SELECTIVE SEARCH
The COMPUTER CHESS Magazine

Est. 1985
Issue 70
Jun-Jul 1997
£3.50

The TERMINATORS!

DEEPER BLUE
Gary Kasparov
3½

HIAACS6
Deen Hergott, IM
4
2

Full REPORTS and
all the GAMES inside!

• SUBSCRIBE NOW to get REGULAR COPIES of the LATEST ISSUE and RATING LIST
Simply WRITE or RING: the address and phone no. details are shown below.

• £18 per year for 6 issues by mail. Foreign addresses £24. Re FOREIGN PAYMENTS please note that CHEQUES must be in POUNDS STERLING, or (best for you) USE CREDIT CARD.


• A REMINDER INSERT is included when you are sent the LAST ISSUE covered by your current sub.

• NEW SUBSCRIBERS: please state the number of the FIRST ISSUE that you wish your sub. to cover.

• ARTICLES, REVIEWS, GAMES sent in by Readers, Distributors, Programmers etc are welcome.

CONTENTS, Issue 70

2 Latest NEWS & some major RESULTS
5 REBEL8 vs CRAFTY: REPORT and GAME.
9 HIAACS6 vs I.M Deen HERGOTT: Full MATCH REPORT and ANNOTATED GAMES.
18 AEGON: RESULTS Listing. 19 DEEPER BLUE vs KASPAROV: REPORT and all the GAMES.
25 Reader's GAMES & VIEWS. 29 GRAHAM LAIGHT on the FUTURE of Computer Chess.
31-32 Full PC and Dedicated COMPUTER RATING LISTS.

• SELECTIVE SEARCH is produced by ERIC HALLSWORTH. All CORRESPONDENCE and SUBSCRIPTIONS to Eric please at The Red House, 46 High Street, Wilburton, Cambs CB6 3RA. Or e-mail: eric@elnchess.demon.co.uk

• All COMPUTER CHESS PRODUCTS are available from COUNTRYWIDE COMPUTERS, Victoria House, 1 High Street, Wilburton, Cambs CB6 3RB.

• ERIC is at COUNTRYWIDE, Mon-Fri, 1.00-5.00.
Readers are welcome to ring.

MasterCard
VISA
NEWS and RESULTS
Latest Computer Results - New Product - Other Info

Welser 1997, cont...

When SS/69 went to print, we were just about three-quarters of the way through the annual Welser Tournament.

Welser 1997 was played over 12 rounds at 40/2, on the AutoPlayer 232 system, using a Pentium/133. Mention should also be made of Franz Wiesenecker, who organises these Events and to whom thanks are due.

Here was the Score-Table, already seen in SS/69, with 3 rounds to go.

<table>
<thead>
<tr>
<th>Welser 1997: after 9 rounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>7  Rebel7</td>
</tr>
<tr>
<td>6½ Genius5, MChessPro6</td>
</tr>
<tr>
<td>6  Hiarc5, Hiarc4</td>
</tr>
<tr>
<td>5½ Nimzo3.5, Nimzo3, Genius2, Kallisto1.83</td>
</tr>
<tr>
<td>5  Hiarc3</td>
</tr>
<tr>
<td>4½ MCPro5, MCPro4, Fritz3, Fritz2</td>
</tr>
<tr>
<td>4  Genius3, Rebel8, Kallisto1.98, CometA45</td>
</tr>
<tr>
<td>3½ WChess, CometA42, Rebel6, Isichess2.5</td>
</tr>
<tr>
<td>2½ Gandalf</td>
</tr>
<tr>
<td>2  Diogenes315</td>
</tr>
<tr>
<td>1½ Diogenes31x</td>
</tr>
</tbody>
</table>

Shocks in Store?!

Obviously there were some surprises in there, not least the top placing of Rebel7 - and I mean no disrespect to Ed Schroder's 1995 version, but it was a strange comparison to see the upgrade Rebel8 (top of the SS/69 Rating List) languishing on under 50% on 4/9.

Other positions raising a few eyebrows included Genius2's high placing, whereas the very highly rated Genius3 - which some people still assert is Richard Lang's strongest ever version - was keeping Rebel8 company on 4.

Of course Genius5, along with MChessPro6, and perhaps Hiarc4 and 5, were close enough to have chances of getting to 1st. place if Rebel7 slipped and they could score 2½ or 3 from the final 3 rounds.

And W Chess, which won with 6½/9 in 1996, ahead of Hiarc3, Genius3, Rebel7 and Kallisto1.83 all on 6/9, was looking somewhat miserable on only 3/9. Time for an upgrade!... can someone tell Dave Kittinger?!

The Final Rounds

Of the leaders, Nimzo3.5 did best over the last 3 rounds, scoring 2½.
Genius5 scored 2/3, as did both Hiarc4 and 5.
MChessPro6 slipped up, only managing a single point.

Of course what everyone really wants to know now is what happened to the various Rebel programs?!

In fact Rebel8 recovered tremendously, though of course it was playing mid-table opposition. Anyway, it also managed a 2½/3 finish!

