g4 ♖f4+ 26. ♖h5 ♖f2 27. g4 ♙e5 28. ♗e6 b6



29. ♖d8+?! This just helps activate Black's king a little. 29. b3 was best, and then 29... ♖h2 (29... ♖xc2?! 30. ♖d5!) 30. ♖d3 29... ♖b7 30. h4 ♖xc2 31. ♖d7 ♖xb2 32. ♗xg7 ♖c6 32... ♖xa2! 33. ♗f5 ♖c2 was even better, preparing to push the queenside pawns with very good winning chances 33. ♖e7 ♙d6



As usual, a diagram before a key moment! 34. ♖f7?! 34. ♖e1 ♖xa2 35. ♖h6 was White's best chance of some counterplay as its pair of kingside pawns are more advanced than Black's trio on the queenside 34... ♖xa2 35. ♖g5 Here 35. ♗f5!? threatening ♖xh6 was probably better. Play might have gone 35... a5 36. ♗xd6 ♖xd6 37. ♖xh7, but Black is probably winning with 37... a4! 35... ♖d2 36. ♗f5 a5 37. ♖xh7 a4 38. ♗xd6 ♖xd6! 38... ♖xd6 39. ♖h6+ ♖d7 40. ♖f6 would leave Black's king less well placed 39. ♖e7 a3 40. ♖e2 b5! 41. h5



It's become an exciting pawn chase, and White will get a pawn to the 7th first. But with correct play there's only one winner! 41... b4! 42. h6 b3 43. h7 ♖d8 And this move makes it clear that Black's pair of promotion candidates are much stronger than the single White one 44. ♖d2 Worth a try! 44... ♖h8 45. ♖d3 b2 46. ♖c3+ ♖d5 47. ♖b3 ♖xh7 Mate in 11 according to my PC engine 48. ♖f5 ♖h2 49. ♖f4 a2 0-1

So the Berlin Pro takes the lead 2-1, and just needs a draw in the last game to win Jim's Tournament!

Berlin Pro - Atlanta

Game 4. ECO D45: Semi-Slav: 5 e3

1. d4 d5 2. c4 c6 3. ♗f3 e6 4. e3 ♙d6 5. ♗c3 ♗f6 6. ♙d3 dxc4 7. ♙xc4 0-0 7... ♗bd7 8. ♖c2 0-0 is the main line 8. e4 8. 0-0 would have transposed to 8... ♗bd7 9. ♖c2 the main line as above, but 8. e4 is almost unknown 8... ♙b4 9. ♙d3 c5! I found a game with 9... cxd, and another with 9... ♙e7, but I rather like the Atlanta choice myself! 10. a3 ♙a5 11. dxc5 11. e5! might have worked out

better for White: 11...cxd4 12.b4 dxc3 13.exf6 ♖b6 14.fxg7 ♔xg7 15.♖c2±
11...♙xc3+ 12.bxc3 Once again the Berlin Pro has the bishop pair 12...♞bd7 13.♙e3 ♞g4 14.♙d4 e5!



Attacking the ♙/d4 to give the Berlin Pro a difficult choice. Although it has more space and slightly better development, its pawns are a mess! They are isolated on the a and c files, and on the latter also doubled. Can it unravel the mess or will the Atlanta be able to take advantage?! 15.c6?! 15.0-0 exd4 16.cxd4 definitely seems to be a better way to proceed for White. It would have made for an interesting game, White has only 2 pawns for a knight, but its central pawns could be very dangerous. 15.♙e3 would have been no good because after 15...♞xe3 16.fxe3 ♞xc5 White would have to play 17.♙c2 to stop Black winning a pawn with ♞xe4, but now it has 17...♖a5! when 18.0-0 is pretty much forced, allowing 18...♖xc3-+ 15...bxc6 16.h3 exd4 17.hxg4 ♖a5 18.♖c2 dxc3



19.♙e2? Gives the Atlanta a real chance to equalise the match. Better was 19.0-0 ♖e8 20.♖f1 ♖ 19...♖b8! The Atlanta grabs its opportunity 20.e5 The counter-threat against c3 with 20.♖c1 was the best try, though the pawn can't be taken yet. Black

should now go 20...♙d8 and White tries 21.e5 threatening ♖xh7+ (not 21.♖xc3? ♖xc3+ 22.♖xc3 ♖b1+). Of course the computer will spot the threat of 22.♖xh7 mate, so 21...h6 22.e6 ♞f6 23.exf7+ ♔f8 (but not 23...♔xf7? 24.0-0 ♙xg4 25.♖xc3=). Now Black has a decent advantage against the en pris pawns and threats of both ♖b2 and ♖d2, so 24.♙d3 ♙xg4-+ but White may yet be able to get a draw 20...g6 21.e6? The BPro needed to deal with the threat of ♖b2 created by Black's excellent 19th. So 21.0-0 ♖b2 22.♖e4 and some chances of holding after 22...♞c5 23.♖e3 ♙xg4 with 24.♙c4 21...♖b2! White could nearly resign after this! 22.♖c1 fxe6 22...♖xe2+! 23.♔xe2 ♙a6+ 24.♔d1 ♖d5+ 25.♔e1 ♖e8! would have been an even quicker 0-1 23.♔f1 ♞f6 24.g5 ♞d5 25.♖d1 ♖xe2! 26.♔xe2? Not 26.♖xe2?! ♙a6! Best was 26.♔g1 but 26...♖b2 27.♖c1 ♖b6! leaves White with no hope 26...♙a6+! My PC engine says m/10 27.♔e1 ♞f4 28.♖c2 ♙d8 29.♖g1 ♖b5 The Atlanta follows the route to mate perfectly, so must have seen it as well 30.♞d4 ♖e5+ 31.♞e2 ♙xe2 32.♖a2 ♙c4+ 33.♖e2 ♙xe2 34.♖c2 ♙d1# 0-1

	1	2	3	4	
Atlanta	½	½	0	1	2
Berlin Pro	½	½	1	0	2

And the Final Table:

	Elo	At	BP	M4	SD	
Atlanta	2207	x	2	3	1½	6½
Berlin Pro	2235	2	x	2	2½	6½
Mach 4	2071	1	2	x	3	6
Star Diamond	2175	2½	1½	1	x	5

The big surprises: the Star Diamond 'over-performed' in beating the Atlanta, which cost the latter outright top place in the end. The Mach4 did very well to hold the Berlin Pro to 2-2, which therefore cost the Berlin Pro top spot, and even better to beat the Star Diamond by 3-1. In the end honours shared by the Mephistos: Atlanta and Berlin Pro. Some exciting chess, some strange moments, but all hugely enjoyable! Thanks Jim!!

