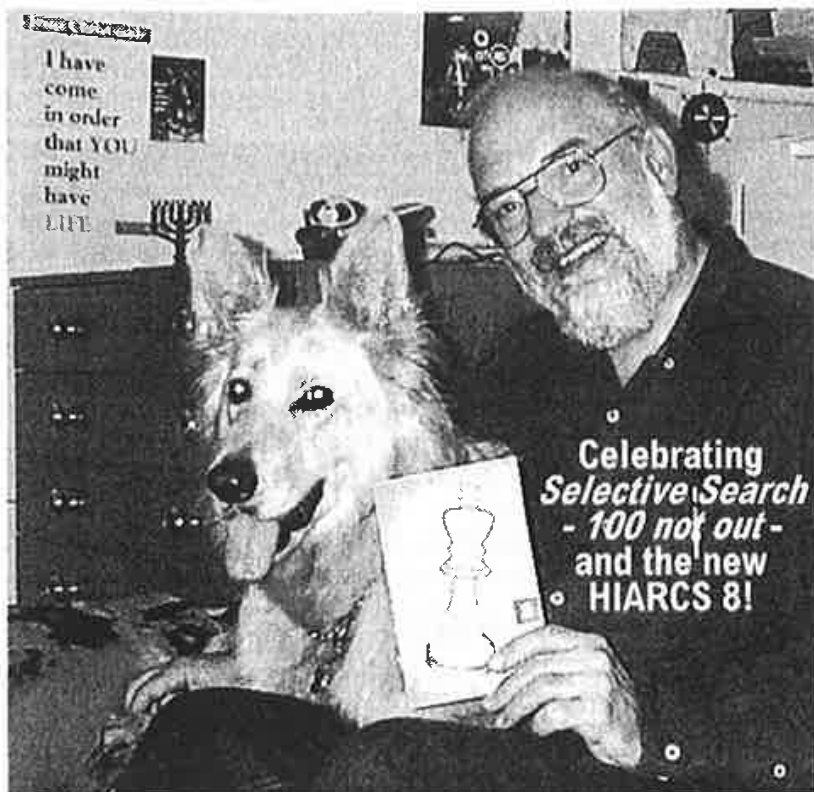# Selective Search 100!
THE COMPUTER CHESS MAGAZINE

Est. 1985

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Editor: Eric Hallsworth

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CONTENTS: NO. 100

COMPUTER & PC PROGRAMS... THE BEST BUYS!

RATINGS for all these computers and programs are on pages 31-32. This is not a complete product listing - they are what I consider to be current BEST BUYS bearing in mind price, playing strength, features + quality.

Further info/photos can be seen in Countrywide's CATALOGUE - if you want one, ring or write to the address/phone no. on the front page.

Note the software prices! - some retailer prices seem cheaper, but there's a post & packing charge at the end!... *our insured delivery p&p is FREE to SS folk*. Adaptors are £9 extra. Subscribers Offer: buy from Countrywide and deduct 5% off dedicated computer prices shown here.... mention 'SS' when you order.

■ PORTABLE COMPUTERS ■ [por]
Kasparov
BRAVO - new £49, Barracuda program!
COSMOS £99 - great value, 4½"x4½" plug-in board, strong Morsch '2100' program. Multiple levels + info display and coach system
Novag
OPAL PLUS £54 - good hobby computer
Excalibur
TOUCH CHESS £49 - play on screen using touch pen. Includes carry pouch.

■ TABLE-TOP PRESS SENSORY ■ [ps]
Kasparov
BLADE £49 - includesTalking coach system
BARRACUDA £79 - The Morsch '2000' prog. Compact board, display etc. This is great value!
CENTURION £79 - Barracuda '2000' program in slightly larger board, and value-for-money buy
COUGAR £99! - the Cosmos '2100' program + features in 16"x11" board; good info display.
Novag
AGATE PLUS/QUARTZ £72 - Opal Plus progam, good hobby computer + teaching
Mephisto
MILANO PRO £249 - Morsch at RISC speed, big book, strong, good features and display
ATLANTA £379 - the fast hash-table version of Milano Pro=even greater strength. 64 led board

■ WOOD AUTO SENSORY ■ [as]
Mephisto
EXCLUSIVE all wood board, felted pieces with MM6 - Morsch's 2100 program £449 with MAGELLAN - Atlanta program £749

■ PC PROGRAMS from CHESSBASE on CD ■
All Win & run INDEPENDENTLY + analyse within CB7/8. Great graphics, big databases+opening books, printing, max features.
FRITZ 7 £39.95 - by Franz Morsch. Extra chess knowledge for top Strength - a beautiful program! Plus superb *new* Interface, terrific Graphics, excellent in both analysis and play, plus good hobby levels and teaching features.

DEEP FRITZ £79 - for dual & quad processors, giving GM strength on top multi-processor Pentium3+AMD machines

HIARCS 8 £39.95 - by Mark Uniacke. Simply outstanding and running faster+stronger than ever! Superb *latest* Interface, terrific Graphics.

TIGER14 £39 - by Christophe Theron. Features for play, analysis, printing etc. as Fritz6. *Tiger14.0* is *very* strong and reliable in all aspects of the game, while *Gambit2.0* plays some amazing, attacking chess - possibly the new no.1! A great chess CD!

SHREDDER 632 £39.95 - Stefan Meyer-Kahlen's program in latest ChessBase Interface. Feature-packed format - knowledge-based playing stylish chess. Good for quality analysis.

JUNIOR 7 £39.95 - top Features, latest Chess-Base Interface etc. Strong, good positional chess but aggressive with fast tactics!

DEEP JUNIOR 7 £79 - the multi-processor World Champion version of Junior 7!

The YOUNG TALENTS CD £46 has 6 new programs, of which SOS and GOLIATH are clearly pretty strong

POWERBOOKS 2002 £39 - turn your *Chess-Base* playing engine into an openings expert! 7.6 million opening positions + 630,000 games!!

ENDGAME TURBO CD's £39 - turn your *ChessBase* playing engine into an endgame expert with this 4CD Nalimov tablebase set!

■ Other PC PROGRAMS on CD ■
REBEL CENTURY 4 *with* GANDALF 5 £46. CD contains the *new Century4.0* (DOS & Win) by Ed Schroder, as well as Suurballe's latest *Gandalf* Win version. *Wonderful* chess - Century4 is crammed with chess knowledge, about as human-like as you can get, new king safety awareness, and running faster than ever. The CD is packed with some unique analytical features, openings books, big games database etc.
HIARCS7 - for PC and MAC! - £49

■ PC DATABASES on CD ■
CHESSBASE 8.0 for Windows £99 !! The most popular and complete Games Database system, with the very best features. 1.6 million games, players encyclopedia, multimedia presentations, search trees, statistics, superb printing facilities and much more, incl. 3 recent ChessBase magazines on CD! The business!
CHESSBASE 7.0 for Windows, now only £49
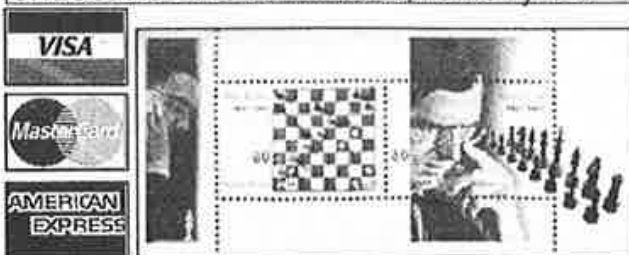
NEWS & RESULTS - Keeping you right up-to-date in the COMPUTER CHESS world!

Well, 17 years ago when I wrote my first, somewhat casual, **Computer Chess NEWS SHEET**, I would never have believed it!

100 issues of the News Sheet, re-named a few years later and best known as *SELECTIVE SEARCH, the Computer Chess Magazine*.

It really started out as a (slightly cross) reaction to over-the-top advertising and 'claimed ratings' of the day, and I wrote two articles for **Mike Basman**'s magazine POPULAR CHESS.

In those I attempted to apply the official BCF rating system to the computers, and showed that the <u>real</u> ratings were generally at least 10-15 BCF (100 Elo) lower than the various manufacturer's advertised figures.

In a way it's amusing, as the rating figures which I produced in those early efforts have also all proved <u>still</u> to be <u>too high</u> in the end.

Of course part of that is because people eventually got used to playing against them! I know the computers scored plenty of points at first as opponent's made mistakes through the sheer novelty and disbelief of playing against them. We also tended to try out our range of cute openings or little tactical traps (*'I wonder if it knows this...'*) only to find that we were playing in the one area the machines were quite good at, even in those early days.

I have in front of me the **Rating List** from the **Spring 1987** edition, *News Sheet 13!*

Note below, <u>from NEWS SHEET 1</u>, that advertisers of the Super Enterprise claimed it to be 2100 Elo. I half-swallowed it and said 1940! Then compare the 1987 figure, just 2 years later, with a reasonable Elo-calc system running. Finally, look at the current 2002 rating!

CHESS COMPUTERS - NEWS SHEET 1

NEWS SHEET to all SUPPLIERS, RETAILERS and PERSONAL CONTACTS with whom I have ... or another concerning CHESS COMPUTERS sold or owned by them. All of the ... received from you has been very much appreciated and proved most helpful; and ...outcomes of this NEWS SHEET will be continuing incoming supplies of Information

NEW MACHINES from what I hear.

SUPER ENTERPRISE. Mnfctrs. claim 2100; other Retailer says 1900+. Few Results in so far, I am giving it a very tentative 1940 for now.

FIDELITY EXCELLENCE also has very erratic information. One Retailer has it close to 2100; two others have it at 1850+ and 1880. A Purchaser estimates around 2040 and the Games scores I have thus far suggest around 2010, perhaps a little more. We shall see!

This was my first A5-sized publication - previous to that it had been on cheaply duplicated A4 sheets.

By this time my rating method - done on an old Sharp computer - had been carefully tuned and re-tuned until I for one was convinced it was surely close to the truth. Eventually it would get onto a real Personal Computer with proper database facilities, and some further refinements and improvements could take place.

But just look at the **1987 ratings**, which are a selection of those in issue 13, and compare them with the figures I have shown alongside them today, in **2002!**

Even allowing for the fact that humans must have improved in their awareness and strength of play against

computers and programs - by, I'd say, at least 100 Elo - it does seem that *'even I!'* was guilty of exaggerating their abilities in those early days!

1987 cp. 2002 TABLE	1987	2002
Meph Dallas 68020	2265	2057
Meph Dallas 68000	2188	2002
Meph Amsterdam	2133	1970
Meph Rebell	2024	1857
Novag Forte	2020	1848
Fidelity Par Excellence	2018	1862
Novag Expert 5MHz	2008	1870
Conchess Plymate/6MHz	1997	1833
SciSys Turbo Kasparov	1964	1822
Mephisto MM2	1955	1793
Psion1 on AtariST 8MHz	1948	1802
Fidelity Excellence	1938	1788
SciSys Turbostar 432	1934	1793
Fidelity Elegance	1928	1799
Novag SuperConstellation	1920	1760
Conchess 4MHz	1905	1770
Conchess 2MHz	1836	1689
Novag Constellation 3.6	1830	1680
Super Enterprise	1758	1618
Novag Constellation 2	1748	1626
Fidelity Sensory 9	1700	1557
Mephisto 2	1676	1500
Mephisto 3	1651	1509
Conchess A0	1643	1456

How can one actually be so far wrong, even when you're sure you're nearly right?!... ooops. must be careful, that sounds like a cue for one of my sermons on the Ten Commandments, which we're mostly sure we nearly keep! but really don't in truth.

And what could one say of the manufacturers - who, as I've said, were at least another 100 Elo higher than me at that time. In some cases they still persist in this today with their current machines!

In celebrating production of my 100th. Edition (!) I am aware that I have many, many readers who knew nothing of this work in its early days.

So I thought some would be interested in that **Table**, to see what the ratings looked like... 15 years ago, and not a PC in sight! But note there the very first-wave warning sign: a decent Richard Lang Psion program for AtariST!

So here we are: *Selective Search 100!* To be honest I never really thought there would ever be this many! But once I'd got to 80, I began to hope I might just make it, and now I've given myself a *'well done'* pat on the back!

NEWS and RESULTS

Chessmaster 8000

I know that many people - though perhaps not such a high percentage of *SelSearch* readers - get hold hold of the various **Chessmaster** versions, easily available from adverts in PC Gamer-type software magazines, or through some High St. 'megastores', Virgin Games and the like.

We don't sell Chessmaster

at Countrywide, and that's not particularly because we don't like it - after all, it is a Johan de Koning program! - but mainly because we just wouldn't sell enough to get a marketing margin on them.

The prices they are available at to such as ourselves mean that, by the time we've dealt with VAT and paid the postage in-and-out, we'd be lucky to make a couple of pounds on a sale. Given that each new version seems so far to have been launched with its own range of teething troubles, necessitating a web-only available 'upgrade' (for *'upgrade'* read *'bug removal kit'*), I can easily imagine the wide range of customer complaints we would enjoy for the first few months :-)

We already have folk who, having purchased elsewhere (!), ring us because no-one else can help them. The only solution is, as we don't have it there's not much we can do.

Nevertheless, because of **de Koning**'s reputation from producing many top-class dedicated and PC chess programs over the years, there are serious users who like to buy and test it against the (please forgive me) serious programs. **Harald Faber** is one such, and here's his results for **Chessmaster 8000**.

CM8000	ChessTiger 14	5-5
CM8000	GambitTiger 2	2-8
CM8000	GTiger 2 aggr	3-7
CM8000	Gandalf 5.1	5½-4½
CM8000	Hiarcs 732	4-6
CM8000	Junior 6	6-4
CM8000	Junior 7	3½-6½
CM8000	Shredder 6 CB	5½-4½
CM8000	Shredder 6 Cla	2-8
CM8000	Fritz 6	4-6
CM8000	Fritz 7	4½-5½

Naturally from a series of results like that, we can work out a rating for Chessmaster 8000... which is **2558 Elo** from the 110 games.

A bit disappointing?! Folk have assured me that CM8000 is definitely different from the engine-twins Chessmaster 6000 and 7000, but the rating comes out almost exactly the same, which would put it only around 20th on our Rating List!?

An effort on the web in **rgcc** recently to promote Chessmaster's virtues was quickly put in its place. But, as we're having a non-mumbling & grumbling issue, I'll content myself with showing the features which someone listed as being in the various Chess-Base programs, but not in CM8000:

- Fritz & Co. have a lot of features you won't see in Chessmaster: Friend mode, sparring mode, blunder check, full analysis, kibitz mode, hashtable sizes, coaching mode, database manager with multiple sorting options based on opening, themes, tactics, strategy and endgame techniques... and you don't need to have the CD in every time you want to use it!

To be honest at this point in time, and apart only from **Rebel** that I can see, you'd have to say that *'ChessBase rules, o.k!'* with Fritz, Shredder, Hiarcs, Tiger, Junior & Nimzo all on board.

Although still a DOS program, I class Rebel as a true competitor for the club or professional user, because it is strong and humanlike, with genuinely useful analytical functions. There are strong rumours that a Windows version will be out quite soon!

Gandalf 5 scores

Apart from the results from Harald Faber and Sweden's SSDF testing, scores have been slow coming in for **Gandalf5**.

It's a Windows program and is on the latest **Rebel Century4** CD... the latter has shown itself to be a well-worthwhile improvement in Ed Schroeder's series of programs where the aim is probably as much for human-likeness as for strength. Century4 is an advance in both departments, but the Gandalf program hasn't received so much attention.

However **Paul Walsh** wrote recently to say how much he liked it: *'I must say I'm particularly impressed with Gandalf5's style of play; it's aggressive but well rounded"*... and he enclosed some scores.

These are a little better than those included in the *SelSearch99* Rating List, where Gandalf5 was 19th. on 2558 Elo (only 3 Elo above Gandalf4), and should move it up a little, depending obviously what other new scores I receive.

The PCs are **P3/800** and the time control is **40/90** then 30secs per move.

- Gandalf5 - GTiger 4½-2½ !!
- Gandalf5 - CS-Tal 3-0
- Gandalf5 - Hiarcs732 5½-7½ !
- Gandalf5 - Shredder532 4½-2½
- Gandalf5 - Junior5 2-0
- Gandalf5 - Fritz532 2-0
- Gandalf5 - Cmaster8000 1½-1½

For good measure here's a score with Rebel Century as well:

- RebCentury4 - Hiarcs732 1½-½

Gerhard Sonnabend

We seem to be able to update Gerhard's Tournament Table in each successive issue, as he extends it to include yet one more program!

Nimzo8 is the new addition, so here's the latest, updated Table.

Gerhard Sonnabend: Dual P3/800MHz PC. Time 40/40

		F7	CT14	J7	S6	GT2	H732	N8	/120
1	Fritz7	x	11	13½	12	11	11½	14½	73½
2	Chess Tiger14	9	x	10	10	10	10½	13	62½
3	Junior7	6½	10	x	12½	10	10	12½	61½
4	Shredder6	8	10	7½	x	9½	12½	13½	61
5	Gam Tiger2	9	10	10	10½	x	11½	9½	60½
6	Hiarcs732	8½	9½	10	7½	8½	x	9½	53½
7	Nimzo8	5½	7	7½	6½	10½	10½	x	47½

Internet Chess Club CCT4 tournament

This event somehow managed to get itself missed out of our last issue - not sure how, perhaps lack of space, or else the papers with the results got buried on my desk. Probably the latter.