And Rebel7 hung on at the top by closing with a fine 2/3, thus earning an excellent Tournament victory, as the full Table shows:

<table>
<thead>
<tr>
<th>Welser 1997 Final Standings: 12 Rounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>9  Rebel7</td>
</tr>
<tr>
<td>8½ Genius5</td>
</tr>
<tr>
<td>8  Hiarc5, Nimzo3.5, Hiarc4</td>
</tr>
<tr>
<td>7½ MChessPro6</td>
</tr>
<tr>
<td>7  Nimzo3, Genius2, Kallisto1.83, MChessPro4, Rebel8, Fritz2, Fritz3, CometA45</td>
</tr>
<tr>
<td>6  Hiarc3, MChessPro5, Kallisto1.96</td>
</tr>
<tr>
<td>5½ Genius3, WChess</td>
</tr>
<tr>
<td>5  Isichess2.5</td>
</tr>
<tr>
<td>4½ CometA42, Rebel6</td>
</tr>
<tr>
<td>4  ...</td>
</tr>
<tr>
<td>3½ ...</td>
</tr>
<tr>
<td>2½ Gandalf</td>
</tr>
<tr>
<td>2  Diogenes315</td>
</tr>
<tr>
<td>1½ Diogenes31x</td>
</tr>
<tr>
<td>1  Diogenes31x</td>
</tr>
</tbody>
</table>
HIARCS6 Results

We listed some of the early gamma-test results in SS/69. Enrique Irazoqui, who had previously shared a 60/30 Cross-Table with us between the then top four, has now included Hiarc6.

The original Table (shown in SS/68) was:

1. Hiarc6 17
2. Genius 16½
3. MChess Pro6 15
4. Rebel8 11½

The new Cross-Table looks like this:

<table>
<thead>
<tr>
<th>30 secs per move Tournament</th>
</tr>
</thead>
<tbody>
<tr>
<td>H6</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>1. Hiarc6 6 6½ 8½ 7½ =28½</td>
</tr>
<tr>
<td>2. Hiarc6 4 3½ 5½ 5½ =21</td>
</tr>
<tr>
<td>3. Genius 3½ 5¼ 7¼ 3¼ =20</td>
</tr>
<tr>
<td>4. MChess Pro6 1½ 2½ 2½ 7½ =16½</td>
</tr>
<tr>
<td>5. Rebel8 2½ 2½ 6½ 2½ =14</td>
</tr>
</tbody>
</table>

Surprised by the margin of victory, Enrique played 5 more Hiarc6 v Genius5 games, which Hiarc6 also won by 3½-1½, giving it, in fact, a 10-5 lead in their own match. This 60/30 result is about the same as our own combining G/60 and various 40/2 results in so far, but in Sweden, all at 40/2, the score is 19-19!

Other Results

Carl BICKNELL sent me a few scores, from matches involving his Mephisto RISC2 and the Genius and Hiarc programs running on his Pentium/100.

At Game in 5

**Genius 5 P/100 8-2 RISC2**

At G/60

**Genius5 P/100 5-5 RISC2**

**Hiarc6 P/100 9½-½ RISC2**

You may remember that Garry SEDMAN "let the Hiarc5 slide down" with his results in SS/69. His Hiarc6 scores against it's bete noir (Fritz) show an improvement:

**H6 P/75 7-3 Fritz3 486 (5-5 with H5)**

**H6 486 4½-5½ Fritz3 P/75 (4-6 with H5)**

Still with the new Hiarc6, Norman O'Connor played 6 games at 60/60 and had:

**Hiarc6 P/90 5½-½ RISC 2500**

Frank HOLT's latest Rebel8 results are against Fritz4. As usual he has tested under a range of time controls from G/30/60/90 through to 40/1 and 40/2.

I have listed the results in full under Rebel8's different playing styles, though the 'extreme' ones and the G/30 scores are excluded for Rating List calculations.

**Rebel8 Pent/100 v Fritz4 Pent/100**

R8 Normal 6½-5½ Fritz4 Normal
R8 Active 7½-4½ Fritz4 Normal
R8 Solid 10-2 (!) Fritz4 Normal
R8 Aggressive 3½-8½ (!) Fritz4 Normal
R8 Defensive 6-6 Fritz4 Normal

Frank says that the games are fascinating to watch, and reminded me that Rebel8's overall 55.8% score this time compares with Rebel7's 53.3% last year. Also Rebel8 very slightly out-booked Fritz over the whole of the match, but not in any way that suggested special preparation.

Frank was also using the Fritz4 End-Game CDRom, and saw it announce a mate in 26 from this in one of the games - it was a 98 move, so we won't include it here!

However I am going to show one longish one, due to the interesting difference in evaluations during the game!

**REBEL8 (2515) – FRITZ4 (2425)**

[C18 – French] Frank Holt, G/90, 1997/[Comments: Frank & Eric]

1. e4 e6 2.d4 d5 3.c3 c6 4.e4 c6 5.a3 exd5 6.bxc3 c5 7.d4 0–0 8.g5
   F4 leaves its Book after this?!

8...a5 9.e2 g6 10.d1 c6
   And R8 also now leaves its Book. Evals are R8 –36, F4 +94 –> e3.

11.f3 a4 12.e2 b5 13.h4 h6 14.c1 c8

15.h5 f6

R8 still shows it fairly even at –16, but F4 has moved up to +103. F4's view of White's vulnerable e5 and its loss of castling rights appears to be very different to its opponents.

16.f4 cxd4!

16...c4? was intended until well into 3 mins – fortunately F4 had been thinking in R8’s time on the correctly expected f4!

17.exd4?!
17...cxd4 afx5 and F4 shows +76.

Now, in fact, F4 reads +116.... but not for too long as R8’s extra mobility on d4 means that the sting can be taken out of Black’s attack.

18...d3  a4x4 19. a4x4  a6 20. a4 xa4 bx4
And both evens are close to =.

21.f4 a5 22.h2 c6a6?!
An utterly mysterious move, at least to me, as it undoubles and centralises White’s previously unhealthy A’s!!

23.b6  bxb6 24. c3 e8 25.a3  a8
26.a2  xb6 27. a6 b6 f6 28.d4 f5 29.a5
30.hxg6  g7 31.a4

DIAGRAM. Apparently giving Rebel8 a & breakthrough! It shows +118, F4 – 88.

31...a6 32.d3 b8 33.c5 exd5
Now, does White guard the 2nd. rank, e.g. c2, or...