TWO GREAT HIARCS 14 GAMES

After my Review of **Deep Hiarcs 14** and the **Hiarcs Chess Explorer** in our last issue, where I looked at the many features, it's time we had a look at the chess!

Of course this is the engine which won the 2011 World Championship, with one of two minor improvements, so some of its games accompanied the **World Championship Report**. But now let's see what it is doing on our PCs!

Our first game was kindly sent to us by the SSDF as they started their own tests on the new engine. As their games are played at the 40/2 full Tournament time control, you get quite a few more draws (so much harder to beat a computer at long time controls)... but the wins are often well worth looking at!

I've left the provided Hiarcs evaluations in, and added some notes of my own at the most interesting or critical moments.

Deep Hiarcs 14 Q6600 - Deep Fritz 13 Q6600

SSDF-match Lars Sundsall
C87: Closed Ruy Lopez: Steinitz-
type lines after 6 Re1 d6

1.e4 e5 2.♘f3 ♘c6 3.♙b5 a6
4.♙a4 d6 5.c3 ♙d7 6.d4 ♘f6
7.0-0 ♙e7 8.♞e1 0-0 9.h3
♞e8 10.♘bd2 ♙f8 11.a3

11.♙c2 is also popular,
then 11...g6 12.♘f1 ♙g7
13.♘g3
11...g6



A position that hasn't been reached all that often, so there is little theory.

12.♙c2N 339 0.52/24.

The top-rated game in my database at this point went 12.♙c2 ♙h6 13.♘f1 ♙xc1 14.♞xc1 ♘g7 15.♘g3 and was Balashov 2565 - Biyi-asas 2435, 1977 ending 1-0
12...b5 13.♙b3 0.52/25 ♙c8
14.♘f1 0.58/23 ♙g7 15.♙g5
0.61/23 15...a5 16.d5
0.71/23 ♘d8 17.a4 0.65/25
b4 18.cxb4 0.60/24 axb4
19.♙c4 0.70/24 ♘b7 20.b3
0.67/24 ♘a5 21.♞ac1
0.48/22 21...♘h5 22.♙d2
0.50/21 22...♙b7 Worse is
22...♘xc4 23.♞xc4 ♞a7
(23...c5?! 24.dxc6 ♙e6
25.♞ec1) 24.♞ec1± 23.♘g3
444 0.32/23 23...♘g3
24.fxg3 0.39/24 ♙f8
25.♙h6 0.71/23 25...♙xh6
26.♙xh6



With the obvious threat of

♘g5, but Black has a good enough response and doesn't seem to be in any serious danger 0.57/22

26...f6

From my previous note, absolutely not therefore 26...♘xc4?? which allows 27.♘g5! and results in mate after 27...♙a7+ 28.♘h2 ♙f2 29.♞f1 ♞e6 30.♞xf2 ♞f6 31.♞xf6 ♙e6 32.♙xh7+ ♘f8 33.♘xe6+ ♘e7 34.♙xf7#
27.♘d2 0.64/23 27...♞e7
28.♞f1

The kingside pressure is building up, and Black's queen is on the wrong side of the board to give help, but things still don't seem that desperate after Black's correct reply. 0.60/23

28...♞f8! 29.♘h2 0.85/23
♙a7 30.g4 0.87/26 30...♞g7
31.♙d3 0.89/26 31...♞gf7
32.♞f3 0.89/26 32...♙b8
33.♙e2 0.87/24 33...♙a7
34.♞cf1 0.82/23



34...♙d4

Of course the queen needs to get into the game, but doesn't seem any better here than where it was. 34...c5!? might have been better, then 35.♙h4 ♘g7 and if 36.g5! f5 37.exf5 ♙xf5, but 38.g4 obviously leaves Black with problems

35.h4!

Hiarcs certainly knows how to make the best of an attack! 1.25/27

35...♖b2?

35...♗xg4 was probably Black's only worthwhile try, but after 36.♞d3! the queen is lost. Still 36...♗xe2 (trying to save the queen with 36...♖a7? leads to 37.♗xg4 with ♗e6! to come and the game is over) 37.♞xd4 exd4. At first it appears that this might not be as bad as it seems, Fritz would have had ♖+♗+♘ for the ♖, but after 38.♞e1 ♗d3 39.♖f4! ♗a6 40.♖f2 the game is looking more and more like a 1-0
36.h5! 4.00/25



36...♞g7?

Even on fast hardware at 40/2 Fritz is unable to cope with the attack. The immediate exchanges resulting from this actually favour Fritz, but there is no slowing of the Hiarcs attack, which is the main point! In fact the exchange of rooks actually leaves White's attacking force stronger than before because Black's queen is still missing from the battle area. Best was 36...♗f5 threatening ♗xe4 as the ♘/d2 is pinned, but it's still no good after the quiet 37.♞d3 (37.♞f2 also solves the problem, but now 37...♖d4 38.gxf5 g5 Black is a bishop

down, but White's queen is trapped, so things might not be quite so clear!?) 37...♖c2 38.g5! fxe5 39.exf5 gxf5 40.♞g3! ♖xd2 41.♞xg5+ ♖xg5 pretty much forced 42.♖xg5+ ♗h8. It's all but over, but Hiarcs still has a little work to do

37.♞xf6 6.63/25 **37...♞xf6**
38.♞xf6 7.68/24 **gxh5**

There isn't anything better 39.♗b5 13.22/24 39...♗xg4 All other moves get a mate in xyz response! Here's a few examples: 39...♗xb3