The tournament actually took place in Jan/Feb of this year, and involved no less than **46 programs** in an **11 round event**.

Deep **Junior7**, Deep **Shredder6** and **Fritz7** came out right at the top, whilst many of the programs were Winboard and/or Amateur programs, which marks the CCT4 as a quite special occasion for them, mixing it with the commercial 'big boys'.

But it was also of interest because of the appearance of a rogue beta-version of **Hiarcs8**. Mark Uniacke and I were positively astounded when we saw that Hiarcs8X

was shown in 13= place with 6/11. Of course there are beta-versions used by ourselves for testing, but they are only very rarely shared with a few trusted co-workers, and then only when we believe we have made some sort of useful improvement that we think might be worth their while testing.

And even then they have an expiry date stamp built-in, so that the program will only run for a couple of months. This is part of the security which *ChessBase* rightly insist on (and which caused such embarrassment in **Shredder6**, which went out to the public with an expiry date still in it!).

So what was this Hiarcs8X?!?

After a few enquiries, we found that it seemed to have reached the hands of quite a few people - in fact during the Gulko and Smirin games on the Internet, some folk were even sharing what *'Hiarcs8's evaluation and proposed move'* was!!

Fortunately one or two *Selective Search* readers had also come by it, and that worked out well, as one of them kindly sent Mark and me the 'dll' file which enabled Mark to work out when it was issued.

The answer to the 'when' is August 1999, so it isn't actually that up-to-date. But some computer buff had changed the internal version number which Mark and I would use in testing and comparison work, and converted it to read Hiarcs8X... and they'd 'fixed' the expiry date so it would also keep running!

All we need to work out

now is who our 'trusted' co-tester is!!

Of course we all know what happens, it's often the same with software piracy.

One person lends it to one or maybe two other friends, on the solemn promise they don't pass it on to anyone else. But that one other person does exactly the same, with the same instruction, and before you know it: 2 x 2 x 2 x 2 x 2 = 32 and so it goes on. (My Bible tells me this is how the Early Church passed on the Gospel, every person telling others, who told others, and on it went... there's nothing like multiplication).

Well, I hope you're finding my 100th. issue interesting with all these little insights!

Now I'd better give you the leading scores from the Tournament!

Deep Junior started with an outstanding 4/4 before drawing **Fritz7** (3½/4) in round 5.

This allowed **Deep Shredder** to move into 2= place, also on 4/5, and when this beat **DJunior** in round 6, it moved into joint 1st place with **Fritz7** on 5/6, with **DJunior** now 3rd on 4½.

At this time an amateur program (with a growing reputation), called **Quark** and by Thomas Mayer, was quietly just above half-way on 4/6, but at this point it embarked on an extraordinary winning seuquence of 4 straight games, including victories over **Diep** (4/6) in round 7, **DShredder** (6½/8) in round 9, and then **Fritz7** (7½/9) in round 10!

Until this defeat **Fritz's** 7½/9 had enabled it to hang on to 1st place, but as a result

of **Quark's** win, **DJunior** and **Quark** started the last round both on 8/10 in top spot, a ½-point ahead of **DShredder** and **Fritz7**.

Not only were Deep Junior and Quark the joint-leaders, but they were also scheduled to play each other in the last round, with Quark as White. You couldn't ask for a more exciting way to finish a tournament and, though playing Black, **Deep Junior** won and took the title!

Deep Shredder beat Insomniac so leap-frogged into outright 2nd. place, whilst **Fritz7** was held to a draw by **Diep**, so found itself 3= with **Quark**.

CCT4 Tournament

	Program	ICC	/11
1	**Deep Junior 7**	2701	9
2	**Deep Shredder 6**	2731	8½
3=	**Fritz 7.06**	2764	8
	Quark X	2375	
5=	**Diep**	2526	7
	Searcher X	2575	
	Yace	2546	
	Bringer	2489	
9=	**Zarkov 4.5**	2570	6½
	Insomniac	2552	
	Comet X	2471	
	Post Modernist	2504	
13=	**Gandolf 5**	2598	6
	Chester X	2602	
	Monsoon	2511	
	Ferret	2478	
	Tao 5	2525	
	Hiarcs 8X	2812	
	Pharaon 2.61	2556	
	King of Kings 2.022	2421	
	Goliath-Blitz	2628	
	Warp X	2144	

There were 24 other entrants. Those on 5½/11 included **Isi-Chess** and **Crafty 18.13**, but most of the others were new names to me.

The ratings are come from games played on the Internet Chess Club by each of the programs.

From these it seems that **Quark** has not done so well against human opposition, whilst it appears the (1999) **Hiarcs8X** has done extremely well.

It is only 2-3 years ago that **Ferret**'s excellent performances in the Harvard Cup and on the 'net had people saying that it was one of the top 3 programs. However its current rating with ICC and its score here suggest that progress might have slowed somewhat.

Comet did well again, however, confirming the good result at Paderborn and indicating that the B40 version and onwards are becoming quite competitive and closing in on the the top programs.

Yace is another program with a growing reputation, and that also did well.

Trojan Horse attack

I'm taking you back a couple of months or so, to issue 98 and a discussion on *king attacks and safety*, when we had a look at the following game.

Paul Bailey - Crafty 18.12
Trojan Horse positions [A08]

1.e4 e6 2.d3 d5 3.♘d2 ♘f6 4.♘gf3 c5 5.g3 ♘c6 6.♗g2 ♗e7 7.0-0 0-0 8.e5 ♘d7 9.♖e1 b5 10.♘f1 a5 11.h4 b4 12.♗f4 ♗a6 13.♘1h2 a4 14.♘g5 ♕e8 15.a3 h6

Here we had an almost typical Trojan Horse position, as seen in many anti-computer games in the past.

In fact going all the way back to the well-known 'George Morris attack' games of some 14 or 15 years ago, when no computer could resist taking his Ng5 sacrifice and subsequently quickly succumbing to the killing attack along the h-file.

The big difference is that George, playing White, would never castle while he waited for h6 to be played! **16.♕h5?!**

Imagine this position with White uncastled and his ♖ still on h1! Clearly 16...hxg5 17.hxg5 is then terminal for Black! But... is it so bad in the current game position, in which White will need a few moves to get a rook behind the queen on the h-file?

So the question was, must Black play **16...♘d4?!**, and if so who is winning?

Or can he risk **16...hxg5** in this position? If he does can White still drum up a big attack? I reckoned it was the issue of White having castled which greatly reduced or even removed his chances in the above game.

We left the question unanswered, and no-one as yet has submitted an opinion.

But I was particularly interested very recently when it came to my notice that the 19th. game in the 1937 World Championship match had a similar situation!!

In this the attacker offering the Trojan Horse was Black - and he <u>hadn't</u> castled. White (Euwe) refused the bait, but could he have taken it?

Euwe,M - Alekhine,A
17th World Championship
Game 19 (20 Nov 1937)

1.d4 ♘f6 2.c4 e6 3.♘c3 ♗b4 4.♘f3 ♘e4 5.♕c2 d5 6.e3 c5 7.♗d3 ♘f6 8.cxd5 exd5 9.dxc5 ♗xc5 10.0-0 ♘c6 11.e4 ♗e7 12.e5 ♘g4 13.♖e1? ♘b4 14.♗b5+ ♔f8 15.♕e2 ♗c5 16.♘d1 ♗f5 17.h3

17...h5 18.♗g5!
Was 18.hxg4?! hxg4 19.♘g5 okay − can Black find a winning response? In fairness 18.♗g5! here is better, leaving the capture of the knight to next move **18...♕b6 19.♘h4**
Okay, so here we go again: what about **19.hxg4!? hxg4 20.♘h4.** *Can anyone show a winning line for Black against best play?*

It is interesting that once again **Crafty** will have nothing to do with taking the Trojan Horse! **Bob Hyatt**

volunteered some more information:

"This is all an artifact of the Trojan Horse evaluation code which I have in Crafty. The 'Trojan Horse' attack is based on the idea of Black playing Ng4 (or White playing Ng5) and the computer attacks it with a pawn, as in 17.h3. If the computer has castled and the opponent has not, the opponent will then play h5 (as Black) so that on hxg4 hxg4, White is a knight up, but the rook file is open with a Black rook already on it. If Black's queen is also able to reach the h-file quickly, the attack is generally terminal for White.

Crafty recognises this and wont take the knight and open up the file. But once it is gone the special evaluation term is no longer relevant, and it will (for a while) conclude that White is a knight ahead and is winning. But White might still be getting mated outside the search horizon."

I hope readers are like me, and find this sort of thing quite fascinating.

So come on - in the 2 games we're looking at, can **readers** (especially folk like our own anti- computer stars, David Wiekrykas and Rafael Vasquez) show a winning route after the knight sacrifice... or does the Trojan Horse attack need other factors to be in place to work?

Out of interest play in the Euwe–Alekhine encounter continued (from **19.♘h4**):
19...♗e4 20.hxg4 ♘c2 21.♘c3 ♘d4 22.♕f1 hxg4! 23.♘a4 ♕c7 24.♖xe4? dxe4

25.♕c4 ♖c8? 26.♖c1 b6 27.♘xc5 bxc5 28.♗a6? [28.e6! Alekhine] **28...♕xe5! 29.♗xc8 ♕xg5 30.♕xc5+ ♕xc5 31.♖xc5 ♖xh4**

and the game was drawn in 48 moves ½-½

New RULES for CHESS

(printed with the permission of its author Stewart Reuben, and Sam Sloan who first quoted it on the Internet)

Britain's **Stewart Reuben** is a member of the FIDE Rules Commission, the highest authority on chess, and also a distinguished and widely publisher authority on the Rules of Chess.

He has recently proposed a greatly improved **Rule of Chess** which will be a great improvement over various other suggestions trying to change or enliven the game, and also end centuries of injustice!

Mr. Reuben's improvement is addressed to the fact that many chess figures are the victims of long-standing invidious discrimination.

This new rule will end that unfair discrimination.

The change concerns the En Passant Rule, which is outrageously unfair to rooks, bishops, knights and queens, not to mention kings.

Under the En Passant Rule, if White has a pawn on d5 and Black plays pawn e7-e5, then White can, if he wishes and on his next move only, capture the pawn by playing d5xe6 e.p. and remove the pawn on e5.

Similarly, if Black has a pawn on f4, and White plays pawn g2-g4, Black can capture the pawn on g4 by playing f4xg3 e.p.

But what about knights, bishops, rooks and queens? Why have not they been given equal rights as pawns?

To end this very obviously unfair situation, International Arbiter **Stewart Reuben** says that <u>knights and other pieces should be given the same rights</u> as pawns.

So: **under the NEW RULE**, if White has a <u>knight</u> on d4 and Black plays pawn e7-e5, then White can capture the pawn by playing Nd4xe6 e.p. and removing the Black pawn on e5.

Similarly, if Black has a <u>bishop</u> on c7, and White moves g2-g4, then Black can capture the pawn, on the next move only, by playing Bc7xg3 e.p. and removing the pawn on g4.

This elegant solution to a long standing problem has such obvious merit in these days of Equal Rights, that we believe it should be adopted immediately into the Rules of Chess!

Bill REID's

Let's Finish with some CHESS!

How did our readers and their computers get on with the problem Bill set us in *SelSearch99*?

From the small number of responses received, not too well it might seem, but in fact some programs did very well! Here it is again.

White to move looks better. But how is the win to be clinched? It seems whether you are a computer or a human, you either see it or you don't (Nigel Short would!), so 5 mins for everybody.

Bill Reid- 7. *White to move*
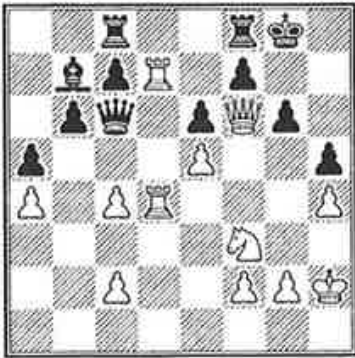
I dropped the Nigel Short hint (which Bill hadn't included), as for once I managed to solve it myself quite quickly, and remembered then where I had seen it.

Here's what **Bill** said in his **Comments** on the Position:

As Eric recognised, this is from a quite well-known **Short-Timman** game, played at Tilburg in 1991. I was reminded of it when I picked up Jonathan Rowson's recent book *'The Seven Deadly Chess Sins'* (Gambit, 2000). Not sin in the real sense, but what Rowson calls *'a good sense of humour'*, for he explains, *'if you are not susceptible to the funny side of a variation then you will probably miss lots of those vital subtleties and paradoxes that you need to play chess well'*.

So, does your program have a sense of humour? It seems it could, as Eric refers to a couple of programs finding Short's move.

How should White improve his threatening position? Moves of queen, rooks or knight don't achieve anything, but Short spotted something he thought highly amusing: 1.Kg3!! Now the other pieces can just watch while the king advances to h6 and delivers mate. A little bit like my SS98 position really, though I expect that the programs did better with this one, as the mate is a lot closer!

As far as I can see from my mailbox, only **Peter Grayson** and **Frank Holt** responded on this one, but between them they tested so many machines that we end up with a good overview of what the programs manage.

I've converted their successful timings as nearly as I can to the level of a P3/1000.

8Hiarcs	Kg3	0m07
Fritz 532	Kg3	0m10
Nimzo 8	Kg3	0m20
Genius 6/6.5	Kg3	0m25
Comet B27	Kg3	0m30
Nimzo 732	Kg3	0m37
Hiarcs 732	Kg3	1m20
Fritz 6	Kg3	1m32
Ikarus 0.18	Kg3	2m55
Fritz 7	Kg3	4m02

| Failures: |
|---|
| S.O.S. Crafty 18.11. Goliath Light 1.5. Chess Tiger 14. Gambit Tiger 2. Junior 7. Shredder 4. Shredder 6 |

Back to **Bill** for his special puzzle for this issue!

Well now it's Eric's turn for congratulations, on the Centenary of *Selective Search*. You have done an outstanding job of presenting the intricacies and excitements of computer chess to your readers. We are all grateful to you for the hard work you put in.

So how to celebrate? Something really out of the way and exotic!?

No, I shall go for utter simplicity. One of the pleasures of chess is to find out how apparently straightforward positions can turn out to have hidden depths. Not so hidden sometimes to our modern computer programs. So how will they far with this one?

Only 6 pieces on the board and **White to move** really has no choice. It has to be f8. So the programs should have it wrapped up in nanoseconds. But f8=what?
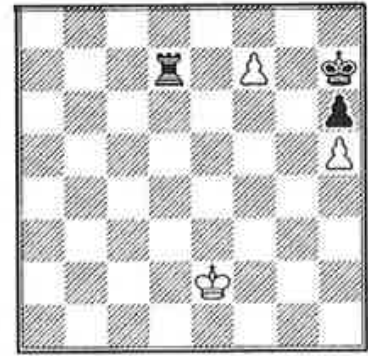
Even humans shouldn't need long to figure that out!

The SMIRIN games

Many (internet connected) readers will know that even as the **Computers v Gulko** match came to its end, with 2601 rated Gulko going down 5-3, a follow up with **Ilya Smirin** (2702 Elo no less! and aiming to exact revenge for the GM's) was already being organised.

Incidentally for both the organising, and then operating the computers, we all owe *serious thanks* to **Shay Bushinsky** who, with Amir Ban, is Junior's programmer. His willingness to do his very best for all the programs he operated does him great credit!

In fact the Smirin match has already been played.

Again over 8 games, and with the same time control, though **Tiger** came on as a substitute for Fritz, but lost ½-1½, as did **Shredder**. **Hiarcs** and **Junior** both drew 1-1, so **Smirin won 5-3**.

Whatever, the GULKO games are exciting and I've prepared copious notes for them. To do an exact repeat for the SMIRIN games in this same issue would be analytical overkill and, I think, render the magazine slightly indigestible through lack of variety! Therefore next time!

The GULKO games! - 2601 GM plays FRITZ, JUNIOR, SHREDDER and HIARCS

In late Feb/early March a major **Human-Computer** confrontation took place over the Internet.

The USA's ex-Champion and strong GM **Boris Gulko** took on 4 of the world's top **PC programs** in an 8 game Match playing each program twice.

- Time control G/60m+10secs
- Hardware: **Deep Fritz, Deep Junior** and **Deep Shredder**: *Dual 1000*; **Hiarcs**: *P4/2000*
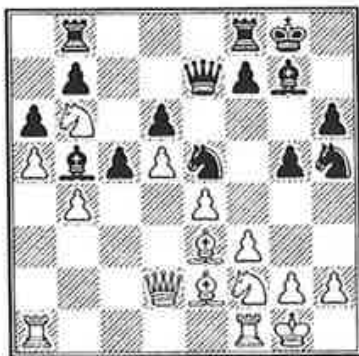
The GULKO credentials!

Boris Gulko is one of the few players in the world with a +1 score from all games played against Gary Kasparov!