34.e1 f4 35.e3? h2! 36.a3  f6 37.a3 g6

37.g3?!
I am not so keen on this. Maybe
37.a3 was better, then 37...h7 38.a3 returning to the threat of pushing the e/.

37...b1 38.e3 h5 39.h2 b3+ 40.f2
38.d8! 41.h1 e6 42.e1 h4 43.h4  h5
Now both programs show themselves ahead: R8 with +26, F4 with +38.

44.e1 e3 45.ee2  e3
45...dxc5?! looks tempting, but
46.dxc5  e4 not (46...dxc5?! 47.d3  xh4 48.d4+!  47.e6  dxc5 48.d3  xh4 49.e7
d6+! 50.d3 threatening 8h1 mate 50...h5
51.xg5+ should be drawn.

46.g8  xh4+ 47.d2  xh4 48.e7  xh2+
49.e3  g6! 50.e5  g5 51.xg5  e5

Frank suggests that f4! was best here.

52.g6
52.xa5? traps his own H, so 52...f4+
53.d3 f3 54.xa8 e2–+
52...f4+ 53.d3 f3 54.e3 f4 55.e7+
56.xa4 He2+ 57.c3 xh4 58.e6
He1!
The Rebel8 - Crafty Challenge

Nodes per Second, SPEED v KNOWLEDGE Test

The Crafty-Rebel NPS challenge

Acknowledgements to Ed Schroder's web page for much of the preamble and other information.

A 10 game TIME HANDICAP match between Crafty and Rebel started in late February 1997.

This match (or, rather, experiment) was a result of a huge discussion on the Internet concerning the current state of playing strength of today's PC chess programs, compared with the supposed strongest chess program Deep Blue1/2 of IBM.

The main participants in the discussion, Bob Hyatt (Crafty) and Ed Schröder (Rebel), strongly disagreed about the Elo gap between today's strongest PC chess programs and the Deep Blue monster machine of IBM.

In the fire of the discussion Bob Hyatt stated that Deep Blue2 is at least 200 Elo points stronger than the best PC chess program. Ed Schröder replied that the gap is not more than 50 Elo points.

Bob Hyatt believes that Deep Blue2 is around 2600-2650 Elo, whereas the best PC programs, even on the fastest Pentium-Pentium Pro machines, in his opinion only get to 2400-2450.

Ed believes that a program such as his Rebel8, on a hot Pentium Pro, will grade at close to 2600 Elo! He also believes that the top PC programs, and he named Rebel and Hiarcs, have better chess knowledge in them than such as Deep Blue, and that the extra knowledge would make up for the overwhelming speed, or NPS (Nodes Per Second) difference.

Bob believes that Deep Blue2 has plenty of knowledge in it, and that the sheer scale of the speed difference will always blow PC programs apart.

After that Bob challenged Ed to a 50:1 time handicap match between Crafty and Rebel, to demonstrate that "speed rules". Ed Schröder accepted, saying "let's make it a 100:1 time handicap match then".

So here we are, a 10 game match between Crafty and Rebel, played on tournament 40/2 level by Rebel8, and Crafty using 100 x more time than Rebel8. Both were running on today's fastest machines, the Pentium Pro 200 Mhz. It was agreed there would be no 'thinking in opponent's time' so that Rebel8 would not be able to partially equalise the time gap, should it correctly anticipate a high percentage of Crafty's moves!

Now what will this experiment prove?

Deep Blue1, the big iron of IBM due to his incredible hardware, was able to search around 100,000,000 chess positions in one second (this is what we call NPS), whereas the average PC programs 'only' search 50,000 to 100,000 NPS. Because of this, it's generally assumed that both Deep Blue1 and the even faster DB2 (or Deeper Blue!) will crush any PC program in a 10 game match, since it has been proven that speed is very important for chess programs.

With this match we hope to get more information about what machine power does for chess programs.

There will also be a 50-60 game match between Crafty and Rebel8 on EQUAL tournament time, which will give a good indication of the relative 'true' playing strength of both programs.

Then we can compare these results with those from the handicap match, and make some assessment concerning the effect of the speed.... will it "kill" Rebel8, or will the claimed extra knowledge quality of the latter enable it to hold Crafty to a close score?

How Good is Crafty?

A question I should probably leave to the end of the Match! However we know it grades highly (around 2500) in Internet Blitz games against humans, and it has often been mooted that it isn't too far behind the leading PC programs.

On the other hand SS regular Michael Redman, in our Issue 68, declared his personal disappointment after testing Crafty
against the Novag Diamond.
Possibly Crafty's result in the 1996 World Micro Event is our best guide... I print its score and position alongside programs for which we have gradings.

<table>
<thead>
<tr>
<th>WMCC 1997 - Rated Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.5 Nimzo3.5 4251</td>
</tr>
<tr>
<td>7  Crafty</td>
</tr>
<tr>
<td>6.5 FritzX 2412</td>
</tr>
<tr>
<td>6  Gandalf 2104</td>
</tr>
<tr>
<td>5.5 Pandix 2049</td>
</tr>
</tbody>
</table>

Falling between Nimzo and Fritz might suggest a figure of around 2425 for Crafty, though the proximity of the weakish Gandalf should be noted.

Also, the FritzX rating is taken from Fritz4's grading, but 'X' often made different (weaker) moves than its predecessor, and Franz Morsch afterwards said it was a disappointing experimental re-write, and was not as good as either Fritz3 or 4.

Therefore, again taking into account Michael's review, my guess is that it's not 2425. Bob Hyatt says that it is optimised for [1] Human opposition, and [2] Blitz chess for the Internet. Therefore I'd estimate Crafty at 2350 for now, compared with 2520 for Rebel8: so let's see how it goes.

Rebel8 (2520) – Crafty
GAME 1.