40.♗xd7 ♘c5 41.♗e6+ ♘xe6 42.♞xe6 ♞xg4 43.♞e8+ ♗f7 44.♖e6+ ♗g7 45.♞g8#; 39...c6? 40.dxc6 ♗xg4 41.c7 ♖c3 42.♞f8+ ♗xf8 43.♖f6+ m/17; 39...♗xb5?! 40.axb5 ♘c6 (40... ♘b7 41.♞e6! m/8) 41.♖xh5 ♞g6 42.♞xg6+ hxg6 43.♖xg6+ m/28 40.♞f1 20.62/27 40...♘c6

If 40... ♘b7 41.♖f6 h6 42.♖f8+ ♗h7 43.♞f7 m/13 41.♗xc6 60.92/25 41...♖a1

Sacrificing to delay mate, so it's obviously all over 42.♞xa1

I note that Hiarcs made a mate announcement immediately! #17/21 0 42...♞g6 43.♖e3 #12/21 43...♗d1 44.♞xd1 44...♞g4 45.♖h6 ♗h8 46.♞f1 ♞h4+ 47.♗g1 ♞f4 48.♞xf4 exf4 49.♖f8# 1-0

Hiarcs14 won its match with **Fritz13** by a massive **28-12!**

Next a fascinating game between **Hiarcs14** and **Houdini3**. It was played at G/3+2 on my Quad laptop, so the fast time control means the game isn't perfect, but the interesting thing is the very

different evaluations the engines have, even from move 10! Then there is a really big difference of opinion after move 26.

First here is the actual game with those evaluations, and I've also left in the moves they expected their opponent to make where they were different from the move played. Afterwards we will look at the key moments and try to work out who got it right. Of course the simple answer is that the winner 'got it right', but why?!

Deep Hiarcs 14 - Houdini 3 Pro x64

D45. EricHallsworth, Blitz 3m+2s

1.d4 d5 2.c4 c6 3.♗f3 ♗f6 4.♘c3 e6 5.e3 ♘bd7 6.♖c2 ♗d6 7.g4 h6

I use a Testset with a wide range of openings, and aim to end the lines fairly early at a point where there are quite a few 'Book moves' available, so I can keep an eye on how the engines fare at finding proper continuations on their own. So this Testset opening ends here, with 8.Bd2, 8.Rg1, 8.h3 and 8.cxd5 all well enough known, plus 8.c5 occasionally gets played but usually unsuccessfully! Hiarcs chooses...

8.h3 -0.14/15 **0-0** (b6) -0.25/19 **9.♗d2** 0.00/16 **♖e7** (dxc4) -0.25/18 **10.g5** 0.28/17 **hxg5** -0.25/16 **11.♗xg5** 0.15/16

Here I can only find 11...e5 in my PowerBooks, but it lost, so Houdini's choice is likely just as good!

11...dxc4 (b6) -0.30/18 **12.♞g1** (0-0-0) 0.03/16

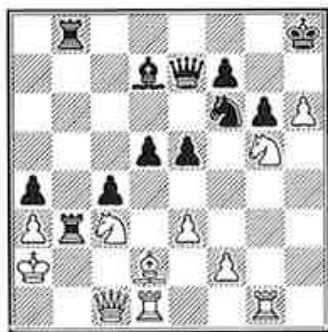
12...e5 (c5) -0.48/19 13.d5
(0-0-0) 0.17/17 13...♖b6
-0.42/18 14.dxc6 0.11/16
bxc6 -0.33/20 15.0-0-0
(♗xc4) 0.17/16 15...♞b8
-0.55/18 16.♙g2 0.00/16
♙d7 (♞d8) -0.38/18 17.♙f3
(♗b1) -0.01/15 17...♗h8
(g6) -0.33/17 18.h4 (♗b1)
0.27/16 18...a5 (♙b4)
-0.23/17 19.h5 0.74/15
♙c5 (♗bd5) 0.06/16

At this point Hiarcs thinks
it has a decent advantage,
Houdini shows it level.



20.♗b1 0.81/15 a4 (♙b4)
-0.27/16 21.h6 (a3) 0.31/15
21...g6 -0.28/18 22.a3
0.30/15 ♙xa3 (♗bd5)
-0.51/17 23.bxa3 0.00/15
♗bd5+ (♞xa3) -0.51/13
24.♗a2 0.00/18 ♞b3
-0.85/16 25.♞c1 0.00/18
♞fb8 -0.85/15 26.♙xd5
(♞de1) -0.01/17 26...cxd5
-1.60/14

Now Houdini sees itself as
well on top, but Hiarcs has it
level



27.♞de1 (♙e1) 0.00/16
27...♙f5 (♞f8) -1.45/15

28.e4 -0.71/16 dxe4 (♞b7)
-1.45/14



29.♞d1 (♞e3) 0.00/15
29...e3 (♙g4) -1.46/15
30.♙xe3 0.00/15 ♙d3
-1.67/15 31.♞d2 0.00/16



31...♗d7 (♞c7) -1.01/15
32.f3 0.42/14

Hiarcs starts to think it
might have an advantage

32...♗f8 (♗f6) -0.57/16
33.♞dg2 (♞gd1) 0.94/15
33...♞b7 (♗e6) -1.01/14

But Houdini is still happy!

34.♗ge4 (♗a1) 1.26/14
34...♗e6 -0.39/15 35.h7
(♙g5) 1.06/15



35...♞b8 -0.73/14 36.♞h1
0.79/15 ♞c7 (f5) -0.54/15
37.♗d2 (♙g5) 1.24/13



37...♗d4 (♞b7) 0.11/14

The first sign of doubt in
the Houdini evaluation

38.♙g5 (♗xb3) 2.51/15

But Hiarcs is convinced
that it is now winning!

38...♞c6 (♞b6) 0.11/16

39.♗de4 (♗xb3) 2.30/17

39...♙xe4 1.80/17

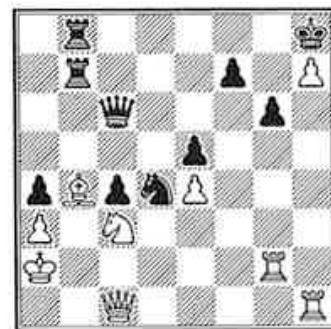
So, finally, is Houdini!