Gulko,B (2565) - Kasparov,G (2630)

URS-ch49 Frunze, 1981.
ECO: A65
1.d4 ♘f6 2.c4 e6 3.♘c3 c5
4.d5 exd5 5.cxd5 d6 6.e4 g6
7.f3 ♗g7 8.♗g5 a6 9.a4
♘bd7 10.♘h3 h6 11.♗e3
♘e5 12.♘f2 ♗d7 13.♗e2 g5
14.♕d2 ♕e7 15.a5 ♖b8
16.♘a4 ♘h5 17.♘b6 ♗b5
18.0-0 0-0 19.b4

19...c4?! *This looks too risky, pushing the pawn just too far*

beyond its own pawn protection. Better therefore 19...♘d7, and if 20.♘xd7 ♕xd7 21.♗xb5 ♕xb5 White might sacrifice the exchange with 22.bxc5 ♗xa1 23.♖xa1 leaving Black the interesting but perhaps not enviable task of working out how to stop Gulko's central pawns from marching to victory.
20.♖ac1! f5!? *Kasparov will need to make this all-out kingside attack work before Gulko's extra pawn starts to tell.* **21.♘xc4 ♗xc4 22.♗xc4 g4! 23.fxg4 fxg4 24.♘h1** *24.♗e2 looks a good alternative.* **24...♕h4?!** *24...♘xc4 25.♖xf8+ ♖xf8 26.♖xc4 ♕f7 27.♕e2 ♔h7 leaves the kingside attack smouldering in a position which should enable to Black to defend against the central pawns as well, so this might have been better than trying to pursue the kingside attack with such commitment* **25.♗e2 g3**

Gulko can now simplify the position. **26.♘xg3 ♘xg3 27.hxg3 ♕xe4 28.♖xf8+ ♖xf8 29.♗f4 h5?!** *Looks a bit over-desperate.* **30.♖c7!** **♕b1+ 31.♕c1 ♕g6 32.♕c2 ♕e8?** *Maybe now was the time to accept the exchange*

with 32...♕xc2 33.♖xc2 h4. Otherwise 32...♖f6 could have been tried, though 33.♕xg6 ♘xg6 34.♗d2 ♖f7 35.♖xf7 ♔xf7 36.♗xh5 should win for White. **33.♕e4 h4 34.gxh4 ♕d8 35.♖xb7** *This could also have been played very effectively at move 33 or 34!* **35...♕c8 36.♖e7 ♕d8 37.♗g5 1-0**

Here is one of **Gulko**'s best known performances against a computer, the then greatly feared Deep Thought!

Gulko - Deep Thought

Harvard Cup, 1989. ECO: A07
1.♘f3 d5 2.g3 ♘f6 3.♗g2 c6
4.d3 ♘bd7 5.0-0 e5 6.♘c3
d4 7.♘b1 ♗d6 8.e4 ♘c5
9.♘bd2

9...b5? *It is hard to believe Deep Thought could have missed the obvious tactic this gives Gulko (i.e. by weakening c6 and opening up the g2-a8 diagonal for the coming push e4-e5 by White)... but who knows?!* **9...0-0 10.♘c4 ♖e8** *was right* **10.♘xd4 exd4 11.e5 ♗b7 12.exd6 ♕xd6 13.♖e1+ ♘e6 14.a4 a6 15.♘e4 ♘xe4 16.♗xe4 0-0 17.♕h5 g6 18.♕h4 ♕b4 19.♗h6**

19...♖fb8?? *Unbelievably bad by DT. From this and the inferior move 9...b5 I'd guess there was some bad coding in the area of piece x-rays. There is litle doubt that today's Fritz, Tiger, Junior, Hiarcs and the rest would beat Deep Thought easily enough, even if the argument still rages on in the attempts to compare the PC programs on top hardware against Deep/er Blue! 19...♖fe8 20.♗g2 ♞g7 offered Black survival chances even though his position is somewhat disorganised.* **20.♗xg6 fxg6 21.♕f6** *21.♖xe6 would have probably won even more quickly.* **21...♖f8 22.♗xf8 ♖xf8 23.♕xe6+ ♔g7 24.♕e7+ ♕xe7 25.♖xe7+ ♖f7 26.♖ae1 bxa4 27.♖1e4 c5 28.♖4e5 c4 29.dxc4 1-0**

Now to the games from the **2002 Internet Match!**

Gulko,B - Deep Junior 7
Game 1. ECO: A29

<u>Gulko:</u> In this game White creates pressure using the b-file. DJ could have defended itself if it had prevented the maneuver Nf3–d2–c4, but it 'didn't understand this'. I really could have won by playing, for example, 36.♖a6, but trying to avoid time shortage I played 36.♕b1 very

quickly, and after Black's reply the position became unclear and a draw was agreed a few moves later. **1.c4 e5 2.♞c3 ♞f6 3.g3 d5 4.cxd5 ♞xd5 5.♗g2 ♞b6 6.♞f3 ♞c6 7.0-0 ♗e6 8.d3 ♗e7 9.a3 0-0 10.b4 f6 11.♖b1** *11.♗b2 is the main move here, but Gulko said that he thinks this is better, as White's plan should be to get the knight to c5 and open the b-file.* **11...a5 12.b5 ♞d4 13.♞e1 c6 14.bxc6 ♞xc6** *DJ was still in its book to here.* **15.♗e3 ♞d5 16.♞xd5 ♗xd5**

17.♕a4 *Maintaining the pressure and stopping Black from playing the freeing a4 and Bb3 when he is okay.* **17...♔h8?!** *An unusual move from a computer, was the general view here, but DJ is trying to avoid a queen exchange. Programmer and operator Shay Bushinsky says that it had 17...♖c8 in view until the very last moment!* **18.♞f3 ♕d7 19.♖b2 ♖fc8 20.♖fb1 ♖c7 21.♖b5 ♗a2!** *Gulko must now weaken his back rank with ♖b2, or take the rook off the b-file.* **22.♖a1?!** *DJ expected ♖c1 and Gulko concluded afterwards that this would have been stronger.* **22...♗e6 23.♖ab1 ♗g4 24.♗b6 ♖cc8 25.♗e3 ♖ab8 26.♕b3 ♗e6 27.♕a4**

27...♗d8? *This allows White to get a clear advantage. 27...♗g4 repeating moves was correct. Gulko says he planned 28.♔f1 and now DJ would play 28...♗h3 29.♗xh3 ♕xh3+ 30.♔g1 and without the light-squared bishops, Black should be okay.* **28.♞d2 ♞e7 29.♞c4 b6 30.♕b3 ♞c6 31.♕d1 ♗c7 32.♞xb6 ♗xb6 33.♖xb6 ♖xb6 34.♖xb6 ♞d4 35.♗xd4 exd4**

36.♕b1 *36.♖a6 should win, though there are still some technical difficulties on the way to the full point. DJ would have played 36...♖c3 and then it might go 37.♖xa5 ♕c7 38.♖a8+ ♗c8 39.♕a4 ♖c1+ 40.♗f1 ♕d8 41.e3 and White, 2 pawns ahead, should complete the win.* **36...a4 37.♖b8 ♗b3 38.♖xc8+ ♕xc8 39.♔f1 h6 40.♕b2 ♕c5** *White just can't make any progress now, since the queen must defend the a3-pawn instead of*

supporting the desired e2−e3 break. **41.h4 ♔g8 42.♗e4** *This was certainly an interesting start to the match: though White won the strategical battle, Black obtained positional compensation and earned the draw after a mistake by the GM ½-½*

Deep Fritz 7 - Gulko,B

Game 2. ECO: C03

Gulko: 'This was a lively tactical duel. My opponent was very creative, though I lost in a clearly drawn position, due to a time shortage. For example I could have played 51...♖a8 52.♔f4 ♔f7 as is shown in the game notes, and White wouldn't have accomplished anything'. **1.e4 e6 2.d4 d5** *The French defence is a great weapon against computers, because it allows humans to achieve closed positions in which they can demonstrate their superior strategic understanding. The electronic opponent is unable to use its incredible tactical skills.* **3.♘d2 b6** *Gulko is not playing this line for the first time.* **4.♘gf3 ♘f6 5.e5 ♘fd7 6.c4!** *It is good for the computer to open the position, especially as Gulko has played successfully at GM level against the popular alternative 6.♗d3.* **6...♗b7 7.cxd5 ♗xd5 8.♗c4 ♗e7 9.♗xd5** *Sokolov beat Gulko with 9.0-0 c6 10.♕e2 0-0 11.♘e4 a5 12.♗f4 in a 1983 game in Moscow.* **9...exd5 10.♘f1!** *Gulko considered this a nice innovation by Fritz* **10...♘f8 11.♘e3 ♘e6 12.♕a4+ c6 13.0-0 0-0 14.♘f5 ♖e8 15.♗e3**

White is probably ahead at the present: Black has problems with the undeveloped queenside ♖ and ♘, and his c6-pawn is weak. **15...♗f8 16.♖ac1 a5 17.♖fd1 ♖a7 18.♖d2 h6 19.♕d1?!** *19.♕b3!? would have maintained pressure against Gulko's queenside weakness.* **19...♖d7 20.♕b3?!** *Changing his mind! Having got the queen (rightly or wrongly) back on d1, DF could have continued with 20.h4 straight away.* **20...♔h7 21.♕d3 g6 22.♘g3 c5! 23.♘h5 c4 24.♕b1 ♗e7 25.♘f4 ♘a6 26.♘xe6 fxe6 27.h4!?** *A pawn sacrifice! and 'a brilliant decision' said Gulko.* **27...♗xh4 28.b3 b5 29.a4 bxa4 30.bxc4 ♘b4 31.c5 a3 32.♕b3 a2 33.♖b2 ♖f7** *33...♖f8! 34.♗d2 ♖xf3 35.♕xf3 ♗g5 'would keep my a2-pawn' said Gulko: 36.♖a1 ♗xd2 37.♖xd2 ♕h4 'but unfortunately I found it too late'.* **34.♗d2 ♖ef8 35.♕e3** *Not 35.♗xb4?? ♖xf3! 36.gxf3 ♕g5+ 37.♔h2 ♗xf2! (37...♕xc1-+) 38.♖xf2 ♖f4-+.* **35...♔g8! 36.♘xh4** *Not 36.♕xh6?? ♗xf2+! 37.♔f1 (37.♔xf2 ♘d3+ 38.♔g1 ♘xc1-+) 37...♗xd4 38.♕xg6+ ♖g7 39.♕xe6+ ♖ff7-+.* **36...♕xh4 37.♗xb4 axb4 38.♖xa2 ♖f4 39.g3 ♕g4 40.c6 ♖xd4 41.♕xh6**

41...b3?! *This loses a tempo which might be important in the endgame. Best was 41...♖d1+ 42.♖xd1 ♕xd1+ 43.♔h2 ♕h5+ 44.♕xh5 gxh5.* **42.♖b2 ♖d1+** *Someone on the Internet using the pirated Hiarcs8X reckoned that 42...♖d3 would draw for Black, and Gulko later shared the thought in his game notes suggesting 43.c7 ♖c8 with 'an unclear position'.* **43.♖xd1 ♕xd1+ 44.♔h2 ♕h5+ 45.♕xh5 gxh5** *'The resulting endgame is not easy to calculate when you are in time trouble,' said Gulko, 'but it might be easier for me now that I have the queens off'.* **46.♔h3!** *Gulko will need to play very carefully from here!* **46...♔g7 47.♖xb3 ♖xf2 48.♖c3 ♖f8 49.♔h4 ♔g6 50.g4 hxg4 51.♔xg4**
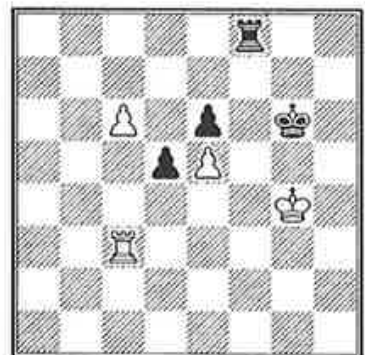
The critical moment of the game. Here we believe Gulko still had two ways in which to get the draw! **51...♖c8?!**

51...d4 is probably the strongest recommendation, when 52.♖f3 ♖d8! looks drawn. 51...♖a8 was Gulko's idea, and he expected 52.♔f4 ♔f7 53.♔e3 ♔e7 which seems to be a draw. However we think that 52.♖f3! might have been a better continuation for White. **52.♔f4 ♖d8 53.♖c1!** *53.c7? would throw the win away: 53...♖c8 54.♔e3 ♔f7=* **53...♖a8 54.♖g1+ ♔f7 55.♔e3 ♖a6** *55...♖c8 56.♖c1 still wins, even though Black has saved a tempo.* **56.♖c1 ♖a8 57.♔d4** *I don't think Black has any way to save it from here. The final moves were:* **57...♔e7 58.♔c5 ♖a2 59.♖g1 ♖c2+ 60.♔b6 ♖b2+ 61.♔c7 d4 62.♖g7+ ♔f8 63.♖g4 d3 64.♔d7 d2 65.♖d4.** *A great game, and very exciting. Pawn c6−c7−c8 is inevitable* **1-0**

Gulko,B - Hiarcs 8

<u>Game 3. ECO: A22</u>

<u>Gulko</u>: 'This turned into a positional game in which my opponent simply didn't make any mistakes'
1.c4 e5 2.♘c3 ♘f6 3.g3 d5 4.cxd5 ♘xd5 5.♗g2 ♘xc3 6.bxc3 ♗e7 7.♘f3 ♘c6 *Eric: Mark and I were using only our own book which was not backed up with the usual GM database book creation, which would normally run in the background as in the commercial releases. So annoyingly Hiarcs went out of book with here! After finding correct theory Hiarcs did come briefly back into book after 9.d4, but Gulko caught us again with his 10.♘d1 when we expected either ♘d2 or ♘e5.* **8.0-0**

♗e6 9.d4 e4 10.♘e1 f5 11.f3 exf3 12.♗xf3! *This frees the g2 square for the maneuver ♘e1-g2-f4.* **12...0-0 13.♘g2 ♘a5**


14.d5!? *A brave move, which suprised almost everybody. Hiarcs expected 14.♘f4 here, and then 14...♗c4 which is interesting but, as Gulko pointed out, does give Black some play which he wanted to avoid (of course!). Gulko says he would have played 15.d5 and after Hiarcs' 15...c6 he 'saw no good moves for White'.* **14...♗d7 15.♕d3 ♗c5+ 16.♗e3 ♗xe3+ 17.♘xe3 ♕e7** *17...f4?! looks threatening, but simply 18.gxf4 ♖xf4 19.♗e4! and White is better.* **18.♕d4** *Both sides are fighting for dark squares!* **18...♖ae8 19.♘g2 b6 20.♖ae1** *20.♘f4 was an alternative, and Gulko said after the game that he had considered it. His analysis went 20...♕e3+ 21.♔h1 g5 22.♘e6 ♕xd4 23.cxd4 ♗xe6 24.dxe6 c6 25.d5 and probably White is better here. However Hiarcs would have played 20...g5!, ignoring the chance of checking with the queen, and the game would become much more tactical and could well have favoured Hiarcs (at least in our view! Mark + Eric!)* **20...♘b7 21.e4 fxe4 22.♖xe4 ♕c5 23.♘f4** *Another interesting*

positional decision. Gulko allows his pawns to be doubled, but gets counterplay along the c−file. **23...♖xe4 24.♗xe4 ♕xd4+ 25.cxd4 ♗b5!** *25...g5 was an important alternative − 'favours Black' said Gulko initially − and others thought it would give Black an advantage. But analysis from Hiarcs showed that it was far from clear: 26.♘e6 ♖xf1+ 27.♔xf1 ♘d6 and now it was agreed by all that it isn't clear at all!* **26.♖c1 ♘d6 27.♗c2 ♗c4 28.♗b3**
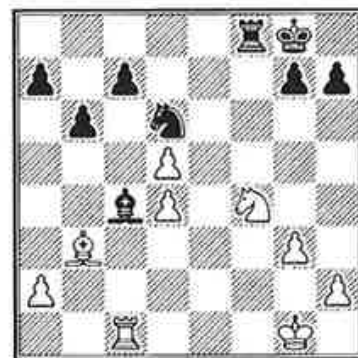
28...b5! *A perfect decision, keeping the c−file closed.* **29.♘e6 ♖c8 30.♗xc4** *Afterwards Gulko decided that 30.♔f2! was an improvement. He expected 30...a5 31.♗xc4 ♘xc4 32.a4 ♘b2 33.♖b1 and felt he had overlooked a possibility. However Hiarcs would have played 30...♔f7! which looks better than a5, and very likely would just transpose to the actual game.* **30...bxc4** *Now it was suggested Hiarcs had 'missed' its best chance by not playing 30...♘xc4 31.a4 a6 32.axb5 (32.♘c5 also seems to draw) 32...axb5 33.♖b1 ♘d6 34.♖c1 b4 35.♖b1 ♖b8 36.♘xc7 b3 37.♘a6 ♖b5 38.♘c5 b2 39.♘d3 ♘c4 which was said to be 'bad for White'. But apart from the fact that*