1.e4 c5 2.b3 d6 3.Qb2 f6

The first 'crisis' – Crafty's gone out of Book! The final auto-test version has been wrongly compiled, and half the Book is missing. It is agreed they'll play on.

4.Qc3 g6 5.g3 Qg7 6.Qg2 0–0 7.Qe2

This is Rebel's first move out of its Book. The advantage of the lost Crafty Book may not have been too influential, as we note R8 shows +18, Crafty-5, and Crafty's time allowance surely renders his loss in this area of small significance!

7...e5 8.0–0 Qc6 9.f4 c4

R8 and Hiarcs6 both consider this a small inaccuracy, giving a ro eval swing to White. However if 9...Qg4 10.h3, would Black retreat with Qe6, happy to have created a small possible weakness in White's Q-formation, or play 10...Qxe1 11.Qxe1.

10.Qh1 cxb3 11.axb3 Qg4 12.h3 Qxe2

13.Qxe2 Be8 14.f5 d5 15.exd5 Qxd5

16.Qh2 a6 17.Qe4 Qd7 18.fxg6 hxg6

19.Qc3 Qxc3 20.dxc3

20.Qxc3 was considered by many to be the better recapture, whilst Ed Schroder was convinced that R8's choice was right.

20...Qc7?!

This resulted in another eval swing, according to Rebel8 and Hiarcs6, towards R8. Qe6 suggested 20...Qe6 21.Qxd5 Qxd5 22.Qf1 Qf1 23.Qxf1 Qg8 and White +22. However, with 20...Qc7 Crafty went to a small plus for the first time... +28.

21.Qe5 Qd8 22.Qf3 Qb8

Here R8 showed +47 and Crafty +34... the last time the latter would show itself ahead.

23.Qd1 Qe6 24.h4!!

Full marks for boldness... but R8, showing +61, doesn't know the time control is 100:1 against it when it gets tactical! Nevertheless, good positions and winning chances are obtained by good chess and superior knowledge/understanding before tactics 'take over'.

24...b5

It is at this point that Crafty apparently calculated that it would lose a Q, and starts spending much effort to control which pawn goes. Bob Hyatt believes it should have pushed the c-pawn to get rid of it, and thinks that's the one it hung on to because it's a passed-pawn. Rebel's analysis does not show the win of the Q yet, but its eval indicates that it expects some reward from its superior play!

25.h5 gxh5 26.Qxh5

26.Qa3 was stated by Crafty's 'deeper analysis' to be slightly stronger for White - I don't agree. I also note that Crafty's own eval. after Qxh5, though steadily to -20 for a couple of moves, drops heavily to -84 with 28...a5.

26...Qb6 27.Qg2 Qd8

Presumably to allow the a6-Q to get, say, to h8. However, though it also protects the dodgy f7 from here, it also means
White's d5 now targets that square.
28.\textcolor{red}{\texttt{\textbullet}} c1!
A nice reorganisation of White's pieces begins.
28...a5 29.\textcolor{red}{\texttt{\textbullet}} e4!
Changing the attack to h7. H6 shows White at +172.
29.e6 30.\textcolor{red}{\texttt{\textbullet}} e3
30.c4 also looked promising.
30...e6 31.\textcolor{red}{\texttt{\textbullet}} d5 e8 32.\textcolor{red}{\texttt{\textbullet}} h7+
32.\textcolor{red}{\texttt{\textbullet}} h7+ was Crafty's recommendation here, then 32...\textcolor{red}{\texttt{\textbullet}} f8 33.\textcolor{red}{\texttt{\textbullet}} h2 which \textit{is} very strong!
32...\textcolor{red}{\texttt{\textbullet}} f8 33.\textcolor{red}{\texttt{\textbullet}} d3

With this the R8 eval got to +279 whilst Crafty's deeper search showed -351. The rest, despite the 1:100 time disadvantage, should be (and was) a matter of correct technique for White.

However it was around here that Bob Hyatt began to post almost daily confirmations on the Internet that the 100:1 time ratio was 'proving' a big advantage to Crafty, just as he had said it would! How come? Because it was avoiding worse losing moves that shorter searches might have made, and also it knew it was losing before Rebel knew it was winning!

Understandably, I think, this did not go down well in certain quarters.
45...a3 46.g6 f6 47.\textcolor{red}{\texttt{\textbullet}} a1 \textcolor{red}{\texttt{\textbullet}} a7 48.b4 \textcolor{red}{\texttt{\textbullet}} d7
49.e6 \textcolor{red}{\texttt{\textbullet}} e6 50.e6 \textcolor{red}{\texttt{\textbullet}} f6 51.\textcolor{red}{\texttt{\textbullet}} f2 \textcolor{red}{\texttt{\textbullet}} g5 52.\textcolor{red}{\texttt{\textbullet}} f3 \textcolor{red}{\texttt{\textbullet}} g8 53.e4 \textcolor{red}{\texttt{\textbullet}} f8 54.e5 a2 55.e3 \textcolor{red}{\texttt{\textbullet}} a3 56.\textcolor{red}{\texttt{\textbullet}} xxe4 \textcolor{red}{\texttt{\textbullet}} xe4+ 57.\textcolor{red}{\texttt{\textbullet}} xe4 \textcolor{red}{\texttt{\textbullet}} g7 58.\textcolor{red}{\texttt{\textbullet}} e4 \textcolor{red}{\texttt{\textbullet}} xg6 59.c6 \textcolor{red}{\texttt{\textbullet}} d6 60.c7 \textcolor{red}{\texttt{\textbullet}} xc7 61.\textcolor{red}{\texttt{\textbullet}} xc7 1–0

Just before the game finished, Ed Schroder posted: "Today I decided to end the NPS challenge after game 1 is over... I am not interested to read all kinds of possible and impossible explanations to imply or hide the real reason Crafty lost. For instance Bob Hyatt wrote:

"I'll post some interesting analysis later, but you might be surprised at some of what went on in this match. For example, in at least two places Crafty played a weaker move, simply because it saw at depth-5 something it thought Rebel would play, and didn't like it. In these two cases I know of, I've tested Rebel on the position, and it wouldn't have made the move Crafty feared. So Crafty simply avoided something that would not have happened, and consequently played something worse."