40.fxe4 2.28/16 ♗f3 (f6)

2.03/17 41.♙e7 3.64/17

♞b7 2.35/17 42.♙b4

3.46/15 ♗d4 (f5) 2.69/19



43.♞h6 (♞g5) 3.90/16

43...♞c8 3.14/16 44.♞f1

(♞g5) 4.42/13 44...♗e6

3.08/15 45.♞g3 (♞gf2)

4.35/13 45...♗g7 (♞d7)

2.59/15 46.♗d5 4.43/14

♞b5 (c3) 3.06/15 47.♞c3

(♞h1) 4.38/14 47...♞e8

4.18/16 48.♞h1 (♞g5)

4.61/13 48...♞e6 (♞c6)

3.72/16 49.♞xc4 5.08/15

♞e8 (♞d8) 4.27/17 50.♗a1

(♞g5) 5.24/15 50...♞d8

(♞b5) 5.63/17 51.♞g5

5.42/16 ♞db8 6.33/17

52.♞c2 (♞hc1) 5.33/15

52...♗e8 (♞d7) 4.82/16

53.♔c3 7.28/16 f6 4.82/15
 54.♖xf6 (♞xg6) 7.53/15
 54...♞b3 7.76/17 55.♗d5
 7.78/15 ♞xa3+ 8.43/19
 56.♞a2 8.00/15 ♞xc3
 8.43/18 57.♗xc3 8.01/15
 1-0

I was, as you'd expect, very interested to know which engine was right during the moves from 19.h5, where Hiarcs had itself winning, but presumably made a mistake somewhere as, by move 24, Hiarcs showed = and Houdini thought it was winning! At move 26 both had Houdini winning, but between moves 31-37 things had changed again... they both thought they were winning! So I got Hiarcs to analyse the game at 30secs a move to see how that might change its opinion!

The first change it recommended was after Black's 19th. For this part of the analysis I will show the moves as played in **plain bold text**, and the 30sec analysis with **a pale background** to distinguish it.

19...♔c5 0.46/18



So the game went **20.♖b1** with the Hiarcs evaluation and depth 0.81/15

The 30 sec analysis shows **20.♖b1** -0.42/21, and a

preference for **20.♞df1 ♗b4**
 21.h6 g6 22.e4 ♔c5 23.♖b1
 a4 24.a3± 0.46/18

What we also see is that, with a longer think, Hiarcs thought that **20.♖b1** still left Black slightly ahead. Interesting?!

The next suggested improvement came at move 27



27.♞de1 (♔e1) 0.00/16

27.♞de1 -0.85/21.

Instead 27.f4 exf4 28.♞de1
 ♔c6 29.♗f3 ♞b2+= -0.24/19

As you can see Hiarcs with longer to analyse thinks it is behind, and at move 30 Hiarcs still shows itself as losing and finds yet another improvement for itself!



The original: **30.♔xe3**
 0.00/15

But now: **30.♔xe3**
 -1.00/22, and instead 30.fxe3
 ♔d3 31.e4 ♞b7 32.♖a1 ♞b2
 33.♗xa4 ♞c2 34.♞b1 ♞a7
 35.♔b4 ♞xa4 36.♗xf7+ ♖h7
 37.♞xd3 cxd3 38.♞xg6 ♞g8
 39.♞xg8 ♗xg8 40.♞f1 ♗e7

41.♗g5+ -0.74/21

In fact I think that the more active choice of 30.♔xe3 is good at the fast time control. Look at the next position after White's 31st move, the complications are enormous. This is what so many of us like about Hiarcs' games, and now Houdini fails to cope correctly with all of the difficult choices, so the next improvement is one for Houdini!



31...♗d7 (♞c7) -1.01/15

Instead of seeing 31...♗d7 as winning for Black it now recognises that it puts Hiarcs ahead on 0.61...

31...♗d7?± 0.61/20

But it still believes there was a good line for Houdini with 31...♞d7 32.♗f3 ♞c7
 33.♞xd3 ♞b2+ -1.01/19

In fact at 30secs a move Hiarcs finds improvements for both sides over the next few moves! This is the key! Playing Hiarcs can be like playing someone like Tal: there are solutions, but they are not at all easy to find over the board, and this is what makes the games so interesting, and often more exciting than those of many other engines.

32.f3 0.42/14

32.f3 -0.27/20, 32.♞e1 f6

33. ♖ge4 ♜e6 34. f3 ♖b1
 35. ♜xb1 ♙xb1+ 36. ♖xb1
 ♖xb1 37. ♗xb1 ♜c6 38. ♖d6
 ♜b7+ 39. ♗a1 f5 40. ♖d2 f4
 41. ♙f2 ♗h7 42. ♖xa4 ♗xh6
 43. ♖c3 ♜c8 44. ♖de4 ♖f8
 45. ♗b2 ♜c7 46. ♖d5 ♜b7+
 47. ♖b6± 0.61/20

32... ♖f8 (♖f6) -0.57/16
 32... ♖f8± 0.93/20,
 32... ♖xc3± -0.27/20

33. ♖dg2 (♖gd1) 0.94/15
 33. ♖dg2± 0.47/19, 33. ♖h2
 ♖e6 34. ♖xe6 ♜xe6 35. ♙c5
 f6 36. h7 g5 37. ♖h6 ♜f7
 38. ♖gh1 ♜b7 39. ♗a1 ♜xf3
 40. ♙e7 ♖8b6 41. ♖xa4±
 0.93/20

33... ♖8b7 (♖e6) -1.01/14.
*Note how Houdini was still
 happy during the game!*
 33... ♖8b7± 0.99/20,
 33... ♖e6 34. ♖xe6 ♜xe6
 35. h7 ♜d6 36. f4 ♖d8 37. ♖h1
 exf4 38. ♙xf4 ♜d4 39. ♙d2 f6
 40. ♖gh2 g5 41. ♖xa4 ♙b1+±
 0.47/19

Hiarcs is happy enough with
 the next few moves. In the
 game it was already showing
 itself with a small advantage,
 and deeper thinking confirms
 this indicating that its posi-
 tion was even better, though
 interestingly Houdini still
 had itself ahead?!