Gulko could well have played ♔f2 at move 33 or 34, even now 40.d6! would be enough to get him the draw in my view, and I'm sure he would have taken one of these opportunities! **31.♔f2 ♔f7 32.♔e3 c6 33.♖f1+ ♔e7 34.♘xg7 cxd5 35.♘f5+ ♘xf5+ 36.♖xf5 ♔e6**
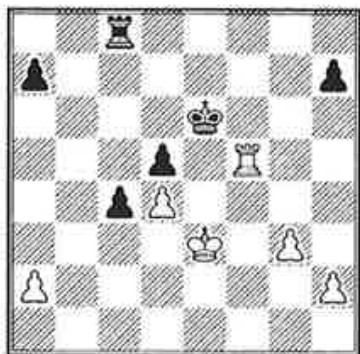
37.♖e5+ *As Gulko pointed out 37.g4? h5! 38.♖xh5?? c3 would have been funny, or not funny, depending on your point of view! But now the White ♖ will be lost as it cannot get to c1 before the pawn. You have to play 38.h3, but 38...hxg4 39.hxg4 ♖h8 would still leave the initiative with Black.* **37...♔d6 38.♔d2 c3+ 39.♔c2 ♖c4 40.♖h5 ♖xd4 41.♔xc3 ♖c4+ 42.♔d3 ♖a4! 43.♖xh7 a5 44.h4 ♖xa2 45.g4 ♖a3+ 46.♔c2 ♖g3 47.g5 a4 48.♖a7 ♖g2+** *A very interesting game with some interesting positional challenges throughout the game for the computer program, which it solved extremely well* ½-½

Deep Shredder6 - Gulko,B

Game 4. ECO: C03

Gulko: My opponent played in the style of young Kupreichik. I blundered two moves in a row in a chaotic

position, and was beautifully mated!
1.d4 e6 2.e4 d5 3.♘d2 b6 *Risking the same rarish variation as he played against Deep Fritz. Most prefer 3...c5.* **4.♘gf3 ♘f6 5.♗d3** *So far we have followed the Deep Fritz−Gulko game, but here DF played 5.e5.* **5...c5** *Trying to get a closed centre. If 5...dxe4 as he played in his draw with Balashov in 1982, there follows 6.♘xe4 ♗b7 7.♕e2 ♗e7 8.0-0 0-0 and the position is wide open for the computer to enjoy!* **6.0-0?!** *"Normal" is 6.c3 as in a Colle, so that if Black plays c4 the bishop can go to c2. So instead he'd play 6...cxd4 (or 6...♗e7 7.0-0 0-0) 7.cxd4 dxe4 8.♘xe4 ♗b7 9.♘xf6+ gxf6* **6...c4 7.♗e2**

7...dxe4? *Gulko, having obtained the chance of a blocked position (isn't that what he was after?), accepts the challenge to open it up... a decision for which he will pay a high price. After 7...♗e7 the position remains closed and surely Gulko, not Shredder, would be in his element!* **8.♘g5 ♗b7?!** *Better: 8...♕xd4 9.♘dxe4 (9.♘xc4 ♕d5 10.♗f4 ♘c6 Black looks good.) 9...♕xd1 10.♖xd1 ♗b7 Black could be a pawn up (Gulko).* **9.♘xc4 ♗e7 9...♗d6!? 10.♘xd6+**

♕xd6±; *Gulko says he avoided 9...h6 10.♘xf7!? ♔xf7 because he was afraid of 11.♗h5+. But the computer would not have played 10.♘xf7 because 11...♘xh5 12.♕xh5+ ♔g8 would look look unacceptable materially.* **10.♘e5 0-0 11.♗c4!** *11.♗c4 −− with the threat 12.♘exf7 ♖xf7 13.♗xe6+− 11...♗d5 12.♗e2 h6?*

Presumably missing Shredder's reply, or simply not belieiving it could be played?! One wonders what might have happened after 12...♗b7, when the position must still be equal.
13.♘gxf7! *Perhaps Shredder's reputation for having a defensive character might have persuaded Gulko that it wouldn't play this? But he didn't in fact miss it, as he commented afterwards: 'This was a very unexpected move for me, because I always thought that two knights should be worth more than a rook + pawn. It seems that Shredder calculates this in a different way to me!'*
13...♖xf7 14.♘xf7 ♔xf7 15.♗f4 *White has a slight material disadvantage but great play on the kingside.* **15...♗b7** *Gulko: 15...♘bd7 'seems to be correct, but I wanted the knight to go to c6. If 15...♗d6! 16.♗e5 ♕c7 is*

maybe not bad for Black. 16...♗xe5 17.dxe5 ♘fd7 18.c4 ♗b7 19.♕d6 ♕e7 is not bad either. So there were many ways to reach a decent game'. **16.c3 ♘c6?!** Gulko: 'this, after all, looks like a mistake, the knight should go to d7.' 16...♔g8 also seems to be better. **17.f3 exf3 18.♗xf3 ♕d7 19.♕e2**

19...♖e8? Gulko: 'Up to here we have small inaccuracies, but this is the losing mistake. I saw the problem immediately after I made it, but it was too late. I also overlooked that with 19...♖f8 20.♖ae1 ♘d8 21.♗g4 ♗d6 22.♗e5 I am okay! **20.♗h5+!** Forces further weakening of the kingside. Black cannot control the position any longer. **20...g6** Probably best, though Gulko afterwards said 20...♘xh5?! 21.♕xh5+ ♔g8 22.♗xh6 ♗f8 would leave a playable position... rather him than me! **21.♗g4 ♘xg4?** In Selective Search we have OFTEN referred to examples of humans compounding one mistake with another immediately afterwards. It even happens to GM's!! 21...h5 was a fighting chance that proves 20...g6 to have been best. After h5 would follow 22.♗h3 ♕d5 23.♖ae1 and White has the advantage in a position suited to a computer, but Gulko has

some hope. **22.♕xg4**

22...♔g7? Another mistake! Gulko: 'Now it's over. The computer was playing very quickly and I tried to measure-up to his speed. Perhaps that's why I overlooked 22...♖g8 was necessary 23.♗xh6+ ♔e8 though 24.♖ae1 is unpleasant for me. **23.♗xh6+!!** A deadly combination, the machines are very impressive at moments like these! **23...♔xh6 24.♕h3+ ♔g7 25.♖f7+!** with mate announcement: 25...♔xf7 26.♕h7+ ♔f6 27.♖f1+ ♔g5 28.h4+ ♔g4 29.♕xg6+ ♔xh4 30.♖f4#** **1-0**

So the **Computers** reach the half-way stage with a 3-1 lead, due to wins with White from **Fritz** and **Shredder**.

Deep Junior 7 - Gulko,B
Game 5. ECO: C05

Gulko: I used correct anti-computer strategy properly for the first time in the match. We created a closed position without big tactical opportunities. It played perfectly throughout the first part of the game, improving even on Stein's play in his historic game against Bagirov. I was deprived of any active moves, but in the middle

game it had to prepare f2-f4-f5, and such a long plan was above its mental capabilities. Its moves became purposeless and by the end of the game it was I who had the advantage **1.e4 e6 2.d4 d5 3.♘d2 ♘f6 4.e5 ♘g8 5.♗d3 c5 6.c3 ♘c6 7.♘e2 ♗d7 8.0-0 ♕c7 9.♘f3 c4!** The first part of the plan accomplished, as Gulko locks the pawns. **10.♗c2 h6 11.b3!** An attempt to open the position, which is totally correct for Junior, especially as Black is behind in development. Stein played 11.♖e1 in the game mentioned earlier. **11...♘a5 12.b4?! ♘c6 13.b5 ♘a5 14.♖b1 0-0-0 15.h4 ♔b8 16.h5?! ♘e7 17.♗a3 ♘c8 18.♗b4 b6** Not of course 18...♗xb5?? 19.♗xf8 ♖hxf8 20.♖xb5! **19.♕d2 ♘b7 20.a4 ♗e7**

It is at this point where Junior should start trying to prepare an advance with the f-pawn. **21.♖fd1?** It was best where it was! **21...♖df8 22.♖e1?! ♖hg8 23.♕e3 ♖h8 24.♘h2** Optimistic! **24...♗e8 25.♕g3 ♖fg8** Not the other rook: 25...♖hg8?? 26.♗h7 ♖h8 27.♕xg7. **26.♘f3?! ♔a8 27.♔h2 ♕d8 28.♖h1 ♕c7 29.♖a1 ♔b8 30.♖ae1** It is clear that White doesn't know what to do, and Gulko is happy to wait and see if the

computer goes totally astray **30...♔a8 31.♕h3 ♘d8 32.♖b1 ♔b8 33.♖a1 ♘b7 34.♕g3 ♔a8 35.♖ab1 ♔b8 36.♖bf1 ♘d8 37.♕h3**

37...g5!? *A brave decision as Gulko decides to take the initiative.* **38.♗xe7 ♘xe7 39.♕g3 ♘f5 40.♕g4 ♗d7 41.♘g3 ♘e7 42.a5?** *What is this? Now Gulko gets his chance!* **42...bxa5 43.♖a1 ♖f8 44.♖hf1 ♘b7?!** *44...f5!? was VERY interesting, but Gulko decided not to risk it. After 45.exf6 e5 46.fxe7 ♗xg4 47.exf8♕ ♖xf8 48.♘xe5 ♗e6 I reckon Gulko would have had the advantage in this interesting position.* **45.♔g1 ♘c8 46.♘h1?! ♘b6**

47.♖fe1 *Not bothered about the b-pawn!* **47...♗xb5 48.♖eb1 a6 49.♕h3 ♔a7 50.♘h2 a4 51.♘g3 ♘a5 52.♘g4!** *A share of the ! belongs to all of the last few moves, as DJ now gets its own kingside initiative and it is Black who lacks a decent*

plan. **52...♘b3 53.♖a2 ♘d7 54.♘f1 ♗c6 55.♖e1 ♘b6 56.♕f3** *Gulko was beginning to look tired, and Junior's GM-adviser, Boris Alterman, wanted DJ to exert the pressure here with 56.f4!? Then 56...gxf4 57.♕f3 ♘d7 58.♕xf4 f5! 59.♘f2 ♘f6! the e5-pawn is pinned against its queen 60.♘g3 ♗e8 and Black should be winning.* **56...♘d7 57.♘fe3 ♘d2 58.♕h3 ♘b3** *The players have no more to offer and moves are repeated quickly before the draw is agreed.* **59.♕f3 ♘d2 60.♕d1 ♘b3 61.♕f3 ½-½**

Gulko,B - Deep Fritz 7

Game 6. ECO: A14

Gulko: After mutual mistakes in the opening I reached an advantage in the endgame, but it managed to escape! **1.♘f3** *Gulko had started with 1.c4 in the preceding games, a trend which Smirin would continue in his Match against the computers!* **1...d5 2.c4 e6 3.b3 ♘f6 4.g3 ♗e7 5.♗g2 0-0 6.0-0 c5 7.e3 ♘c6 8.♗b2 b6 9.♘c3 ♗b7?!** *The top F7 book move but, according to Gulko, 'this is a known error!' The game should be interesting! 'Much better' is 9...dxc4.'* **10.cxd5 ♘xd5 11.♘xd5 ♕xd5 12.♘e5?!** *Gulko: 'I had forgotten the theory here: 12.d4 and black has a difficult position.' This appears to be correct as I checked the d4 move with my ChessBase Opening Report and found that 12...♖ad8 and only then 13.♘e5. Here White scores 66% after Black's 13...♕d6.* **12...♕d6** *Gulko's error means that DF is now out of its book, but*

better off! **13.d4 cxd4 14.♘xc6 ♗xc6 15.♗xd4 ♗xg2 16.♔xg2 e5?!** *A small inaccuracy which gives White some chances. Simpler was 16...♕d5+ would be exactly level.* **17.♗b2 ♕e6 18.♕e2**
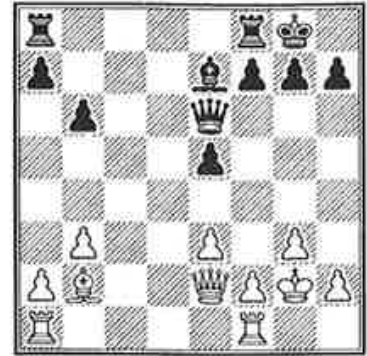
A battle for the open files now begins! **18...♖ad8 19.♖ac1 ♗c5 20.♖fd1 e4 21.♖d2 ♖xd2 22.♕xd2 ♖e8 23.♖d1** *Gulko thought for a long time before playing this. His control of the d-file probably gives him a small advantage.* **23...f6 24.♕d7 ♕xd7 25.♖xd7 ♖e7 26.♖d8+** *26.♖xe7 ♗xe7 definitely has draw written all over it.* **26...♔f7 27.♗d4** *Gulko: This is necessary, the bishop doesn't have any potential at all. 27.g4 was my other idea and quite possible, but I was afraid the Black rook would penetrate. 27...♖c7 28.♔g3 ♗e7 (28...♔e6!?) and 29.♖d2 doesn't promise me anything.* **27...♗xd4 28.♖xd4 f5 29.h3 g6**
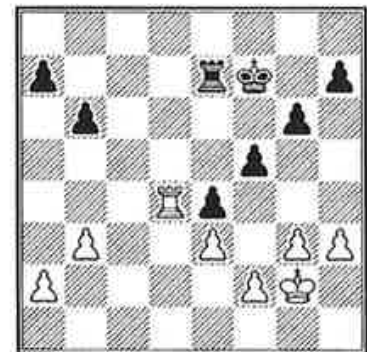
The GM's technique will have to be something special to win this! **30.g4 ♔f6** *Gulko: I hoped here that Fritz would try to gain some play on the c-file with 30...♖c7. Now 31.gxf5 gxf5 32.♖d6 would give me a significant adavantage – which I, Eric, confess I cannot really see, at least not 'significant'. E.g. 32...♖c2 33.♖d7+ ♔e6 34.♖xa7 f4! 35.exf4 e3. Now 36.♖a8 seems forced to get onto the e-file, and after 36...♖xf2+ 37.♔g3 ♔d5 I think it's going to be drawn.* **31.♔g3 ♔e5** *Black threatens to win the rook with 32...f4.* **32.♖d8 ♖c7 33.♖e8+ ♔f6 34.♖a8 ♖d7 35.b4 fxg4 36.hxg4 ♔e5 37.a4 ♔d5 38.♖c8** *Stopping White's king from venturing further into the queenside.* **38...♖f7 39.♖d8+ ♔e6 40.a5 bxa5 41.bxa5 ♔e5 42.♖b8**
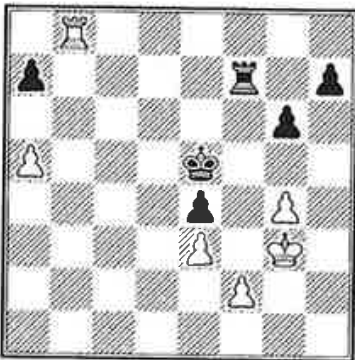
42...a6 *After 42...♔d5?! says Gulko, Black could have problems: 43.a6 ♖f6 44.♖b5+ ♔c4 45.♖b7 ♖xa6 46.♖xh7 ♔d5 47.♔f4 ♖f6+ 48.♔g5 ♖xf2 49.♖xa7 and White has to win. Again us mere patzers really need a Gulko or an endgame expert to show the 'must' win bit on the end of this. To me 49...♖f3 50.♖a3 ♔c4 51.♔xg6 ♔b4 52.♖a2 ♔b3 still looks drawn. However I do agree that 42...a6 looks*

even more certain to draw! **43.♖a8 ♖f6** *Gulko: This was good defence! I hoped for: 43...♖f3+?! 44.♔h4 ♖xf2 45.♖xa6 ♔d5 46.♖a8 would give me some (very slight!) chances.* **44.g5 ♖f3+ 45.♔g4** *After the game 45.♔g2 was suggested as being better, but 45...♖f5 46.♖xa6 ♖xg5+ 47.♔f1 ♔d5 48.♖b6 ♔c4 49.a6 ♖a5! still has to be a draw.* **45...♖xf2 46.♖xa6 ♖g2+ 47.♔h4 ♖h2+ 48.♔g4 ♖a2 49.♖a8 ♖g2+ 50.♔h3 ♖a2!** *Not 50...♖e2? 51.a6 ♖xe3+ 52.♔g4! ♖a3 53.a7 e3 54.♖e8+! ♔d4 55.a8♕ ♖xa8 56.♖xa8 e2 57.♖e8 ♔d3 58.♔f3 1-0.* **51.♔g4 ♖g2+ 52.♔h3** *Gulko's last try for a trick!* **52...♖a2!** *52...♖xg5?? 53.a6 ♖g1 54.♖e8+ ♔f5 55.a7 1-0.* **53.♔g4 ½-½**

Hiarcs 8 - Gulko,B

Game 7. ECO: A43

<u>Gulko</u>: This was the best game by a computer in the competition. I again allowed a tactical battle. It was precise in the opening and consistent throughout the middle game **1.e4 d6 2.d4 ♞f6 3.♞c3 g6 4.♞f3 ♝g7 5.♝e2 0-0 6.0-0 c5?!** *Slightly unusual, c6 is the Pirc's main line here. The character of this game is interesting! Gulko says he 'allowed a tactical battle', but most people viewed this rather as a positional achievement by Hiarcs! Even from its book it now chooses for Karpov's line, which blocks the centre and should in theory suit the knowledge-able GM!* **7.d5!? ♞a6 8.♖e1 ♞c7 9.♝f4 b6** *Korchnoi played 9...♞h5 against*

Karpov, which may be better. Gulko: Compared to our first game, the computer looks very well prepared for this opening. Even though it does now go out of its book, it continues to play good moves in keeping with the demands of the position. **10.♕d2 ♖e8** *This wasn't necessary.* **11.a4!** *Exactly what Karpov played at move 10 against Korchnoi.* **11...♝b7 12.♝c4 a6**