As Ed says, this presumably means that both Crafty and Rebel, Hiarcs et al would really struggle against Mephisto 1, Boris Diplomat, Sensory 8 and my wife etc.
because they would be constantly avoiding all the best moves for fear of what their weaker opponents might just play.

He concluded: "I am not in the mood for these kind of explanations for another 9 games over the next 5-6 months; my time is too precious for that... but I believe this game shows that Rebel was able to handle the big time and ply search gap - this has always been my point, and game 1 has proven it. I believe this also counts for other chess programs such as Hiarcx etc".

For the record, the 40/2 Match was also stopped, with Rebel8 leading by 9-3.

**Crafty and the Auto232**

There was one other problem which kept rearing its head throughout all the games, and that was a constant communication problem between Crafty and the AUTO232 software.

Many new 'auto232 corrected' versions of Crafty were sent to Ed for installation as the games went on, but neither Bob nor Ed were able to find a solution.

After Bob Hyatt had received log files of the early 40/2 games and Crafty analysis, he felt there might be a problem with the moves being played, and the situation, requiring hours of Ed's time, became 'unworkable' after attempts to start game 13 with Crafty as White, failed.

This should be born in mind when viewing the 9-3 score: it may or may not be reliable. A great shame, and a sad end to what had seemed a very promising and interesting experiment.

Ed's web site was attracting over 500 callers a day during the Match, as far as I could tell. But his final message "Match Ended" on April 1st. was not a joke.

**A Final Piece completes our Jigsaw!**

Also after the Match there was much discussion on the occasionally varying evaluations the pair showed, and also the reasons for same.

Mainly it was assumed that the Crafty evaluations are mainly materialistic, showing increases/decreases according to whether it could see pawns being dropped or not.... and the Rebel evaluations were more positional and knowledge-based - if you get a decent position, something good will happen, even if you don't necessarily know what just yet!

However it was also revealed that Rebel8 uses a slightly unusual pawn evaluation!

Most programs are 'supposed' to be using approximately the following to indicate their evaluations:

- Pawn = 1.00 (or 100)
- Bishop and Knight = 3.00 (or 300)
- Rook = 5.00 (or 500)
- Queen = 9.00 (or 900)

It is fairly widely known that Hiarcx uses Pawn = 1.28 (or 128) with other values also x 1.28. It is believed, but not confirmed, that MChess Pro uses a figure either the same as or similar to this. But Ed confided later, to help us appreciate the merits of R8's figures that:

"In Rebel the following, as basic values for the MIDGAME, are true:

- Pawn = 0.75
- Knight = 3.00
- Bishop = 3.00
- Rook = 4.75
- Queen = 8.875

After eval:

- a Pawn can be worth 0.25-2.00
- a Knight can be worth 2.25-3.75
- a Bishop can be worth 2.25-3.75

and so on.

Please note that the figures are also completely different for the PRE-ENDG, NORMAL ENDG, MINOR-ENDG and PAWN-ENDG. I hope this explains a little".

So now we've learned a something of the sophisticated type of evaluation techniques which go into all of the top-rated PC programs!

Following the end of this experiment, two other Interneters have arranged to play Crafty (Game in 480 hrs) v Hiarcx6 (Game in 6 hrs), again the intention being a 10 game Match. We'll look at this in future issues of S/S... it'll take a while!
HIARCS6.0 v. I.M Deen HERGOTT
First EVER Commercial Computer v I.M: 6 game MATCH @ 40/2

The 'Beat any I.M' Challenge!

We reported the lead-up to the Match in SS/69: Canada's Alan TOMALTY (a.k.a. Komputer Korner on the Internet), having seen Hiarc6 defeat two I.M's at Blitz by a combined score of 12½-3½, challenged any I.M to a 40/2 Match, predicting that "Hiarc will win!"

The Canadian I.M's had reportedly been pretty dismayed by their defeats, but Deen HERGOTT was nevertheless quick to take-up the 40/2 Challenge if cash could be found. The other Blitz-defeated I.M., Tom O'DONNELL, was to be his second!

Sponsors at the Ready

'The Challenge' and its acceptance caused some concern at HIARCS' HQ in England - there could be both a lot to win or lose for 'us', in terms of our newly found big reputation.... and sales! But the possibilities quickly captured the imagination of everyone else, and it wasn't long before a healthy list of potential sponsors had been found.

Mark, David Hatchett and I believed the venture was one we should fully support. We had no choice as to whether or not it would take place, but if the program is that good, it is exactly the sort of event which should prove it one way or the other! We felt that chances were about 50-50 over 6 games if a Pentium Pro/200 could be used.

So the HIarc's name (Applied Computer Concepts) appeared on the list of $1,000 purse sponsors, along with Mike Leahy (BookUp), and ChessBase.

Other sponsors were Ottawa's Camdev Properties, also Computer City who provided the Pentium (MMX/200 in fact, which is little different to the PPro/200 in HIarc's case), and the Chess Federation of Canada provided the premises and Internet access.

Our Forecast:
3½-2½ at best, if not...3-3!

Our '50-50' feeling was based on what had happened in DEEP BLUE vs KASPAROV - the computer's early win was soon overtaken by Kasparov's chess knowledge and experience, once he had got used to it and spotted its areas of weakness. This factor has been referred to so often, and by so many people, that it has inevitably affected our own view of 'real' Computer ability.

Though we think the HIarc6 program really is outstandingly good, we are not
under any illusions that there are always things which can be improved - we already know of one or two ourselves.