34. ♖ge4 0.98/20 ♖e6
 0.96/19 35. h7 0.96/19 ♖b8
 0.96/18 36. ♖h1 0.95/18
 ♜c7 1.07/19 37. ♖d2
 1.46/18

In the game I commented at
 move 37 that Houdini's
 evaluation showed its first
 sign of doubt, with an almost
 = evaluation:



37... ♖d4 (♖3b7) 0.11/14
 In analysis what does Hiarcs
 make of this? A serious mis-
 take under pressure!
 37... ♖d4?+- 3.03/22. *But
 even an improvement with*
 37... ♖3b7 38. ♖h6 ♖c5
 39. ♙xc5 ♜xc5 40. ♖de4 ♙xe4
 41. fxe4+- 1.46/18 *would still
 be losing*

And after 38. ♙g5 it seems
 there was another mistake
 with
 38... ♜c6 (♖3b6) 0.11/16,
*though you'd not know the
 game was as good as 1-0
 from this evaluation during
 the game. But Hiarcs says...*
 38... ♜c6+- 4.04/21,
 38... ♖3b6 39. ♖d5 ♜b7
 40. ♖xb6 ♜xb6 41. ♖e4 c3
 42. ♜xc3 ♙xe4 43. ♖b2 ♜e6+
 44. ♗a1 ♖b3+ 45. ♖xb3 axb3
 46. fxe4 f6 47. ♜c7 ♖e8
 48. ♙h6 ♜e7 49. ♜xe7 ♖xe7
 50. ♙e3 ♖c7 51. ♗b2 ♖c4
 52. ♗xb3 ♖xe4 53. ♖h3 g5+-
 3.11/21

And that's it, there was no
 way back for Black from
 here.

But, like me, you might
 now wonder what some of
 the Houdini evaluations were
 at these critical moments
 when it also had 30secs a
 move for the analysis!?!

Game, Hiarcs: 20. ♗b1
 0.81/15
 H3 analysis eval: 20. ♗b1±
 -0.58/22
 Better was: 20. ♖g3 ♙d6
 21. ♖ce4 ♖xe4 22. ♖xe4 ♙b4
 23. h6 g6 24. ♖c3 ♙c5 25. ♗b1
 ♖fd8 26. ♙e4 ♜h4 27. ♗a1
 ♙b4 28. ♖h1 ♜e7 29. a3 ♙d6
 30. ♖d1 ♙c7= -0.03/18

20... a4 -0.44/20

Game, Hiarcs: 21. h6 (a3)
 0.31/15
 H3 analysis eval: 21. h6±
 -0.93/22
 Better was: 21. a3 ♙xa3
 22. bxa3 ♜xa3 23. ♜a2
 ♖bd5+ 24. ♗a1 ♜e7 25. h6 g6
 26. ♖xd5 cxd5 27. ♖b1 ♖b3
 28. ♙c1 ♙c6 29. ♙d1 ♖a8 30. f3
 d4 31. exd4 exd4 32. ♜e2
 ♜xe2 33. ♙xe2± -0.44/20

Game, Hiarcs: 27. ♖de1
 (♙e1) 0.00/16
 H3 analysis eval: 27. ♖de1?+-
 -2.39/17
 Better was: 27. f3 ♙c6 28. ♙e1
 ♖h7 29. f4 ♖xg5 30. fvg5 ♗g8
 31. ♖g3 ♜c5 32. ♙f2 ♜d6
 33. ♙g1 ♖b2+ 34. ♜xb2 ♖xb2+
 35. ♗xb2 ♜b8+ 36. ♗a1 ♜b3
 37. ♖c1 ♜xa3+ 38. ♖a2 d4
 39. ♖h3 ♗h7 40. ♖h2 ♜c5
 41. exd4 exd4 42. ♖d2 ♜xg5
 43. ♖xd4 c3± -0.54/19

Game, 27... ♙f5 (♜f8)
 -1.45/15
 New eval: 27... ♙f5± -1.22/22
 Better was: 27... ♙e6 28. f4
 28... ♖d7 29. ♖xe6 ♜xe6
 30. f5 ♜b6 31. fvg6 fvg6
 32. ♗a1 ♜d6 33. ♖a2 ♖c5
 34. ♙c3 ♖d3 35. ♜d2 ♖xa3
 36. ♖b1 ♖bb3 37. h7 d4
 38. exd4 exd4 39. ♙a5 ♗xh7
 40. ♖h1+ ♗g8 41. ♜g2 ♗g7
 42. ♜d2 ♗f7 43. ♖bf1+ ♗g8
 44. ♜h2 ♜xh2 45. ♖xh2 ♖b5

46. ♖c7 ♖f5 47. ♖g1 ♗f7
48. ♖h7+ ♗f6 49. ♗d8+ ♗e5
50. ♖xg6+ -2.39/17]

Note: if 27... ♗e6 Hiarcs says 28. ♗xe6 ♖xe6 29. f3 ♖b6 30. ♗a1 d4 31. ♖g2 dxc3 32. ♗xc3 ♖d6 33. ♗b4 ♖8xb4 34. axb4 ♖xb4 35. ♖d1 ♗h7 36. ♖a2 ♗xh6 37. ♖d2 ♖b5 38. ♖b2 ♗g7 39. ♖h1 a3 40. ♖bb1 e4 -1.74/22, agrees Black would be winning

Game, Hiarcs: 29. ♖d1 (♖e3) 0.00/15
H3 analysis eval: 29. ♖d1?+ -2.52/20

Better was: 29. ♖e3 ♖d7 30. ♖e2 e3 31. fxe3 ♖b7 32. ♗a1 ♗d3 33. ♖f2 ♖e7 34. ♗a2 e4 35. ♗e1 ♗g8 36. ♖h1 ♖8b7 37. ♖g1 ♖7b6 38. ♗a1 ♖xa3+ 39. ♖a2 ♖xa2+ 40. ♗xa2 ♖b3 41. ♗g3 ♗h8 42. ♗e5 ♖xe5 43. ♗xf7+ ♖ -0.98/18