13.♖a3! *'A very strong plan', said Gulko afterwards. It is both a unique and a flexible idea. When the commentating GMs and IMs had thought about it for a few moments, the main argument was whether it deserved a ! or a !! Not only can the rook go immediately to b3, but clearly there may be chances of its going to g3 or h3 later, with obvious complications.* **13...♖b8?!** *Gulko: 'Maybe here I also had to play 13...e6 14.dxe6 ♞xe6 15.♕xd6 ♞d4 16.♞g5 ♕xd6 17.♝xd6 ♞xc2 with an unclear position. But this kind of playing I tried to avoid with the computer, because you never know if it might find something else!' In fact Hiarcs would probably have played 14.♖b3 making the line suggested by Gulko inapplicable!* **14.♖b3 ♝a8 15.e5 ♞h5** *One of the watching GMs suggested*

15...dxe5 16.♗xe5 ♕d7 as being better. Out of interest H8's next would then be 17.♕d3 and White's position still looks healthy. **16.♗h6**

16...f5 *Gulko: 'This is a usual reaction in this type of position, but here it is bad. Therefore 16...dxe5 17.♘xe5 ♕d6 was better.' But now Hiarcs comes up with 18.♘xf7! ♔xf7 19.♘e4 ♕d7 20.d6+ ♘d5 21.♗xd5+ ♗xd5 22.♕xd5+ and Hiarcs is all over its opponent.* **17.♗xg7 ♔xg7 18.♘g5** *Gulko: Now I don't see a good way for Black to play, maybe here Black is already losing.* **18...h6 19.exd6! exd6 20.♖xe8!** *Gulko: This was very strong. I had hoped for 20.♘e6+?! ♗xe6 21.dxe6 ♘f6 22.♗xa6 d5 with good compensation.* **20...♕xe8 21.♘e6+ ♘xe6 22.dxe6 ♕d8** *Gulko spent over 4 minutes on this move, and concluded afterwards that it was as good as anything. The alternative he looked at, and which Hiarcs actually expected, was 22...♕e7!? Now 23.♗d5 ♗xd5 24.♘xd5 and, says Gulko, White wins.* **23.♗xa6 d5 24.a5!** *Gulko: This is very strong, now I AM LOSING!* **24...♕d6** *Gulko: If I try 24...d4 25.♘a4 and I don't see a good move. Okay: 25...♕d5 but 26.♗f1 b5 27.♘b6 ♕xe6 28.♖xb5! is*

going to be 1-0. **25.♘a4**

25...♘f6 *Not 25...♕xe6? 26.♘xc5 bxc5 27.♖xb8 ♕xa6 28.♕c3+ 1-0 already.* **26.♖xb6 ♖xb6 27.♘xb6 ♕xe6 28.♕e2** *Hiarcs cleverly sees that the endgame is won, so liquidates to remove any lingering hopes Black might have been harbouring. 'Now it's over', said Gulko, 'I should have resigned here.'* **28...♕xe2 29.♗xe2 ♗c6 30.♗f3** *Gulko: I'm losing a 2nd pawn and can't stop the a-pawn without sacrificing something else.* **30...♗b7 31.c4 ♗a6** *Well, at least the a-pawn IS blocked. Unfortunately White soon has an even stronger one!* **32.♗xd5 ♘xd5 33.cxd5 ♗b5 34.♘a8** *Gulko: Hiarcs played very strong today. It found some strong positional ideas, together with many punishing tactical moves* **1-0**

Gulko,B - Deep Shredder 6

Game 8. ECO: A14

The final game is 'an essential study for learning how to play against computers'. <u>Gulko</u>: This was my only victory. I obtained exactly what is necessary against a computer – a strategic struggle without queens. My intuition overcame its calculation

1.♘f3 d5 2.c4 e6 3.b3 ♘f6 4.g3 ♗e7 5.♗g2 0-0 6.0-0 b6 7.♗b2 ♗b7 8.e3 c5 9.♘c3 dxc4 10.bxc4 ♘c6 11.♕e2 ♕c7 12.d3 a6 13.♖ab1 ♖ab8 14.♗a1 ♘a7 15.♖fd1
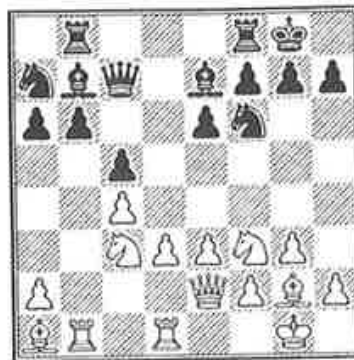
The position is known from the Korchnoi–Spassky many years ago, and a similar position occured in Spassky–Portisch 1983, when Black had played the less accurate 14...♖fd8. Black has to prepare b5, but the computer was out of its openings book and starts to calculate. **15...♖bd8** *Gulko: This is not logical at all, it (the book!) just took the ♖ from d8 to b8, which is where it should be, to prepare b5! Obviously Black doesn't understand the position.* **16.♕b2 ♘c8 17.a4 ♗c6 18.♘g5 ♗xg2 19.♔xg2 ♕c6+ 20.♔g1 ♘d7**
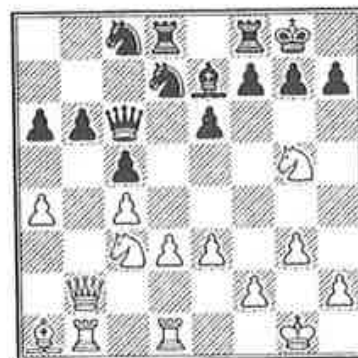
21.f4! *Played after an 8 minute think! Gulko: It's not clear if White is all that much better, but I feel good about*

my chances. *Black almost provoked me to play 21.♘d5?! f6 22.♘xe7+ ♘xe7, but my ♗a1 would become completely unemployed.* **21...♗xg5 22.fxg5 ♕f3** *Shredder finds the best move. Gulko: After 22...♘e5? 23.♘e4 my attack is very dangerous. Also 22...f6?! 23.gxf6 ♘xf6 and again 24.♘e4 gives White a strong initiative.* **23.♕e2** *Gulko: Unclear was 23.♘d5 f6 24.♖f1 ♕g4 25.♘c7 ♕xg5 26.♕e2 ♔f7 27.a5, with the attack, but I really wanted to play less complicated.* **23...♘e5 24.♕xf3 ♘xf3+**

25.♔f2!! *A quite brilliant pawn sacrifice, though it has to be said that most kibitzers on the Internet, having seen Gulko's struggle against Hiarcs, thought he had just thrown the game away! But in reality it is a sac' almost especially designed for a computer program, as they will (all!) be convinced that the knight is still a fully operating piece and evaluate themselves as being virtually a pawn up.* **25...♘xh2 26.a5** *Gulko: Now Black wins my a-pawn but loses his pawn-c5, and I believe White is better. I saw this move while I calculated between 23.♕e2 and 23.♘d5.* **26...♘g4+** *It might look to be escaping, but*

where can it go to next? Nowhere!* **27.♔e2 bxa5 28.♘a4** *Gulko: Now I do like my position!* **28...♘e7 29.♘xc5 ♖c8**

If the reader has a program running through this, what is its evaluation at this moment, and what does it think White's next move is?! **30.♘a4** *Not this I'm sure!!* **30...e5 31.♘b6 ♖cd8 32.♖f1!** *Excellent, making life very difficult for Black on the f-file where he really wants to play f6 to protect e5.* **32...♖fe8?!** *It is hard to know what was best here. Maybe this, or perhaps. Gulko felt Black had to try 32...f6 33.gxf6 ♖xf6 34.♖xf6 gxf6. Another possibility was 32...♖d6!? 33.♗c3! ♖d6 34.♗xa5 ♖g6 35.♘d5 White's advantage is huge, whatever computer evals may be on ours screens! 35...♘xd5 Or 35...♘c6 36.♗c3 ♖xg5 37.♖b7!* **36.cxd5**

36...e4! *Vacating e5 to get a*

square for his poor knight! Not of course 36...♖xg5?? 37.d6! and only a sacrifice stops the pawn queening.* **37.dxe4 ♖xg5** *Now the d5-pawn can't advance as it is pinned to the ♗a5* **38.♗c7! ♖h5 39.♔d3 f6 40.♖b7 ♖h2** *The computer programs are still hopeful for a draw!* **41.♖f4 ♘e5+?!** *41...h5 was the other try, though it fails to: 42.♖xg4! hxg4 43.d6 ♖h1 44.♖b2.* **42.♗xe5 ♖xe5 43.d6 ♖e8 44.e5! fxe5 45.♖ff7 e4+ 46.♔c4 ♖d8 47.♖xg7+ ♔h8 48.♖ge7 ♔g8 49.♖g7+ ♔h8 50.♖gd7 ♖xd7 51.♖xd7 ♔g8 52.♔d5 ♔f8** *The tablebases would be whirring away and telling Black to resign here.* **53.♖a7 a5 54.♖a8+ ♔f7 55.d7 ♖d2+ 56.♔c6** *Super technique was displayed by Gulko in this endgame. A mistake against enemy tablebases could have ruined all the excellent positional and middlegame play, which he demonstrated from the brilliant pawn sac' at move 25 onwards.* **1-0**

Final MATCH TABLE

	Boris Gulko
Deep Junior 7	1-1
Deep Friz	1½-½
Hiarcs 8	1½-½
Deep Shredder 6	1-1
Computers win	**5-3**

In his remarks afterwards **Gulko** admitted: *'My experiences from the mid-1990's turned out to be completely irrelevant today! Even a method of playing against one program may not work against another. I lost the 1st. round 1-3, then drew the 2nd. 2-2, and if there was a 3rd. I think that I would win'.*

TACTICAL TEST by Graham White

Graham White has been involved in computer chess for probably as long as I have, and has also been an encourager in *Selective Search* and its continuance, as well as a valued author of various articles over the years.

Some of his in-depth game analysis has been of particular value for judging the character of different computer programs, but this time we are having an initial look at a MARATHON TACTICAL TEST set which he has compiled!

I have been testing some ChessBase engines using the Fritz analysis tool called 'processing test set'.

Initially 49 positions were selected to test on my Athlon 1.4g., and each was given a maximum of 5 minutes to solve each position. Some interesting - and in some cases surprising - statistics arose:

Positions not able to be solved:

Program	Unsolved
Junior 6	2
Fritz 5	4
Fritz 7	4
Gambit Tiger 2	4
Chess Tiger 14	5
Shredder 6	5
Hiarcs 7	6
Crafty 18.11	6

We see that Junior6 solved the most number of positions (48/50) by a relatively clear margin.

However, if we look at the average number of seconds per test, we see Junior was amongst the slowest!

Shredder performed the slowest overall, and was actually the quickest in only one of the positions:

Solution Speed!

Program	Average Time
Gambit Tiger 2	45 secs
Fritz 5	49
Fritz 7	57
Chess Tiger 14	58
Hiarcs 7	62
Junior 6	70
Crafty 18.11	71
Shredder 6	77

The fastest was Gambit Tiger, which, to my surprise, appreciably outperformed Chess Tiger in this test.

Next fastest was Fritz 5 which also slightly outperformed the latest Fritz!

I had always thought that the main difference between the two Tigers was in small adjustments in evaluation but this resulted in several positions (11) in which the Gambit version had much less difficulty than the normal one or vice versa.

For instance, this is my **Position 21**.

White to play, and the solution is 1.Rxe6!

Chess Tiger solved this in 9 seconds but Gambit Tiger not at all. Crafty and both Fritzes also could not solve this one but Hiarcs had it right in just one second!

On the other hand, however, this is my **Position 7**, White to move and the solution is 1.Bd8.

Here Gambit Tiger excels, finding the solution in only 1 sec. whereas Chess Tiger 14 needs 51 secs.

It's also one of the examples of where Fritz5 (1 sec) is faster than Fritz7 (22 secs). So occasionally we are finding a loss of tactical speed in Fritz7, which is the price it pays for having substantially more chess knowledge.

No doubt a Positional Test would see Fritz7 regularly outperforming Fritz5 and 6!

Junior6 was also very fast, needing just 2secs.

Position 27, Black to play, the key move is 1...Nxh2!

This is another example of Fritz5 completely outper-forming Fritz7. Indeed Fritz5 is the quickest of all to find 1...Nh2! (an extremely impressive 3 seconds!) whereas Fritz 7 cannot actually find it at all! Strange.

Here we also have another (quite big) difference between the Tiger versions: Gambit Tiger2 equalled Fritz5 with a 3 secs perform-ance, whilst Chess Tiger14 took 53secs, .

Junior6 did at 32secs, Hiarcs7 only just squeezed inside the 3mins and Crafty joined F7 in failing to beat the time limit altogether.

Here's my Position 29, White to play and find 1.exf6!

This time it is Fritz7 which is fastest, needing just 1sec while Fritz5 takes 11secs.

In fact all the programs ex-cept one find this move within 15secs... the odd one

out being Shredder6 which doesn't find exf6 at all within the 5 minute limit!

Now we come to **Position 50**, the one in which Shredder did excel. It is of course from the famous Botvinnik – Capa-blanca game, Avro 1938. White to find 1.Ba3.

Shredder and Junior play 1.Ba3! in 1 second... that's fast!

Fritz7 however needs just over 3mins and this is one of the few from my series which Fritz5 failed altogether

Now **Position 49** with White to play and find 1.Rxd7

This was one of the most difficult!

Shredder 6 failed, as did Crafty.

Even Gambit Tiger took just over 2mins, whilst Chess Tiger and Junior6 needed just over 3mins

And yet somehow three programs did it in double-

quick time, around 10secs: Fritz5 (8secs), Fritz7 (9secs) and Hiarcs7 (10secs).

Maybe the analysis to go with this might be appreciated!

1.♖xd7+– ♞xd7 2.♕h5 b5
   2...♗c8 3.♘f5 ♘f6 4.♗xf6
   ♗xf5 5.exf5 gxf6 6.♕g6+
   ♔h8 7.♕xh6+ ♔g8
   8.♕g6+ ♔h8 9.♕xf6+ ♔g8
   10.♕g5+ ♔h8 11.f6
3.♗xh6 ♘f6 4.♕g5 ♘e8
5.♗xg7

I finish with what proved to be the most difficult position of all, my **Position 32**.

Only Chess Tiger, Shred-der (just) and Fritz 5 could solve this one. Again Fritz5 was the quickest with a time of 44 seconds.

Please have a go at it! *(Solution at the bottom of the page, but only if you MUST!)*

Note from Eric: Of course I had to find out, so tested **Hiarcs8** on my P3/1000. It scored **48/50** in positions solved, so would be 1= with Junior, failing only on 16 and 32.

And its average solving time, as recorded by the Fritz7 processing method, was **50secs**! It could well go under 40secs on Graham's Ath-lon 1400. Not bad for a knowledge program in a Tactical Test!

HIARCS 8! - *3 years of hard work WELL WORTHWHILE, says its programmer, Mark UNIACKE*

We've all been waiting (somewhat impatiently!), for a new HIARCS.... it seems for a rather long time!

The delay is not because the work has ever stopped, nor due to a lack of progress or determination.

But its programmer **Mark Uniacke**, (like your editor, who is chief encourager, tester and opening book worker), has a full-time job, a family and Church involvements which, even when reluctantly, must take priority. Probably the program could have been released about 12 months ago, at which time we already believed we had at least 40 Elo over HIARCS 7.

As it happens the delay has been good for us - thanks to some new ideas during the past 3 months especially, we think that we now have a real humdinger! ('humdinger' is English slang I suppose, for something rather special which is likely to cause a bit of a stir!)

Mark was asked by *Chess-Base* if he would write some notes, outlining its development for its launch, and they are reprinted here for our **Selective Search** readers.

Hello Mark,

Good luck tonight!

■ The e-mail was sent a few hours before Hiarcs played its 2nd. game against Gulko. So it was written just before the (can I call it) *sensational* positional win which the program was about to achieve.

We have a deadline for ChessBase Magazine tomorrow, is there a chance that you could give us some food for a Hiarcs8 article in the course of today?

Kind regards... Matthias

Hi Matthias (and Eric!)

Here is some info about Hiarcs 8 (I hope I am not giving too much away...)

Hiarcs 8 is the result of 3 years spare time development using Hiarcs 7.32 as the basis.

The work for Hiarcs 8 focused on two main areas:

1. Search issues.

The Hiarcs 7.32 search was prone to exploding in the middle game at depths beyond 9/10 plies. The tree just became too big, which resulted in a search that didn't take good advantage of today's ever-faster machines.

For Hiarcs 8, I significantly changed the shape and depth of the search tree by being more selective about the variations explored and the search extensions used.

It then became clear that deeper searching had changed the balance between tactics and positional play. The overall program had to be adapted to this which led to a search now capable of reaching between 1-3 iterations deeper than Hiarcs 7.32 in the same time.

It is worth pointing out that this was achieved through a smarter search rather than faster nodes per second rate.

Although the path to reach this search paradigm has been difficult, with many experimental versions having weaknesses in the tactics or positional play - and sometimes these were difficult for us to detect or diagnose! - the final result in Hiarcs 8 is a very solid program with a beneficial mix of strong tactics and good positional play.

1a. A Speed-up used to improve the Search!

Some raw speed improvements were made totalling about 15%, but most of this has been ploughed back into the evaluation functions and search intelligence, which needed enhancing to cope

with the narrower search tree. Although some tactics do occasionally require a ply more to find, this is rare, and the overall tactical play is significantly improved.