So, we imagined we might take an early lead over the I.M, but it had to be expected that he would be able to find ways to trouble Hiarcs as the Match progressed... particularly as, courtesy of Alan Tomalty, he and O'Donnell were given further time to practice and prepare using a beta-version!

**Who’s Deen Hergott?!**

Well: firstly a very strong Canadian I.M who has represented his country no less than 6 times in Olympiads!

His official Canadian rating is 2513, which ranks him 4th on the Canadian rating list, but his 1996 FIDE Elo figure is shown as 2485.

He has been very close to his G.M norm on at least one occasion, and is not only a very talented chess player, but was also Editor of Canada's chess magazine 'En Passeant' (until O'Donnell, in fact, took over).

He is a highly respected chess-teacher and writer, and his 'Master's Forum' column is still one of its most popular regular articles in the Canadian mag.

**The Games**

All played at time control 40/2, then G/60 finish.

Hiarcs

| 6 | 4 | 2 | d | 4 | d | 5 | 3 | 2 | d | 2 | f | 6 | 4 | e | 5 | f | d | 7 | 5 | f | d | 3 | c | 5 | 6 | c | 3 | b | 6 | 7 | f | e | 2 |

The H6 Book ends here. The possibility that Hergott and his second, as well as playing many Blitz-test games against H6, also obtained a copy of H5 seems pretty likely from the regularity with which he managed to get H6 out of its (my!) Book quite early in 4 of the games.

7...a6 8...xa6 8...e6 9...f3 9...e7 10...a4 8...e7 11.dxc5 bxc5 12...d4 0–0 13...e5 0 a5

14...d5 8...b6 15...e2 a4 16...g3 8...b8

17...h5 8...a7 18...g5 8...e8

18...e8 was recommended by Crafty here, expecting 19...e6 8...e7. However 19...g6! fxg6 (19...fxg6?? 20.exf6 followed by fxe7?) 20.exf6 is good for White, as 20...gxf6 cannot be played, because of 21...xf6, winning easily. Therefore 20...h6, to keep the 8... out of g3, and now 21...d2

| 8 | 7 | 22 | 8 | d | 3 | + | – |

19...f4 8...xg5 20...xg5 8...g6 21...f1 8...g7 22...d3 8...f7 23...c2 a3?!

23...c4 looks better. White plays 24...b4 then 24...a3 25.bxa3 8..xa3

24...b4 8...a4 25...c1

25...e8?!

Here, according to Crafty, 25...h6 is winning for Black (+44). Indeed its line 26...h3 8...c4 27...d4 8...d4 does seem better for Hergott than the move he chose.

Mark Untecke and Bob Hyatt carried the discussion further after the game. Their analysis goes: 27...b2 28...g4! a quickly found 'solution' by H6. 28...g5? (or 28...b8?!) 29...xg5!

I also looked at 29...h5?! here, which seemed very promising to me at first with 29...h5 30...xh5 8...g7 31...xg5. But now I think that 31...g8 does leave Black with an advantage, so Mark's proposed line is best.

29...hxg5 30...xg5 8...d8 31...g3=. 26...d2 8...d8 27...f3 8...b4

27...8...e7 was a possible improvement.

28...xb4 8...e4 29...c5 8...f6 30...d4 8...c1

31...xc1 8...h4

The close arrival of the enemy 8... like this always looks threatening. But H6 defends excellently, and any danger soon evaporates.

32...c3 8...c4

32...a8 was recommended by H6, eval +85, and Crafty +94; so H6 is now ahead. I was watching Fritz at the time, and it showed an equal eval whether 8...c4 or 8...a8 was played, but it was wrong... as we see!

33...g3 8...g4 34...f3 8...h5 35...a5 8...c7

Crafty's analysis has been stopped: "The game is basically over now!", explained Hyatt. It all goes to show how much
opinions vary (see the note to 37...\$b6 below). \$h6 was reading +174, being in the process of launching its knight's now the attack has been visibly repelled. 36.\$h5 \$e8! 37.\$c3

How about 37.\$xc4? At first 37...\$xc4 38.\$xa3 \$c2 looks great for Black, but I think 39.h4 holds, with still a +50 for White. So that might have been okay too, though not as good as the move \$h6 played.

37...\$b6

"The losing move", (Tomalty); "caused as Hergott was in time trouble".

If there is a better move here, it would be \$h6's own recommendation which was:

37...\$f5. Now 38.\$xa3 or \$f4 seem best, and keep the advantage. (But not 38.\$xc4?

\$xc4 39.\$xa3?? \$c2; also 38.\$g4? fails, to 38...\$h4, and if 39.\$xf3 \$d6!)

38.\$d6 \$d6! \$h6 reads +261 and, after this move, Black's position caves in.

39...\$e7 40.\$e5 \$e7 41.\$a5 \$f8 42.\$a8 \$xf3 43.\$f4 1–0

Deen Hergott (2485) – Hiarc 6.0 (2600)

[A08]. Game 2

1.\$f3 d5 2.g3 c5 3.\$g2 \$c6 4.d4 e6 5.0–0 \$f6 6.c4 dxc4 7.\$a4 \$d7 8.\$xc4 b5 9.\$d3 \$c8 10.\$xc5 \$xc5 11.\$c3 b4 12.\$e4

This puts \$h6 out of Book – a better performance this time! – we had expected \$h5.

12...\$xc4 13.\$xe4 0–0 14.\$d1 \$e7 15.\$g5 \$f6 16.\$h3

16...\$b8?

Looking through the opening after the game, having learned that this is actually \$h6's first move out of known theory (16...\$h8 is on some databases!), I had to conclude there are many difficulties for

Black. So maybe there are one or two improvements even before here. I certainly don’t feel that this was a good choice, as it really puts the \$e in the game long-term, but nor do I find \$h8 that much better either!