Game: 29... e3 (♗g4) -1.46/15
New eval: 29... e3+ -1.59/22

Better was: 29... ♖b7 30. ♗e3 30... ♗g4 31. ♗xa4 ♗xe3 32. fxe3 ♖e7 33. ♖d5 f6 34. ♗c5 fxg5 35. ♗xb3 ♖xb3 36. ♖a5 ♗e6 37. ♗a1 ♗h7 38. ♖g2 c3 39. ♖c2 ♖c7 40. ♖a6 ♖c5 41. ♖a2 ♗c4 42. ♖a8 g4 43. ♖f2 ♗d3 44. ♖f7+ ♗xh6 45. ♖h1+ ♗g5+ -2.52/20]

Note: if 29... ♖b7 Hiarcs says 30. ♗e3 ♗g4 31. ♗c5 f6 32. ♗d6 fxg5 33. ♗xb8 ♖xb8 34. ♖d2 ♗h7 35. ♖g1 -1.80/24. They still agree in deeper analysis mode, Houdini was okay with best play

Game: 31... ♗d7 (♖c7) -1.01/15
New eval: 31... ♗d7?

-0.48/18, much less certain
Correct was 31... ♖d7 32. ♖g1 ♗d5 33. ♗ce4 f6 34. ♗c5 ♖b5 35. ♗f7+ ♗h7 36. ♗d6 ♖c6 37. ♗xd3 ♗c3+ 38. ♗a1 ♗xd1 39. ♗b4 ♗c3 40. ♖c2 ♖xd6 41. ♖xc3 ♖c8 42. ♗a2 ♖e6 43. ♖h1 e4 44. ♖c1 g5 45. ♖d2 ♗xh6 46. ♖d4 ♖xc3 47. ♖xc3 ♖d8 48. ♗b2 ♗g6 49. ♗d4 -2.05/25

Note: if 31... ♖d7 Hiarcs says 32. ♗f3 -1.84/25, so agreeing Black might win

Game: 32... ♗f8 (♗f6) -0.57/16
New eval: 32... ♗f8? -0.28/20

Correct was the move played, but the longer analysis line with updated eval is 32... ♗f8 33. ♖f2 ♗d7 34. ♖d2 ♗f8 0.00/28, and it thinks the game is equal

Game: 35... ♖b8 -0.73/14
New eval: 35... ♖b8= -0.22/21

Best was the move played: 35... ♖b8 36. ♗g5 ♗xg5 37. ♗xg5 f6 38. ♗ge4 g5 39. ♗d2 ♖3b6 40. ♗d5 ♖b2+ 41. ♖xb2 ♖xb2+ 42. ♗xb2 ♖c5 43. ♗c3 ♖d4 44. ♖h1 ♗xh7 45. ♖gh2 ♗g8 46. ♗de4 ♗xe4 47. fxe4 ♗f7 48. ♖b1 g4 49. ♖g2 ♖e3 50. ♗c2 ♖d3+ 51. ♗b2 ♖e3 52. ♗c2 0.00/28

Game: 36... ♖c7 (f5) -0.54/15
New eval: 36... ♖c7? 0.33/23
Correct was: 36... ♖d8 37. ♗d2 37... ♖bb8 38. ♗de4 ♖b3 39. ♗d2 0.00/30

Note: if 36... ♖d8 Hiarcs says 37. ♗d2 ♖db8 38. ♗h6 ♖a7 39. ♖hh2 ♖b7 40. ♖g1 ♖c7 41. ♗g5 ♗xg5 42. ♗xg5 ♖b7 43. ♖hg2 ♖e7 44. ♗ge4

♖c7 45. ♖e1 ♖a5 46. ♖d1 ♖b6 47. ♗g5 ♖b7 0.77/25, so now even on long analysis they disagree both on what should be played and the evaluation. However I am sure here that Hiarcs is winning

Game: 37... ♗d4 (♖3b7) 0.11/14
New eval: 37... ♗d4?+ -2.33/20

Correct was: 37... ♖3b7 38. ♗d5 ♖b2+ 39. ♖xb2 ♖xb2+ 40. ♗xb2 ♖d6 41. ♗b4 ♗f4 42. ♖gh2 ♗h5 43. ♗e4 ♗xe4 44. fxe4 ♖e6 45. ♗d5 ♖g4 46. ♗c3 ♗xh7 47. ♗c5 ♖f3 48. ♖h3 ♖f4 49. ♗e3 ♖g4 50. ♗c1 ♖e6 51. ♖f3 ♖e7 52. ♗c2 f6 53. ♗xa4 ♖xa3 54. ♗c5 ♗g8 0.66/29

Note: if 37... ♖3b7 Hiarcs says 38. ♗d5 ♖b2+ 39. ♖xb2 ♖xb2+ 40. ♗xb2 ♖b7+ 41. ♗b4 f6 42. ♖g4 ♖b5 43. ♖h6 1.69/25. The analysis starts out the same, but Hiarcs remains very confident

The long analysis evaluations from Houdini for the next 2 or 3 moves confirm that the game was indeed now won by Hiarcs, 1-0

38. ♗g5 2.67/21 ♖c6 3.18/20 39. ♗de4 3.48/21 ♗xe4 3.41/17 40. fxe4 3.45/18 ♗f3 3.18/20 etc.

I know it's a bit of hard work going through this, flipping back the pages for key position diagrams and comparing the various analysis. But I hope you find it worthwhile, it tells us a little about each engine's approach to chess, and confirms that they aren't perfect yet, as 'challenging mistakes' can still win games!

THE MEPHISTO WUNDERMACHINES!

SELECTIVE SEARCH SUBSCRIBER STEVE BLINCOE PLAYS 2 MATCHES WITH HIS!

The **Mephisto WonderMachine** is extremely rare - to say the least! Only 10 were made!! Some don't even know it exists!