The maximum search depth also had to be extended to 62 plies, as now the search and extensions can regularly exceed the old limit of 30 - even at blitz time controls.

The deeper search has resulted in improved positional understanding and play, as the program is now better able to determine between 2 'almost equal' moves. This leads us straight into a discussion of the second major improvement I have made.

2. Knowledge

For Hiarcs 8 I completely rewrote the pawn evaluation code, and although I am not completely satisfied with it (I may never be!), it understands much more about when pawns are weak. This includes potential future weaknesses as well as how the square control and pieces influence pawn structures and visa-versa.

I also re-wrote much of the passed pawn code, which has been rewarded with a much improved understanding of passed pawns.

Almost all the pawn and piece evaluations have been checked and updated between Hiarcs732->8. This took a long time... and a lot of testing of every individual adjustment, however small!

Various new positional concepts were discovered and converted into heuristics, and again these sometimes give Hiarcs 8 another dimension to its positional play.

Needless to say I am still not totally happy with it, but as

you will see from the games against GM Boris Gulko, Hiarcs 8 has a very strong positional "feel" and can play some natural and impressive, even exciting positional chess.

3. New User Options

There are new options for the users pleasure like:

- Combinations: which when checked enables Hiarcs to search in a more combinative way, which can enable it to find deep combinations (default=Off)
- Threat depth: an option which allows the depth of threat investigation in the quiescence search to be changed (default=3, means pursue threats 4 plies into the quiescent search)
- Smart search: allows the smart search to be switched off or on (default=On)
- Hash table retention: Can be switch off or on (default=On)
- Tablebase depth: modifiable depth access to tablebases
- Hyper-modern: a selectable style to play in a more hyper-modern fashion - used in the Gulko match (default=Off)

4. Conclusion

Hiarcs 8 has taken what seems like ages to develop, and has created a larger *"to-do"* list than I started with after Hiarcs 7.32!

But in the process I think I have created a stronger, more positional program than before. I have had great fun - as well as a lot of ups and downs - developing Hiarcs 8 and now I am looking forward to starting all over again for Hiarcs 9! I hope you will enjoy the refreshing style and play of the program.

Before finishing, I would like to give particular thanks to Eric Hallsworth, who is my co-developer in all but

coding. He continually inspires me with accurate testing, challenging thoughts and suggestions; and not forgetting the excellent opening book preparations. Of course Hiarcs 8 will be available with the very latest opening book from Eric.

Here is an example showing what Hiarcs8 is capable of:

Hiarcs8 on my P3/750 laptop takes 24 secs to find b6+!! (and with a plus evaluation!). It scores it at +4.05 after 29 secs and +9.15 after 48 secs.

The main Variation which Hiarcs shows after just 29 secs is stunning:

1.b6+ ♔xb6 2.♘d7+ ♔c6 3.♕a6+ ♔xd7 4.e6+ ♔e8 5.♕a8+ ♕d8 6.g6 ♕xa8 7.g7 ♕f3 8.g8♕+ ♕f8 9.♕g2 ♕f2+ 10.♕xf2 c5 11.♕xc5 1-0.

We love the 6.g6 queen sac – it's amazing to realise Hiarcs8 sees the whole thing in 29secs at move 1!

I tested Fritz7, Junior7, Chess Tiger 14 and Shredder5.32 (I haven't got Shredder6) and none found the move in 3 minutes. Hiarcs 7.32 used to take ages, just over 9 minutes on my machine!

In our final test against Hiarcs 732 the new Hiarcs 8 won by 20½-9½... it's all looking to be very good!

CHESS ROBOTS ARE still AROUND!
by Rob van Son

Over the past few months **Rob van Son** has become a most welcome contributor to our magazine *Selective Search*.

His main interest is in **dedicated computers** and we have already had some particularly interesting articles from him, including one about the esteemed (and emotional!) **Novag Robot**.

Rob promised me something special for our 100th edition, and here it is! Now he's found **a real 21st Century Robot** with a real arm to grab the pieces and move them around. And it talks interactively with its opponent whilst playing 2000 Elo standard chess... as we learn from Rob's interview with the highly talented **Hans Lammers**.

Yes, Eric's right, we still have an **original Robochess**!

Long ago, in 1770, the Hungarian baron and engineer Wolfgang von Kempelen built the first chess machine!

This machine looked like a big trunk with a chessboard on top and behind that an Arabic looking mechanical man wearing a turban. Be-

cause of the appearance of this man, the machine soon was nicknamed the Turk.
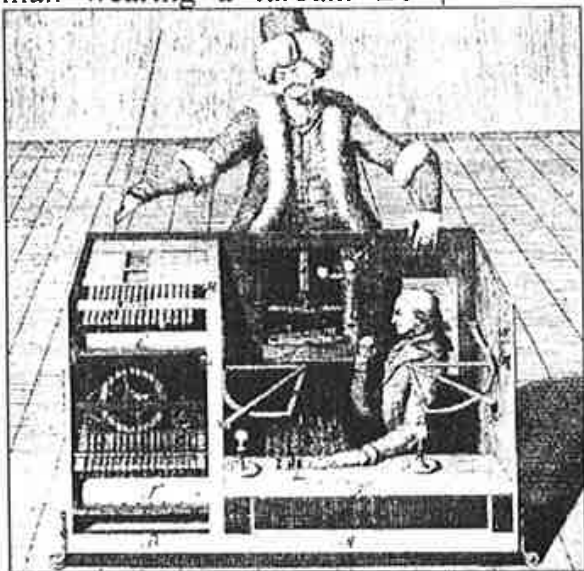
During the many presentations the machine was shown to the public, and they could see the Turk perform. .

Before demonstrating a game, Von Kempelen showed the interior of the machine to the public. By opening the doors of the trunk, he convinced the spectators that there really was no one inside. What they actually saw was a complicated mechanical robot consisting of many wheels and levers.

The whole thing was a deception, because the machine was constructed in such a way that a chess-master could be hidden in it. When, during a performance, the doors were opened, he could move in such a way that the public could not see him.

Man was in the machine and operated the Turk.

The building of a chess-robot has fascinated man throughout all the ages. Even now, in the 21st century, the fascination for a *'living machine'* has not disappeared.

Robochess is the new chess-robot of this century. The name of the machine - as you can see - is a joining of Robot and chess.

Robochess is the creation of the 46-year old **Hans Lammers** from Heemstede, a town about 20 kilometres outside Amsterdam.

The machine can, as a real robot

should, carry out its own moves, but Robochess can also talk. In fact the machine turns out to be a woman! The woman in the robot is not just any woman, but the inventor's wife Lucia! So the robot is a *'she'* and not a *'he'* and should be addressed as such. Robochess is 70 cm long and 50 cm wide (that's about 28" x 20" for our good British friends!).
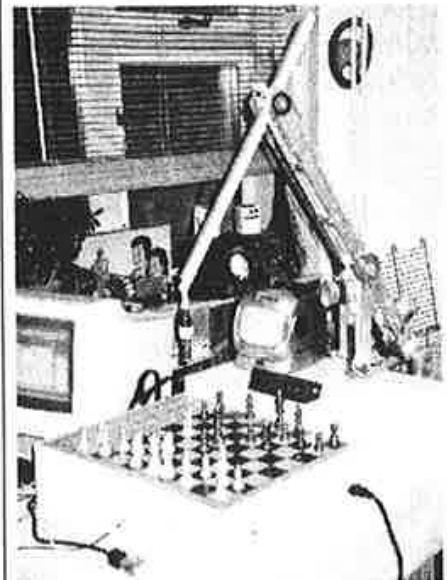
With her underarm in resting position she is 1.10 meters high (3'6"). She weighs 30 kilo (just under 5 stones).

The wooden trunk of the robot is too small for a human, but even so I refrained from asking Hans to open her belly to see what is inside!

Hans, who has two children - a son and a daughter - a few years ago absolutely never would have dared to dream that he would have another female in the house!

When I walked into Hans's living room I felt a great fascination at seeing his brainchild.

I even was allowed to play chess with her!

Naturally I wanted to know more about her.

Time for an interview with the father of Robochess!

Hans, how long have you been playing chess and have you ever played with a club?

I hardly ever play chess. I play one or two games a year at the most, so I am not a chess-club member.

Can you tell me how the idea to make a chess-robot came up?

First, I wanted to make a robot that could vacuum-clean. But the problem with that is that you can't use a cord because the thing moves all over the room. So you'll have to work with batteries. Also, I heard that they were going to make one in Japan.

A couple of years ago I was with my son attending a special day of the Pharos association in Zeist, a club for highly intelligent people. My son is actually highly intelligent.

They had made a miniature traffic situation where everything was operated by a computer, like traffic lights, speed bumps, etc. I found it very interesting to see how the traffic, by means of the parallel port of the computer, was regulated.

From this I got the idea to make a robot-arm. I wanted to let the computer express something creative, something you can see and from that it is only a very small step to chess.

Chess and computers have really always been connected. Chess is a game that asks for a certain amount of intelligence and it takes place in a

limited area. So it is perfectly suited for a robot-arm!

Are you, like your son, highly intelligent?

I can't say that for sure about myself, but I think I do have a more than average creative talent.

Before I started on Robochess, I was active in the field of music, while I was never taught how to read music.

I wrote 11 Rhythm & Blues compositions and offered them to a music publisher. They thought my work was very good, but it was never made into a CD because the titles did not suit the genre they were releasing at the time.

I also assembled a guitar myself. But the highlight for me was the making of a chess-robot!

Do you actually have a technical background that helps you realise your ideas more easily?

No, I only finished secondary modern school and just obtained a typing-diploma.

I have always had a big interest in technique though. I

used to be a maintenance mechanic with a firm that imported clocks from Germany and sold them to retailers in Holland. Together with a couple of colleagues I repaired broken clocks and alarm clocks.

Where did you get the know-how to make a chess-robot?

I was not knowledgeable about goniometry and you do need that to calculate the positions of the arm.

You are actually dealing with combined movements that are performed by three motors. These movements, also known as steps, have to be calculated mathematically. I only ever did secondary school math, years ago, so I just couldn't do it. I had to learn a lot about the technique (digital electronics) to let the steps-motors of the robot-arm communicate with the PC.

In addition, you have to be able to write a program that, together with the chess program and with the help of digital electronics, enables the whole thing to communicate hardware-wise.

The robot-arm can then correctly execute the moves of the chess-program and subsequently pass on the moves of the opponent in the correct way to the chess-program.

So you need knowledge of math (goniometry), electronics, programming, and wood-constructions.

Therefore I borrowed several books from the library and consulted them about goniometry and digital electronics. I also bought a book about the programming-language Visual Basic.

Of course I only read the

things that were important for the construction of the robot, otherwise I still would not have finished it!

How long did you work on it?

I worked 2½ years on it and now it is finished, apart from some minor growing pains.

Meanwhile, the control program I wrote in Visual Basic has reached a length of 70 pages A4.

Can you tell me exactly what is in the wooden trunk of Robochess?

In the trunk are two PC-motherboards, each equipped with a 80486-processor and containing 20 and 8 Mega-bytes of RAM respectively.

It is no problem to replace them later by two Pentium-motherboards.

The most complicated job actually was to let them communicate hardware-wise. You need a lot of knowledge of digital electronics for that. You have quite a few zeros and ones coming into the picture!

Why two motherboards?

The first motherboard is used for the chess-program, which is the Psion2 (1985) by Richard Lang. Of course, any other chess-program can be used as well.

The second motherboard is used for the Visual Basic program that I wrote myself and that takes care of the communication between Psion and the motors of the robot-arm.

At first I used one mother-board for both programs. With the help of multi-tasking they were each separately assigned processor-time.

This did not work so good

however, because subsequently the robot-arm moved less fluently or even faltered. The reason for this was that the one program would for instance be active too long, on account of which the other would perform less than well.

With two motherboards there is no interference and both programs function well.

This has the additional advantage that two monitors can be connected to them. At the moment I use for the Psion a former portable TV that takes up little room, and for the Visual Basic program an ordinary PC- monitor.

What kind of material is Robochess made of?

The robot-arm is made of aluminium corner-pieces that are normally used under cupboard-doors.

Furthermore it has chains attached to it. Originally I even used the lavatory pull-chain, but that creaked and hooked too much, so I used another one for that.

I bought the steps-motors, and many other parts, at an army and electronics dump-store in IJmuiden.

The fun part of that is that you can re-use stuff that was actually ready to be thrown out and save a lot of money at the same time.

At first, the motors I bought there were much too weak, so that the arm could barely lift the chess-pieces. Then I started again with much stronger motors that did in fact have the ability to give the arm sufficient strength.

The robot-arm moves the pieces by means of an electromagnet, a former car-relay.

I drilled holes in the upper side of the chess-pieces and put in small metal bolts, so that the electromagnet, that is
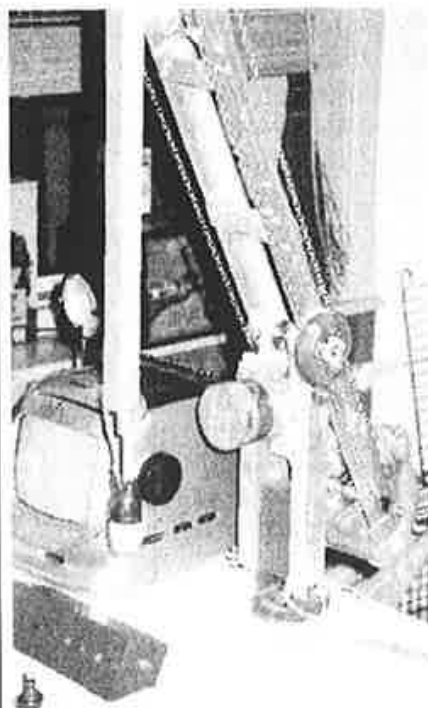
located in the end of the arm, can lift them. In the bottom of the pieces I also drilled holes and put in magnets that relay the moves of the opponent, via the read-contacts-board, to the chess-program.

Then the chess-program, via my Visual Basic program, passes the countermove on to the steps-motors of the robot-arm, which let the arm carry out the move.

I made the wooden trunk out of very fine chipboard. The trunk contains, as I already mentioned, two PC mother-boards which communicate through cables with the steps-motors of the actual robot-arm.

During the game I played with her, I noticed a row of led-lamps blinking. What is the meaning of that?

The lamps go on one by one during the thinking time of the opponent.

How fast they go on, depends on the time you set per move. When all lights are on, the Robochess assumes that

the thinking time is over and no further moves are allowed.

So, if the opponent is still in deep thought, then the lamps will just start blinking again.

However, if he does belatedly try to make his move, the lamps of Robochess all go on next, then - the same as with roulette - *"Rien ne va plus!"* is in order... game over!

This is important for the detection-time of the robot.

For Robochess needs to know for sure that the opponent has made a move, and next needs to detect this move by means of a ticking mechanism. During that time nothing is to be carried out on the board.

The voice in the robot is that of your wife Lucia. Can you tell me a little more about this?

First, I write a number of texts on a sheet of paper.

These texts are read and recorded by Lucia, with the help of a PC, microphone and sound-recording software.

The computer converts these short texts to WAV-files.

Next, I integrate these sound-files in my Visual Basic control-program, which sees to it that the robot completely randomly chooses a text.

It works the same as a dice. Suppose there are six alternative ways of saying how a move should be carried out. With alternative 3 the robot says for example *'I move'* and with alternative 5 she says *'I do'* and with alternative 2 something else again. This way even I never know exactly what she is going to say.

Finally with the help of a

soundcard and two small boxes Robochess can speak the text. Naturally, it is also possible to build in two small speakers.

We add to her vocabulary daily, so she gets continually more talkative!

It is important to know that Robochess is interactive. When you turn her on with a simple switch, she asks you: *"What is your name?"*

Through a microphone you tell her that your name is Rob.

She will then ask you: *"At what level do you want to play, Rob?"*

You answer for example that you would like to play at level 3.

She will then say: *"Ok, Rob, we will now play at level 3."*

Your voice is actually being recognized by a speech-chip that subsequently sends a code to the Visual Basic control-program. This program then knows what text goes with that code and next speaks the text.

In addition, she can give you hints, and if you need to go to the bathroom, you can say to her: *"I want to take a break."*

She will answer: *"Ok, see you in a minute."* She then

temporarily stops the game until you, by pushing a button, indicate that you want to continue.

Do you have any commercial plans with Robochess in the near future?

I haven't investigated this yet, although it is certainly not unimportant.

You could for example sell the robot to certain institutions. Perhaps a home for the elderly would be interested in buying her, possibly with municipal subsidy. They could put her in the recreation-room, so that the chess-lovers in the home can enjoy her.

This would create a whole new social element, because the elderly can join forces to play against Robochess.

At the present time the production of Robochess is much too expensive and therefore not attractive to a manufacturer. Besides the price tag for the consumer will be too high. How do you think you can solve this problem?

If necessary I will make the robot myself - made to order for a customer.

It is hard to say for how much money I would sell Robochess, but a rich eccentric who is really interested certainly might want to pay a substantial amount of money for it.

Another idea is that I make her in the form of an assembly kit and have a number of these kits assembled.

Recently I have joined the Dutch Order of Inventors (NOVU) and I should be able to pick up a lot of ideas there.