17.\$e3 \$f5 18.\$xe5 \$xe5 19.\$f4 \$e7

20.\$a1 \$a4 21.\$b3 \$e6 22.\$e5 \$e4 23.\$g2 \$g5?!

Positionally we might call this 'a losing' move – but it makes things happen at a time when Hergott was threatening to strangle the computer, so in a strange way it's both a welcome and, even, humanlike move, refusing to die a slow death and seeking counter-chances!

24.\$e3 \$xe5 25.\$xg2 \$f8 26.\$d4 \$h6

27.\$c4 \$xc4 28.\$c4 \$h7

\$h6 had dropped to +175 here, and started spending plenty of its big time-advantage seeking out the best possible replies. This move took up 25 mins, 30 will take 16 mins, and 31 another 27. However after 9 mins on 32...\$xg4 it started moving pretty quickly again, keeping piece activity concentrated towards White's \$h.

29.\$h4 \$g3 30.\$c1

30.\$xg4! here was discussed over the Internet and, it is reported, found after some time by Fritz4 as winning. It seems good, too. For example: 30...\$xg4 31.\$e4+ \$h8 32.\$g6.

30...\$a6 31.\$c6 \$g7

The critical moment of this game. DH has a clear advantage, and should be winning despite \$h6's clever defence. But White's time is getting short and he's trying to bring an end to some of \$h6's constant efforts to complicate every issue, so...

32.\$xg4?!

Wins material and simplifies, but also makes Black's task easier. Therefore
relatively best was 32...gxf4 dxc7 33.e4, though a move such as 33...gxf8 here would clearly multiply the complications once again.

32...gxa6 gxe5 33.gxa7+ g6 should also win, but Hergott said he thought this could be particularly difficult.

But, regarding the real reason for 32...gxe4, see my note to move 36 below.

32...gxe4 33.gxa6 gxe4+ 34.g1 g6
35.e7 gxe2 36.gxa7 g5+.

Amazingly g5 will be a key move once again for H6 in game 6!

A move Hergott had completely missed when playing 32...gxe4. In fact he'd believed he was mating Black, and only saw this saving response when they'd got part way down the line! He wasn't alone, as the feeling on the Internet was that Hergott's attack was overwhelming, until reports of this move in H6's analysis line filtered through!

37.g2?

37.g4 must be better, attacking the sad g–b4. If Black defends by 37...g4 (but NOT 37...g6?? 38.h5+!!) 38.gxg4+ fxg4 39.g7 b8 40.g5+ and I think White must win another g, though it could still be difficult to finish H6 off.

37...gxe4+ 38.g2+ g8!

Fine counter-attacking play by Black, this should have really rung the warning bells in Hergott's ears! (see note after game).

39.d6?

Played in now severe time pressure, a result of H6's persistency in creating complications. Even though Hergott will have known he was 'winning', the constant need to rediscover a winning method is taking its toll.

39.g7 was right, so that after 39...gxe2
40.g2, the Black g cannot return to e4.

39...g3 40.g2+ g4+

H6 now reads =, and its operator offered a draw, which was refused.

41.h2 gxe2 42.h4 g4 43.g3

H6 expected 43.g5, and would then have played 43...gxf3! instantly... still drawn after 44.gxg3 g4+ etc.

43.gxe3 44.fxe3 e4 45.b7 gxe3
46.hxh4 gxe2+ 47.g3 gxa2 48.h5 g2
49.g4+ g6 50.gxf5+ exf5 51.b4 e3+
52.g2 h8 53.g5+ h6 54.gxf5+ g4
55.h2

Some programs were reported to be showing Black at +150, but the H6 eval never got above +71 and was mostly in the 30/40 range.

55...h5 56.g2+ h4 57.g8 hxb4

Anyone well-versed in basic H+g endings knows this is now a draw, and I thought it a shame the H6 operator didn't offer to shake hands around here.

58.g2 h4 59.g8 h4 60.g7 h3 61.g8 h3 62.g7 h3 63.g8 h3 64.g7 h3+ 65.g2 h3 66.h2 h3 67.g8 h3 ½–½

The note to move 38 is an attempt at a small joke! The place where the match was played, at the Canadian Chess Federation's offices alongside a busy shopping mall in Ottawa, had proved a little noisy for Hergott's liking in game 1. So much so, he had asked for ear-plugs for game 2 - which Alan Tomalty bought for him, and which he used... as well as a pair of ear-muffs of his own which he brought along!

The Hiarcs team made a major decision before game 3. Though 'we' are fairly sure that the 'Normal' playing style is just about Hiarcs6's best, Hergott had let it be known that he and O'Donnell had found and prepared a trap for Hiarcs for game 3.

We guess that he was assuming H6 would repeat the line from a won game, and go for another French. Though that's not exactly how its book learning works, we wanted to minimise any risk of falling for some special preparation! The very threat also added weight to the feeling we had that Hergott had access to a version of Hiarcs5/6.

Therefore we decided to alter the opening book setting from Tournament to Normal, giving slightly more equal chances to its opening with any of c4/d4/c4/0/6.

Mark had also found that it played a slightly different (and possibly better) 9th move on its Aggressive setting. Even if the move's not that much better, it would be likely to put Hergott out of his stride - and secretly Mark still prefers Aggressive anyway!

Hiarcs6 (2600) – Deen Hergott (2485) [A56]. Game 3

1.e4

Well, the Hergott 'trap' will have to wait for another game!

1...d6 2.d4 c5 3.d5 e5 4.e3 d6 5.e4 g7
6.\text{\textit{g3}} \text{\textit{f3}} 7.\text{\textit{e2}} \text{\textit{f8}} 8.0–0 \text{\textit{g6}}

This is the computer's Book move, but the line ends here and H6 is now on its own again.