Though the PC-module which transforms **Richard Lang's** already powerful **Genius2** program into a WonderMachine doesn't quite fit into the original Munich board dimensions, it is still definitely right to call it a dedicated chess computer.

Karsten Bauermeister has an original, which he calls the Mephisto **Miracle Machine**, but it is still not quite the same as **Steve Blincoe's** true, upgraded WonderMachine whose games we are looking at.

Richard Lang's upgraded **Genius5** playing engine was put into two WonderMachines, supercharged by Mephisto themselves to run on 866MHz Pentium3 processors.

Wow, PC technology in a superb board - and *Selective Search* reader **Steve Blincoe** has one of these, which he bought from a former employee at Mephisto!! We believe that the other one is owned by Richard Lang himself.

In *issue 161* we tried to estimate a rating for Steve's WonderMachine, and concluded that, if the Mephisto Genius2 68030 @ 33MHz is 2292 Elo, then Steve's on a P3/866 processor will be around **2580** Elo.

It's opponent in the first match in *issue 161* was the **Resurrection1 Fruit 2005** which has an SSDF **2395** rating, and the **WonderMachine** won that by an impressive 8-2, a 2635 performance!

Our second match will be tougher... it's against the Ruud Martin created **Resurrection2 Rybka2.2** which is **2632** with the SSDF. This should be good, and should be close!

Steve used 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.Nf3, 1.Nc3** but use their own books after White's first move.

There will be photos next time, for now we will have a look at the first 2 games to whet your appetites!

Resurrection II Rybka - Wundermaschine Genius 5

Game 1. ECO C18: French: 3 Nc3 Bb4: Main line: 7 h4 and 7 Qg4

1.e4 e6 2.d4 d5 3.♘c3 ♙b4 4.e5 ♘e7 5.a3 ♙xc3+ 6.bxc3 c5 7.♖g4 ♗c7 8.♗xg7 ♜g8 9.♗xh7 cxd4 10.♘e2 ♘bc6 11.f4 ♙d7 12.♗d3 dxc3 13.♘xc3 a6 14.♞b1 ♘f5 15.g4 ♘fe7 16.h3 *Considered best, still in theory*



Now 16... ♞c8 (best) or ♘a5 are known 16...b5N 17.♙d2 ♞h8 18.h4! ♘a5 19.♗d4 ♞c8 20.h5 The queenside pawns are beginning to look dangerous 20...♘c4 21.♙xc4 ♗xc4 22.♗xc4 ♞xc4 Not 22...bxc4? 23.♙e3! and Black has problems on both sides of the board 23.♞b4 ♞c7 24.h6



Very positive play from ResRybka 24... ♞h7?! I'm not sure what future the rook can have here, better was 24... ♘f8 heading for g8 then h7 25.♘e2 ♘c6 26.♞b2 ♘e7?! Again my suggested king move was better 27.♘d3 ♞c4 28.♙e3 ♙c6 29.♙d4 Both of Black's rooks are pretty much out of the game 29...♙b7 30.♘e2 ♞a4 31.♞b3 ♘c6 32.g5! ♘a5 33.♞a1! A subtle defence

showing Black's last move was wasted as dxb3 can't be played anyway 33... dc6 33... dxb3 ? 34. cxb3 xd4+ . The rook was lost whatever, so get what you can, but after 35. dxd4 c8 36. c1 d8 37. dc6+ it's game over and 1-0 34. c3 c4 35. d4 a8 Black is in big trouble whatever he tries. If 35... dxd4 36. cxd4 c6 37. c3! 36. dxc6 xc6 37. b4! f8 At last, but much too late 38. xc4



Which pawn to recapture with? 38... bxc4+ Worse was 38... dxc4+ ? 39. e3 g8 and after 40. d1 d5 41. xd5! exd5 42. f5! Black can resign 39. d4 a4 40. b1 White's rook is again on an open file, Black's isn't playing! 40... xc2 41. b6 a5 42. xa5 e7 43. b7+ f8 44. b8+ e7 45. b4+ d7 46. a4! g6 46... xa4 ? 47. g6 fxg6 48. b7+! 47. a5 f6 48. exf6 c6 49. b6+ c7 50. xe6 h8 51. e7+ c6 52. f7 would settle it and Black's evaluation said... 1-0

Not a good start for Steve's computer, it got itself into a passive position so seemed out of its depth once or twice. Have we been over-optimistic?!

Wundermaschine Genius 5 - Resurrection II Rybka

Game 2. ECO B56: Classical Sicilian: Unusual Lines

1. e4 c5 2. d3 d6 3. d4 cxd4 4. dxd4 d6 5. d3 d6 6. d5 dxd5 7. exd5 a5+ 8. d2 xd5 9. b5 d7?! N Surprising, losing the right to castle. Theory has only 9... e6+ and after 10. e2 d7 11. 0-0 a6 12. d3 e6= 10. d3 c5 11. e3 White is able to develop whilst chasing the Black queen around 11... b4 12. a3! h4 The pawn is poisoned as if 12... xb2 ? 13. d2! and Black's queen can't move, so 13... d5 14. g4+ d8 15. a4 b6 16. a2 b3+

17. xb3 xb3 18. cxb3 leaving White with knight for 2 pawns and Black has few practical chances of saving the game 13. b5 f6 14. 0-0 d8 15. d2 d7



This time it is the ResRybka that seems out of its depth and it is lagging a long way behind in development 16. d5 e5 ? A poor choice, White finds the right reply that virtually wins the game. 16... f5 was better 17. ffe1! e6 Too late for 17... f5 now, White wins the queen anyway with 18. xc6 xc6 19. a5+ d7 20. d6+! axb6 21. xf5+ 18. b6+! axb6 19. xe6 xe6 20. xb6 a7



The B/f8 and R/h8 paint a sad picture. White can hardly fail to win with its material advantage, but we will see how the game finished 21. c4 g6 22. c5 g8 23. c1 g5 24. cxd6 exd6 25. xc6 bxc6 26. xc6 c7 27. xc7 xc7 28. d5+ c6 28... xd5 ? would be worse: 29. xd5 g7 30. b4 wins 29. d6 g6 30. c3+ b6 31. d8! b5 ? Walking straight into mate. 31... d5 32. a4 b7 would delay the inevitable briefly 32. a4+! Mate in 7 32... xa4 33. d7 d5 34. b3+ a3 35. d5+ a2 36. c2+ a1 37. d3 d6 38. a2\# 1-0

Complete role-reversal! At 1-1 it looks as if it will be a good and close match after all! More next time.

team had not had enough time so Hiarcs offered a take-back which was accepted.