... with congratulations on issue 100
Rob van Son, Spring 2002

COMPUTER v HUMAN Match
SPANISH Chess Comp. Association & BASILIO and PUZOL Chess Clubs ANNUAL Match

Computer-Human match Puzol/Basilio 2001 by Alvaro BENLLOCH

As almost every year since 1990, some computer chess fans celebrate a **human-computer match** in Valencia.

The match was organized by **ANACA** (Spanish Chess Computer Association) and the **Basilio** and **Puzol** Chess Clubs members.

It is the first time that Puzol Chess Club has cooperated in this event, and probably they will continue in future matches. As a result of this cooperation it was possible to celebrate the match in a public building and local TV presence!

The **human team** was composed by a mix of both chess clubs.

The playing time control was **Game in one hour**.

The first human player took white and the rest alternated the colour. There was a last minute gap left in the human team that had to be substituted by Maria Pilar Lopez at the last moment.

She was weaker than her opponent but she fought and lost with great dignity. Many thanks for her efforts to allow the whole computer team to play. Her opponent was the Playmatic S, a legend from 1982, the Sensory 9 program at 3,2MHz in a wooden auto sensory board. I wonder how

many of the *Selective Search* readers have ever seen one of those?!

The human team was:
- **Víctor Penades** (Basilio), 2100
- **Leonardo Soliño** (Basilio), 2000
- **Vicente Adsuara** (Basilio), 2000
- **Luis Barona** (Basilio), 2052
- **Manuel Contreras** (Basilio), 1900
- **Alberto Avinent** (Puzol), 1800
- **Andrés Benito** (Puzol), 1800
- **María Pilar López** (Basilio), 1600

The **computer team** was composed once we knew the human opposition.

The idea was to prepare a balanced match to increase the event interest. Our past matches were all clearly won by the computer team, so this time we wanted to give the match a chance of being close to create a little bit more emotion and excitement.

We had also prepared the computer team looking for a variety of program authors, trying to avoid many repetitions.

This meant there was a variety of playing styles, and the computer's creation date and their endgame knowledge also varied - which are very important aspects, especially when playing against 1900 Elo rated players.

But despite all this help, it

was not enough and the computer team still managed to win the match!

The computer team was:
- **Mephisto Exclusive Risc 2** ARM2/14MHz 1024Kb, 2277
- **Mephisto Exclusive Almeria 68020**/12MHz 1024Kb, 2125
- **Novag Scorpio** 68000/16MHz 96Kb, 2028
- **Mephisto Dallas 68020**/14MHz, 2000
- **CXG Sphinx Galaxy** 6502/4MHz, 1893
- **Mephisto Exclusive MM-II** HG240 6502/3.7MHz, 1787
- **Scisys Turbostar 432** 6502/4MHz, 1788
- **Fidelity Playmatic "S"** 6502/3.6MHz, 1700

The GAMES

The <u>first</u> computer player was **Mephisto Risc 2**. A very strong positional player that won the WMCCC in 1991 and 1992. The human player **Penades** was 150 Elo points down but he played a very aggressive Petrov variant, the Cochrane Gambit.

The <u>second</u> computer player was **Mephisto Almeria 68020** at 12 MHz, the WMCCC champion in 1988. Almeria is a strong tactic and good endgame player. The human **Solino** played a direct king attack and won a very beautiful game.

Novag Scorpio played in <u>third</u> place followed at <u>fourth</u> by the 1986 WMCC champion, the **Mephisto Dallas 68020**.

As representatives of the medium strength computers, the Sphinx Galaxy, MM-II and Turbostar 432 played in fifth-seventh positions.

Galaxy has an aggressive playing style but with poor positional knowledge, as with many Morsch programs on the dedicated computers and the early Fritz days.

MM-II is a good tactical program, especially good at fast time controls. It played with the help of the opening module HG240.

Turbostar 432 always needed long 40/2 type time controls to play at its best. It used an early form of selective searching, but on the old, slow processors at faster time controls was often found tactically wanting.

The 8th. and last computer was the biggest attraction for many of us, the **Fidelity Playmatic "S"**. The symbol of a past (computer) age, the very early 80's, a brute force program by Kathe and Dan Spracklen. It has a solid playing style with an acceptable tactical strength.

For this issue we are showing the 2 games won by Club players (computers' turn next time). In both the king safety problems of the 1980/90's machines are in full view!

Benito,A (1900) - Turbostar 432 6502/4 (1788)

1.e4 c5 2.♘f3 e6 3.d4 cxd4 4.♘xd4 ♘c6 5.♗e3 ♘f6 6.♘c3 ♗b4 7.f3 ♗xc3+ 8.bxc3 ♕a5 9.♕d3 ♘e5 10.♕d2 0-0 11.♗e2 d5 12.♗g5 dxe4 13.♗xf6 gxf6

Benito is about to make a mistake, giving the computer a (temporary) advantage

14.0-0? *14.fxe4=* 14...exf3 15.♘xf3 ♘xf3+?? *15...♘g6 keeps Black ahead* 16.♖xf3 ♕b6+ 17.♔h1 ♕b2?? *The computer fails completely to see the dangerous threats to its king!* 18.♖af1 ♔h8 19.♕h6 *m/5* 19...♖g8 20.♕xf6+ ♖g7 21.♖g3 ♕xc3 22.♕d8+ ♖g8 23.♕xg8# 1-0

Almeria 68020/12 - Solino,L (2000)

1.e4 e5 2.♘f3 ♘c6 3.♗b5 a6 4.♗a4 ♘f6 5.♗xc6 dxc6 6.d3 ♗d6 7.♘bd2 ♕e7 8.0-0 g5 9.♘xg5 ♖g8 10.♘c4 +0.54 10...h6 11.♘f3 ♗h3 12.♘e1 0-0-0 13.♗xh6 ♘g4

14.♗d2?? *14.♗e3 was necessary, to protect f2* 14...♕h4 15.♘xd6+ *Almeria thinks it's still winning with +1.33?!* 15...♖xd6 16.♘f3 *now +1.63!* 16...♕h5 17.♘g5 *ooops, it's -1.84!* 17...♗xg2 18.♔xg2 ♕xh2+ 19.♔f3 ♖f6+ 20.♔xg4 ♕g2+ 21.♔h4 ♖h6+ 22.♕h5 ♖xh5+ 23.♔xh5 ♖h8+ 24.♘h7 ♖xh7+ 25.♗h6 ♕g6+ 26.♔h4 ♖xh6# 0-1

The final result was **2½–5½** for the **Computer** team.
The individual scores were:

- 1. Victor Penades - Mephisto Risc 2   0-1
- 2. Almeria 68020 - Leonardo Solino   0-1
- 3. Vicente Adsuara - Novag Scorpio   0-1
- 4. Dallas 68020 - Luis Barona   ½-½
- 5. Manuel Contreras - Galaxy   0-1
- 6. MM-II - Alberto Avinent   1-0
- 7. Andres Benito - Turbostar 432   1-0
- 8. Playmatic "S" - Maria Pilar Lopez   1-0

KRAMNIK V FRITZ - OCT. 2002

A major article, and an interview, conducted on April 7, 2002, appeared recently on the **Chess-Base, Hamburg** website.

Permission there is given for these to be reproduced in whole or in part, so for *Selective Search* I have extracted all of the information relating to either the forthcoming match, or to questions concerning computer chess.

I think **Kramnik**'s views are of particular interest.

By Matthias Wullenweber, ChessBase, Hamburg.

A serious match against the human World Champion is the highest possible achievement in computer chess.

The match against **Vladimir Kramnik** in Bahrain is not only the peak of Fritz's eleven year chess career but also the longest and strongest fight <u>ever</u> between a man and a machine, a worthy chance of revenge for humanity after Kasparov against Deep Blue five years, ago.

Today Kramnik is the toughest opponent for chess programs. His flexible positional chess style, his self control and psychological strength are perfect weapons in the battle against computers.

He has proven this in previous encounters against earlier versions of the programs **Fritz** and **Junior**, where the silicon opponents suffered short, sharp shock treatments on both occasions.

However software and hardware have made good progress since then. **Fritz7** leads the world computer ranking list by a clear margin, and its pair of authors **Frans Morsch** and **Mathias Feist** have already made many new advances, leaving the version 7 far behind in development.

So while deep in our tribal genes we all wish Kramnik success, it will be a breathtaking fight. Relying on human intuition and creativity he must avoid positions where the calculating power of the machine prevails and every false step can lead to a loss.

It is important that **the match rules** establish optimal playing conditions to ensure maximum strength for both human and computer.

The match is not about exploiting human weaknesses to pull a short-lived marketing stunt. Nor is the match about tiring the human player, putting him under psychological pressure, making him feel uncomfortable or insecure. This match is about playing good chess under fair conditions for both sides.

Vladimir Kramnik will get the program a month in advance to get accustomed to its individual style.

Human beings have the ability to learn and to draw conclusions. This ability should be a factor where men compete with machines, so a careful preparation is in the spirit of this event for Kramnik... and the Fritz team. There are enough small random factors like hash table size in modern chess software which can elude move-by-move preparation in specific positions.

The **status of the Bahrain** match is underlined by its considerable prize fund.

In the event of a win, Fritz would receive $400,000, whilst a draw still yields $200,000.

The creators of Fritz, Frans Morsch and ChessBase, have decided to put any prize money the program wins into an independent foundation to promote Junior chess! Such a foundation would organize summer training camps, tournaments, and encourage chess in schools. Its goal will be to make chess a cool sport for intelligent young people.

So whatever the outcome in Bahrain - the humans win in the end.

Vladimir Kramnik on Man vs Machine

<u>Intro</u>: In July we are going to see a big qualification tournament for the right to challenge world champion Vladimir Kramnik, who wrested the title from Garry Kasparov in December 2000 .

Then, in October there will be a spectacular Man vs Machine battle in Bahrain, when

Kramnik is scheduled to play the strongest chess program currently available in a spectacular event.

Now the man at the center of these exciting events has speaks out and discusses computers, Fritz, Deep Blue, the classical world championship and FIDE.

This interview was conducted on Sunday, April 7th.

Subject: Interest in Computer Chess

▪ *ChessBase*: Man versus Machine matches in chess get extraordinary public attention. What do you think is the reason for this?

▪ *Vladimir Kramnik*: Our brains have the power to stand up to the machines. It is a good story when the two fight for supremacy in a highly intellectual area. The player and the computer are both obeying the same rules. So you can compare the results. The chess grandmaster is fighting against the best software on a brutally fast machine. He stands there alone in a fight against the most unbelievable technical development in history. It is also the battle between creativity and monstrous calculating power. The public finds this fascinating, and so do I.

▪ *ChessBase*: Kramnik vs Fritz in Bahrain is seen as the revenge match of Kasparov vs Deep Blue. Are you avenging the defeat of Kasparov in 1997?

▪ *Kramnik*: Naturally the match has the character of a revenge. After all the world champion is facing the strongest chess

program. If I too should lose then the people will believe that chess computers are really superior to human beings. Top players are very ambitious, it is also a matter of honour. Believe me, to lose to a computer is twice as painful as losing to a colleague.

▪ *ChessBase*: How does the playing strength of Fritz7 today compare with that of Deep Blue in 1997?

▪ *Kramnik*: I spent some time last summer studying Fritz because the match was originally supposed to take place in October 2001 and had to be postponed because of September 11. I was testing Fritz on a Notebook with a 600 MHz processor. I let Fritz replay the games of Deep Blue in 1997. It was a great shock! In almost every position Fritz was suggesting objectively better variations. The program is clearly stronger than Deep Blue, whatever the hardware. The developers have done some excellent work in the past years. The special version that will run on eight processors in Bahrain I think will definitely be over 2800 in its Elo performance. Everybody can imagine what a difficult job it will be for me. In order to have chances to win I have to be mentally and physically in top shape.

Subject: Kasparov vs Deep Blue, New York 1997

▪ *ChessBase*: Kasparov has criticized the playing conditions and circumstances surrounding the match of 1997. Did you take his

experiences into account for Bahrain?

▪ *Kramnik*: The result in that match was a great shock! but I do not know enough about what exactly happened in New York to give you a precise answer. Definitely it was a mistake to play without any specific preparation against an opponent you know nothing about. That is why it is important that the player is able to spend some time getting used to the playing style of the program. The computer team is also preparing for the human opponent. As I said Deep Blue did not impress me that much. The fact that even a weaker program managed to beat Garry Kasparov tells us that the match in Bahrain will be a hard challenge for me.

Subject: "Fritz plays somehow like... a human"

▪ *ChessBase*: Can you feel different styles in different chess programs and if yes, how would you describe the style of Fritz?

▪ *Kramnik*: Yes, I can, and even if it sounds ridiculous I have to say, Fritz plays in many ways, how should I say it, like a human. At least when I compare it to other programs. Your program is the first on the computer rating lists. Okay, these lists compare the playing strengths of the programs among each other. But I think that Fritz will perform better than other programs against human beings, because of this "human" quality. This is what makes Fritz especially dangerous for me

in Bahrain. A game like my game against Junior in Dortmund will not be possible against Fritz, I think.

- **ChessBase**: Chess programs have clear defects in long-term strategic planning. This lead to the development of anti-computer chess, which can be quite successful with simple attacking plans. However, Robert Hnbner said after his match against Fritz in Dortmund that it is not necessary to betray one's style when facing the machine. Also Boris Gulko recently reached promising positions against top programs with his own repertoire. What is your opinion on this?
- **Kramnik**: You cannot compare Fritz 6 with Fritz 7 at all, there is a big difference, a clear advance. And the Bahrain version will be even stronger and it will understand the strategic aspects even better. That is why I can clarify my strategic plan only after getting the last version of the program. But one thing is already completely clear: There are not many grandmasters left who would have a chance in such a match.

Subject: the Contribution of Computers to the game of Chess

- **ChessBase**: What do you think is the greatest contribution of computers to the world of chess?
- **Kramnik**: Clever question, which I have to answer positively. Okay, computers have surely helped to make chess more popular. Many people have found their way

to chess through the computer. I know many people who are quite attached to their favourite program.

- **ChessBase**: The path to achieve super grandmaster strength is long and tough and only the most talented players succeed in getting there. Top grandmasters enjoy social prestige, not only in the chess scene. Does it have any impact on human esteem that machines now compete on this level?
- **Kramnik**: I really don't think so. Maybe in the subjective view of an active grandmaster there is such a feeling. It is really painful to lose to a computer, as I said already. But the players do not lose social prestige, in fact the opposite is true. It is a battle on a completely different level, and the public understand this.

- **ChessBase**: Do you think that chess might be promoted by the ability to play against people on the Internet?
- **Kramnik**: There is only one answer to this question: chess profits more than any other activity from the Internet. I am convinced that many children and young people are finding their way to chess like this. Many schools all over the world are becoming active on the Internet and recognise the important role of chess in learning and education. Even business is recognising this. I can feel that chess is becoming more popular, and we will all profit from this. But I must advise every player to also

go to a chess tournament or to a chess club. The Internet can never replace a game face-to-face between two people. And also not the atmosphere of a well-presented chess event.

Subject: Chess is much more than a Sport!

- **ChessBase**: You have found a new partner in the Einstein Group in London.
- **Kramnik**: Yes, it is a very professional multi-media company and I have made long-term commitments to them. They have all the parts which are very important for international sporting events. Event management, marketing, the Internet. And they have their own TV channel with international distribution. Einstein wants to use chess to promote learning and education for children and youth. I think this is very important, it is very close to my feelings. I had other offers, but Einstein is an ideal partner for chess. That was the main reason for my decision.

MATE iN, ERRR.... 270 !?
But CAN IT BE PROVED? asks Eric Hallsworth

A long, long time ago (1990!) a customer of ours at Countrywide sent us a **mate in 270** problem which had appeared in his local newspaper.

It's been sat peacefully in our files for the years since, but was unearthed recently when I was having a go at updating and improving our filing system (i.e. trying to chuck a few things out!).

How can you prove such a thing? 12 years ago I would have thought it would have been quite impossible, but the composer of the problem, by the name of **Petrovic** in 1969, claimed at that time that it held the record for the longest legal mate .

I don't know if the record (i.e. mate in 270) still stands, but I thought that <u>maybe</u> the computers could do a bit of the checking for me - I mean in 1990 a 68020 at 12MHz with no hash tables was about the strongest chess computer you could find. It's Elo rating would be 2300 and an all-night search depth would reach around 10 ply on full search and maybe 22 ply with extensions.

Of course today's PC programs aren't going to get through to 539 ply (!) but I wondered if they might at least help a little!

LONG-RANGE PROBLEM

was the article heading - couldn't disagree with that!

A form of dictionary definition was given: *"one in which mate is to be given in a large number of moves. Usually White repeats many times a lengthy manoeuvre that loses the move".*

Here we go! **White** to play and **mate in 270**!

1.♗b1 h4 2.♔a4 ♚a8

Black's king oscillates to and from b7 except when a Black pawn has to be moved

**3.♔a3 ♚b7 4.♔a2 ♚a8
5.♔a1 ♚b7 6.♗a2 ♚a8
7.♔b1 ♚b7 8.♔c1 ♚a8
9.♔d1 ♚b7 10.♔e1 ♚a8
11.♗b1 ♚b7 12.♔f1**

White begins triangulation in order to LOSE THE MOVE.

Up to here the program's hadn't really understood White's moves (which is what I expected), but they couldn't find anything better for Black to throw a spanner in the works, so in that sense I felt they had at least con−firmed the plan.

12...♚a8

Now it's time for the king to triangulate and start on its long way back!

The PC programs now began to understand and approved this idea!

**13.♔f2 ♚b7 14.♔e1 ♚a8
15.♔d1 ♚b7 16.♔c1 ♚a8
17.♗a2 ♚b7 18.♔b1 ♚a8
19.♔a1 ♚b7 20.♗b1 ♚a8
21.♔a2 ♚b7 22.♔a3 ♚a8
23.♔a4 ♚b7 24.♔a5 f5**

Here Black has moved a pawn because he cannot permit the White king to be moved to a6.

White will need to make <u>9 more triangulations</u>, each time it will force Black to move a pawn.

At move 47 it will be f5−f4, move 70 f7−f6, move 93 f6−f5, move 116 h4−h3, move 139 h3−h2, move 162 h7−h6, move 185 h6−h5, move 208 h5−h4, move 231 h4−h3.

Again the programs can't really understand what White is doing − sometimes they choose the move and you think − 'ahaa, they've begun to get the idea', but then they start to move the king back towards and up the a−file before trinagula−tion's happened, so you

realise the don't really get it! But they still can't im—prove for Black or find a way out, therefore...

If we can agree *'so far, so good'* this is the position we've reached, with **White** to play, and it's move 254.

This time (most of) the programs choose the correct move AND have big evaluations, so they've 'got it' at last for sure!

254.♔a5!
Hiarcs8 and Tiger14 go >1000 very quickly, whilst Shredder6 and Junior7 are nearly as high.
However Fritz7 rather disgraces itself by wanting to play 254.♔a3? even after 2mins on my P3/1000

254...♔c8 255.♔a6 f2 256.b7+
Mate in 9 here announces Junior7 − if so the game ends at move 265 and not move 270. Fritz7 − which understood 254.Ka5 once it had been shown it − says m/10 = end at move 266

256...♔d7 257.b8♕ f1♕ 258.♕xe5 ♕xh1
For the next few moves we are going to follow the offi—cial solution of mate in 270. But I'll print diagrams for readers to go back to, as the

programs have indicated the 270 figure can definitely be reduced.

259.♕g7+
The line given in the original 270 move article

259...♔e6 260.♕g6+ ♔e5 261.♗b8+ ♔e4 262.♕c6+ ♔e3 263.♕xh1 ♔f2
Or 263...♔e2 264.♕xh2+ ♔f3 265.♗xf4 m/5 = 269

264.♗xf4 ♔e2 265.b6 d3

266.cxd3
The line in the original 270 move article

266...♔f2 267.♗c2
267.♕xh2+ same result

267...♔e2 268.♗d1+ ♔f2 269.♕f3+ ♔g1 270.♗e3#

Now go back to the dia—gram immediately above, where 266.cxd3 was played, and try this:

266.b7! dxc2 267.♗xc2 ♔f2

268.♗d3 c2 269.♕f1#
mate accomplished a move earlier!

Finally go back to the diagram near the top of the centre column, where 259.Qg7+ was played. Here's what the PC pro—grams produced there:

259.♕xf5+! ♔e8 260.♕g6+ ♔d8
If 260...♔e7? 261.♗c5+ ♔d8 262.♕g8+ ♔c7 263.♕f7+ ♔c8 264.♕e8+ ♔c7 265.b6#. So 260...♔d8 is correct.

261.♗b6+ ♔e7 262.♗c5+ ♔d8 263.♕f6+ ♔c8 264.♕e6+ ♔b8 265.♗d6+ ♔a8 266.♕c8#

Therefore I conclude that, with best play on both sides, the **Problem** is a **mate in 266**. But can this be proven?

I'd be pleased to hear from anyone who feels like going through all of this, either to verify or correct it. Also I'd be glad to hear if anyone knows of a Problem claiming to take even more moves... not that I'm exactly offering to test another like this, but you never know!!

RATING LISTS and NOTES

A brief guide to the purpose of each of the HEADINGS should be helpful for everybody.

BCF. These are British Chess Federation ratings. They can be calculated from Elo figures by (Elo - 600) /8, or from USCF figures by (USCF - 720) /8.

Elo. This is the Rating figure which is in popular use Worldwide. The BCF and Elo figures shown in SELECTIVE SEARCH are calculated by <u>combining</u> each Computer's <u>results v computers</u> with its <u>results v humans</u>. I believe this makes the SS Rating List the most accurate available for Computers and Programs anywhere in the world.

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

Games. The total number of Games on which the computer's or program's rating is based.

Human/Games. The Rating obtained and total no. of Games in Tournament play v rated humans.

■■■■■■■

A guide to PC Gradings:

386-PC represents a program running on an 80386 at approx. 33MHz with 4MB RAM.

486-PC represents a program running on an 80486 at between 50-66MHz with 4-8MB RAM.

Pent-PC represents a program on a Pent1/Pent2/MMX/K6 at approx. **150**MHz, with 8-16MB RAM.

P3-PC represents a program on a Pentium3/K7 at approx. **450**MHz, with 32-64MB RAM.

Users will get slightly more (or less!) if their PC speed is significantly different. A <u>doubling</u> in **MHz speed** = approx. **40** Elo; a <u>doubling</u> in **MB RAM** = approx. **3-4** Elo.

Comp-v-Comp guide, if Pentium3/450 = 0

Quad Pent3/500	80	Dual Pent3/500	50
Pentium3-K7/1000	50	Pentium3-K7/450	0
Pent Pro2K6-Celrn/300	-30	Pent Pro2-MMX-K6/233	-50
Pent/150	-80	Pent/100	-120
486DX4/100	-160	PentDX2/66	-180
486DX-SX/33	-250	386DX/33	-300

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RATING LIST (c) Eric Hallsworth. PC PROGS    SelSearch 100   Jun 2002
BCF Computer                            Elo   +/-   Games Pos    Human/Games
260 FRITZ7 P3-PC                        2684   15    903   1
258 HIARCS8 P3-PC                       2664   21    470   2       2671  4
257 GAMBIT TIGER2.0 P3-PC               2657   11   1572   3
256 CHESS TIGER14 P3-PC                 2654   12   1284   4       2665 13
256 DEEP FRITZ6 P3-PC                   2654   13   1277   5       2618 16
255 SHREDDER6/632 P3-PC                 2644   17    674   6       2471  4
254 JUNIOR7 P3-PC                       2633   16    832   7       2571  4
252 FRITZ6A P3-PC                       2623   10   2077   8       2567 35
252 GAMBIT TIGER1.0 P3-PC               2621   21    490   9
251 REBEL CENTURY4 P3-PC                2612   24    367  10       2634  4
250 REBEL TIGER12 P3-PC                 2605   15    912  11
250 JUNIOR6A P3-PC                      2603   10   1978  12       2581 22
249 SHREDDER5/532 P3-PC                 2599   15    911  13       2653 11
248 HIARCS732 P3-PC                     2587    9   2347  14       2427 19
246 HIARCS7.1 P3-PC                     2574   12   1442  15
246 NIMZO8 P3-PC                        2573   13   1261  16
246 GANDALF5 P3-PC                      2573   21    448  17
246 SHREDDER4 P3-PC                     2571   16    759  18       2560 15
245 NIMZO732 P3-PC                      2566   13   1228  19
245 FRITZ532 P3-PC                      2560   12   1469  20
244 CHESSMASTER 6/7000 P3-PC           2556   24    348  21       2554 22
244 FRITZ516 P3-PC                      2555   12   1281  22       2473  6
244 GANDALF4 P3-PC                      2553   13   1145  23
243 REBEL CENTURY3 P3-PC                2550   23    380  24       2615  6
243 NIMZO98 P3-PC                       2548   12   1307  25       2435 10
242 JUNIOR5 P3-PC                       2542   11   1531  26
241 SOS P3-PC                           2534   14   1003  27
241 GOLIATH LIGHT P3-PC                 2532   15    874  28
241 HIARCS6 P3-PC                       2530   13   1205  29       2552 24
241 REBEL CENTURY1.2 P3-PC              2528   21    458  30       2552 43
240 NIMZO99A P3-PC                      2526   14   1050  31
240 REBEL-10 P3-PC                      2521   25    329  32       2558 17
240 REBEL9 P3-PC                        2520   14   1059  33       2637 14
239 REBEL8 P3-PC                        2516   19    548  34
238 MCHESS PRO6 P3-PC                   2509   17    699  35       2504 12
238 MCHESS PRO7 P3-PC                   2508   14   1067  36       2560  2
238 CHESS GENIUS5 P3-PC                 2506   13   1198  37       2419  6
237 MCHESS PRO8 P3-PC                   2500   14   1026  38
237 SHREDDER3 P3-PC                     2499   34    177  39       2671  2
237 SHREDDER2 P3-PC                     2496   15    875  40       2178  6
234 GANDALF3 P3-PC                      2474   27    278  41
231 HIARCS6 PENT-PC                     2455   11   1686  42       2540  2
231 JUNIOR4.6 P3-PC                     2455   43    115  43
231 HIARCS5 PENT-PC                     2453   19    585  44
231 KALLISTO2 P3-PC                     2448   22    412  45
230 FRITZ 516 PENT-PC                   2447   35    170  46
230 REBEL8 PENT-PC                      2446   10   2116  47
230 REBEL9 PENT-PC                      2440   16    805  48
228 CHESS GENIUS5 PENT-PC               2430   11   1573  49
228 CHESS GENIUS3 PENT-PC               2428   14   1028  50       2658 10
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RATING LIST (c) Eric Hallsworth. SelSearch 100 Jun 2002

BCF	Computer	Elo	+/-	Games	Pos	Human	/Games
221	TASC R30-1995	2370	16	203	1	2276	18
219	MEPH LONDON 68030	2358	32	793	2	2272	6
215	TASC R30-1993	2323	12	1346	3	2336	66
215	MEPH GENIUS2 68030	2319	18	657	4	2308	23
214	MEPH LONDON 68030	2317	67	47	5		
214	MEPH RISC2 1MB	2317	20	516	6	2293	8
210	MEPH LYON-VANC 68020/24	2287	27	296	7	2392	51
210	MEPH LYON 68030	2287	15	869	8	2340	82
210	MEPH RISC2 1MB	2287	20	505	8	2217	29
209	MEPH PORTOROSE 68030	2279	15	337	12	2330	17
208	MEPH BERLIN PRO 68002/24	2266	13	1241	9	2217	29
208	MEPH VANCOUVER 68030	2264	18	656	10	2347	54
208	KASPAROV SPARC/20	2264	27	296	11	2327	10
207	KASP RISC 2500-128K	2262	25	337	12	2330	17
207	MEPH ATLANTA-MAGELLAN	2249	9	2543	13	2232	95
206	MEPH MONTREUX	2241	15	1077	14	2251	24
205	KASPAROV SPARC/20	2239	16	886	15	2357	9
204	KASP RISC 2500-512K	2234	14	828	16	2288	54
204	MEPH ATLANTA-MAGELLAN	2234	16	36	17	2040	4
202	MEPH PORTOROSE 68020	2219	61	2629	18	2270	67
202	MEPH LONDON 68000	2216	9	75	19	2215	21
202	KASP RISC 2500-128K	2216	77	2300	20	2121	33
200	FID ELITE 68040-V10	2196	9	3292	21	2246	92
199	MEPH VANCOUVER 68040-V10	2196	53	57	22		
198	MEPH VANCOUVER 68000	2186	9	1842	23	2238	199
198	MEPH LYON 68020/12	2186	9	567	24	1800	1
197	MEPH LYON 68020/12	2180	8	1321	25	2221	25
195	MEPH PORTOROSE 68020	2166	61	917	26	2169	13
194	NOV SAPPHIRE2-DIAMOND2	2158	10	1340	27	2126	23
194	MEPH PORTOROSE 68020	2158	19	1662	28	2083	33
193	FID ELITE 68030-V9	2152	10	1019	29	2154	242
193	MEPH BERLIN 68000	2146	19	523	30	2169	10
192	MEPH VANCOUVER 68000	2144	15	1363	31	2139	83
191	MEPH LYON 68000	2136	12	1613	32	2111	25
191	MEPH ALMERIA 68020	2134	11	2281	33	2179	130
190	MEPH MILANO PRO-SENATOR	2130	14	312	34	1888	2
189	NOV SAPPHIRE1-DIAMOND1	2116	20	632	35	2080	54
189	MEPH MILANO PRO-SENATOR	2116	29	1075	36	2033	73
188	MEPH PORTOROSE 68000	2106	11	972	37	2069	198
187	FID MACH4-DES2325 68020-V7	2099	9	1054	38	2182	42
184	FID ELITE 2*68000-V7	2079	26	1017	39	2093	31
184	MEPH POLGAR/10	2079	18	2056	40	2124	139
183	MEPH ROMA 68020	2064	18	843	41	2072	65
182	MEPH DALLAS 68020	2059	14	322	42	2136	5
182	MEPH ROMA 68020	2058	14	972	37	2069	198
181	KASPAROV BRUTE FORCE	2053	14	1054	38	2182	42
180	MEPH ALMERIA 68000	2041	14	1017	39	2093	31
179	NOVAG SCORPIO-DIABLO	2036	10	2056	40	2124	139
177	KASP MM6-COUGAR-COSMOS	2020	16	843	41	2072	65
176	KASP NIGEL SHORT	2014	25	322	42	2136	5
176	FID MACH3-DES2265 68000-V2	2009	6	5504	43	1959	65
175	NOV EMERALDCLASS-AMBER	2008	58	64	44	2076	17
175	MEPH DALLAS 68000	2002	11	1526	45	1850	17
174	MEPH POLGAR/5	1996	8	2821	46	2000	24
174	MEPH MM5/5	1995	11	1748	47	2087	14
174	NOV SUPER FORTE-EXP C/6	1992	8	2824	48		
173	MEPH MILANO	1991	13	1156	49		
173	MEPH MONDIAL 68000XL	1988	15	852	50	2049	77
172	NOVAG JADE2-ZIRCON2	1982	39	138	51	2032	48
172	MEPH MONTREAL-ROMA 68000	1979	9	2512	52	1968	56
171	MEPH AMSTERDAM	1971	9	2253	52	2054	182
171	MEPH ACADEMY/5	1968	9	2379	54	2023	111
169	FID MACH2B	1957	27	276	55	1960	25
168	NOV SUPER FORTE-EXP B/6	1955	12	1441	56	2005	93
168	MEPH MEGA4/5	1951	8	2697	57	2005	197
168	KASPAROV MAESTRO D/10	1947	12	1323	58	1923	127
167	FID MACH2C	1944	9	2627	59	2059	127
166	KASP CENTURION-BARRACUDA-BRAVO	1937	9	918	60	1830	30
166	MEPH MODENA	1933	16	780	61		
165	MEPH MM4/5	1931	8	2693	62	2006	97
164	NOVAG RUBY-EMERALD	1920	17	717	63	1981	48
164	NOV SUPER FORTE-EXP A/6	1917	12	1388	64	2074	176
164	MEPH SUPERMOND2-COLLEGE-MCARLO4	1916	27	284	65	1999	8
163	KASPAROV MAESTRO C/8	1915	19	546	66	1945	98
162	FID TRAVELMASTER	1910	26	310	67	1912	90
162	CONCH PLY-VICTORIA/5.5	1902	16	771	69	1861	35
162	MEPH MONTE CARLO	1902	28	260	70	1909	22
161	CXG SPHINX GALAXY/4	1901	9	2394	71	2046	156
161	KASP TRAVEL CHAMPION	1901	32	209	72	1945	10
160	KASP TURBOKING2	1894	14	975	73	1862	22
160	NOV EXPERT/6	1886	32	206	74	2026	22
159	FID CLUB B	1874	12	1309	75	1827	18
158	NOV EXPERT/5	1870	26	305	76	2012	68
158	NOV SUPER FORTE-EXP A/5	1867	11	1530	77	1800	38
157	FID PAR E-ELITE+DES2100	1862	9	2462	78	1916	220
157	NOV FORTE B	1857	10	1836	79	1953	236
157	FID AVANT GARDE/5	1857	11	1670	80	1852	80
156	MEPH REBELL	1857	9	2201	81	1940	69
155	NOV FORTE A	1849	9	2199	82	1908	143
155	FID CLUB A	1847	31	224	83	1767	6
155	KASP STRATOS-CORONA	1845	10	2086	84	1890	48
155	KASPAROV MAESTRO A/6	1840	15	927	85	1864	131
154	MEPH SUPERMONDIAL1	1838	11	1547	86	1990	6
154	KASP TURBOKING1	1836	24	352	87	1852	61
154	CONCHESS/6	1835	45	103	88	2017	8
153	CONCH PLYMATE/5.5	1833	9	2184	89	1923	55
153	KASP SIMULTANO	1828	13	1115	90	1824	36
153	NOV EXPERT/4	1825	14	1020	91	1960	43
152	SCI TURBO KASPAROV/4	1823	21	470	92	1933	64
152	FID EXCELLENCE/4	1821	11	1657	93		
151	CONCH PLYMATE/4	1815	24	372	94	2007	6
150	FIDELITY ELITE C	1807	35	175	95	1869	11
150	FID ELEGANCE	1800	17	696	96	1960	40
149	MEPHISTO MM2	1794	12	744	97	2007	6
149	SCI TURBOSTAR 432	1794	9	1358	97	1823	9
148	FID EXCELLENCE-DES2000	1788	11	1593	99	1828	57
146	CONCHESS/4	1771	20	511	100	2087	14