The reply I had sent 13... ♖xd4-+ looks clearly winning.

13...e4

Black is clearly better.

14. ♖xe4 ♖e5



14... ♖xf2+ was also good, but the move chosen by Hiarcs does make life more complicated so the Facebook team resigned.

I was a bit surprised they gave up so soon although they are in bad shape. From our 14... ♖e5, probably 15. ♖e3 (if 15. fxc6 ♖xf3+ 16. gxf3 hxc6, the threat of Be5

leaves White with very unpleasant choices) 15... ♖g4 16. ♖e2 ♖xe3 17. c3 ♖e5 18. ♖xe3 gxf5 19. ♖xc5 ♖c7 is one possible continuation. 0-1

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 is 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!



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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	3051
2	HOUDINI 1.5A x64	3007
3	HOUDINI 2.0c x64	3002
4	KOMODO 5 x64	2996
5	CRITTER 1.6 x64	2985
6	KOMODO 4.0 x64	2975
7	CRITTER 1.4 x64	2974
8	HOUDINI 1.5A x32	2969
9	CRITTER 1.2 x64	2968
10	STOCKFISH 2.2.2 x64	2965
11	CRITTER 1.4 x32	2959
12	RYBKA 4.1 x64	2954
13	KOMODO 3 x64	2953
14	STOCKFISH 2.3.1 x64	2951
15	STOCKFISH 2.2.2 x32	2940
16	RYBKA 4 x64	2936
17	STOCKFISH 2.1.1 x64	2928
18	GULL II BETA2 x64	2921
19	RYBKA 3 x64	2906
20	RYBKA 4 x32	2904
21	KOMODO 3 x32	2903
22	EQUINOX 1.60 x64	2898
23	CHIRON 1.5 x64	2848
24	NAUM 4.2 x64	2837
25	DEEP FRITZ 13	2820
26	HIARCS 14 x32	2816
27	CHIRON 1.1 x64	2816
28	NAUM 4.2 x32	2814
29	RYBKA 2.3.2A x64	2805
30	FRITZ 13 x32	2802
31	SHREDDER 12 x64	2800
32	HANNIBAL 1.2 x64	2799
33	GULL 1.1 x64	2787
34	SJENG CT 2010 x64	2786
35	SPIKE 1.4 x32	2779
36	HIARCS13.2 x32	2771
37	DEEP FRITZ 12 x32	2766
38	QUAZAR 0.4 x64	2763
39	SPARK 1.0 x64	2761
40	RYBKA 1.2F x64	2760
41	PROTECTOR 1.4.0 x64	2758
42	JUNIOR 13/13.3 x64	2758
43	JUNIOR 12.5 x64	2752

CCRL 40/40 4cpu Rating List

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

CCRL, 32/64-bit, SP only engines as shown

Pos	ENGINE	RATING
1	HOUDINI 3 x64	3286
2	HOUDINI 3 TACTICAL x64	3267
3	HOUDINI 2.0c x64	3250
4	HOUDINI 1.5A x64	3242
5	CRITTER 1.6A	3208
6	STOCKFISH 2.2.2 x64	3200
7	RYBKA 4 x64	3199
8	RYBKA 4.1 x64	3198
9	CRITTER 1.2 x64	3198
10	CRITTER 1.4 x64	3195
11	STOCKFISH 2.3.1 x64	3181
12	BOUQUET 1.5 x64	3175
13	RYBKA 3 x64	3166
14	STOCKFISH 2.1.1 x64	3163
15	STING SF2 x64	3160
16	IVANHOE 9.46H x64	3159
17	KOMODO 5 x64 [SP]	3158
18	VITRUVIUS 1.11 x64	3154
19	STRELKA 5.5 x64 [SP]	3150
20	KOMODO 4 x64 [SP]	3148
21	KOMODO 3 x64 [SP]	3143
22	SAROS 3.1A x64	3139
23	NAUM 4.2 x64	3111
24	HIARCS 14 x32	3107
25	CHIRON 1.1A x64	3102
26	NAUM 4.1 x64	3097
27	DEEP FRITZ 13 x32	3081
28	BOUQUET 1.4 x64	3075
29	CHIRON 1.5 x64	3068
30	JUNIOR 13/13.3 x64	3067
31	SPIKE 1.4 LEIDEN x32	3060
32	SHREDDER 12 x64	3059
33	RYBKA 2.3.2A x64	3055
34	JUNIOR 12.5 x64	3054
35	DEEP FRITZ 11 x32	3026
36	HIARCS 13.2 x32	3023
37	PROTECTOR 1.4.0 x64	3022
38	DEEP FRITZ 12 x32	3020
39	ZAPPA MEXICO II x64	3009
40	SPARK 1.0 x64	3001
41	NAUM 3.1 x64	3001
42	ZAPPA MEXICO x64	2990
43	ONNO 1.2.70 x64	2963

DEDICATED *CH*ESS 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 Portoroze 68030	2256	Fidelity 68000 Mach2B	1931	Kasparov Renaissance basic	1729
Mephisto RISC2	2248	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	2235	Fidelity 68000 Mach2C	1920	Novag Super Nova	1701
Kasparov RISC 2500-512	2231	Kasparov GK2000+Executive	1915	Fidelity Prestige+Elite A	1688
Meph RISC1	2220	Kasparov Explorer+TAdvTrainer	1915	Novag Supremo+SuperVIP	1684
Mephisto Montreux	2210	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	2191	Mephisto Modena	1899	Meph Chess School+Europa	1664
Mephisto London 68020/12	2179	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 Portoroze 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	2105	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 Portoroze 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