9.\text{\textit{e3}} 10.\text{\textit{b4}} 11.\text{\textit{bxc5}} 12.\text{\textit{b1}}

13.\text{\textit{d4}} \text{\textit{c7}} 14.\text{\textit{c2}} 15.\text{\textit{d2}} \text{\textit{f4}}

16.\text{\textit{xf4}} \text{\textit{xf4}} 17.\text{\textit{exc1}} 18.\text{\textit{d3}} \text{\textit{e5}}

19.\text{\textit{h4}}?

Is this really okay?! It's certainly very risky but, in the game, the pawn's presence caused Hergott a lot of trouble... and time.

20.\text{\textit{f3}} \text{\textit{e7}} 21.\text{\textit{e5}} \text{\textit{exf5}}?

21...\text{\textit{dxe5}} was expected by the program and is, I think, better. Of course it is also double-edged: both sides would have protected passed-pawns.

22.\text{\textit{b5}}

H6 evaluated +70 playing this...

22...\text{\textit{d7}} 23.\text{\textit{exd6}} 24.\text{\textit{dxed6}} 25.\text{\textit{e5}} \text{\textit{xe5}}

25.\text{\textit{e7+xh8}} 26.\text{\textit{e4 b8}} 27.\text{\textit{e1}}!

\text{\textit{e5+}}

H6 starts to dominate the game from this point.

27...\text{\textit{h6}} 28.\text{\textit{d3}} \text{\textit{a6}}

28...\text{\textit{xh4}} 29.\text{\textit{xb8}} \text{\textit{xb8}} 30.\text{\textit{a3}} \text{\textit{e8}}

31.\text{\textit{exa7}} would suit White.

29.\text{\textit{c3}} \text{\textit{xe8}} 30.\text{\textit{exb8}} \text{\textit{xb8}} 31.\text{\textit{d3}} \text{\textit{d6}}

32.\text{\textit{e5!}} \text{\textit{xe5}}

No choice. If 32...\text{\textit{f8}}? 33.\text{\textit{xe4}}.

33.\text{\textit{xe5}} \text{\textit{f8}}?

Blamed by most as the losing move. But Hergott believes he was losing to the passed d–pawn anyway, and that this would result in his best practical chance.

Yet, in a few moves, the same observers on the Internet would be arguing as to whether Hergott had actually bamboozled Hiarcs... or not!

Still, 33...\text{\textit{g8}} was expected by most commentators, and does look best. H6 would play 34.\text{\textit{e7}} but after 34...\text{\textit{ed8}} I don't see H6 as having clearly a winning advantage, though it showed +134.

34.\text{\textit{xh8+x}}

H6 now showed +444!

34...\text{\textit{xe8}} 35.\text{\textit{b5}}!

It becomes clear that it will cost Black his \text{\textit{e7}} to stop the \text{\textit{d5}}.

35...\text{\textit{g6}} 36.\text{\textit{xe8}} \text{\textit{g7}} 37.\text{\textit{d6}} \text{\textit{f6}} 38.\text{\textit{d7}} \text{\textit{xd7}}

39.\text{\textit{xd7}} \text{\textit{e5}}!

An unexpected turn of events... and sudden panic amongst the H6 supporters on the net as we hadn't expected Black's \text{\textit{e7}} to advance! Black sacrifices his \text{\textit{f7}}–\text{\textit{d5}} to make a grab for White's a–\text{\textit{d5}} making his own a7–\text{\textit{d5}} passed. And White's own c4–\text{\textit{d5}} stops our \text{\textit{e7}} intervening! Has Hergott found a really clever tactic to maybe even win?!

40.\text{\textit{xe8}}

Mark sent a quick e–mail message to me - you can do clever things whilst connected to chess.net! - and told me that he and his PPro200 said Hiarc was okay, looking very deep and still confidently reading +462.

40...\text{\textit{d4}} 41.\text{\textit{xf7}} \text{\textit{g5}} 42.\text{\textit{hxg5}} \text{\textit{hxg5}} 43.\text{\textit{h2}}

Here most observers expected \text{\textit{d4}}, to see if the White king can get back in time. "No need", says H6, showing +639. The rest of us are now counting squares and trying to work out if, after White loses his \text{\textit{e7}} to stop Black's \text{\textit{a5}}–\text{\textit{d5}}, the \text{\textit{e7}} now on \text{\textit{c5}} can somehow be stopped after Black's \text{\textit{b3}} and \text{\textit{xc4}}.

43...\text{\textit{a5}} 44.\text{\textit{b3}} \text{\textit{a4}} 45.\text{\textit{a3}}!

A brilliant, tempo-winning response.

45.\text{\textit{c3}} 46.\text{\textit{e4}}! \text{\textit{a3}} 47.\text{\textit{e8}} \text{\textit{xa3}}

48.\text{\textit{xc5}}

Another tempo–winning device, though this one was much easier to see... wait until the Black \text{\textit{e7}}'s moved away before taking on \text{\textit{d4}}. H6 reads +959, and I've relaxed now!

48.\text{\textit{b3}} 49.\text{\textit{xa4+}}

H6 reads +1322, and it's \text{\textit{g7}}–\text{\textit{d5}} promotes before Black's \text{\textit{c5}}–\text{\textit{d6}}... I'll leave readers to work it out for themselves - the main thing
is that H6 had, and Hergott knew it.
Writing up my notes, it now seems more straightforward than it did at the time — but I can tell you our hearts were pounding after 39...\textit{ee}5 during the game! $1-0$

So, Hiarcs leads by $2\frac{1}{2}-\frac{1}{2}$!

\textbf{Deen Hergott (2485) – Hiarcs6.0 (2600) \[A11\]. Game 4}

1.\textit{gf}3 d5 2.g3 c6 3.\textit{gg}2 \textit{ff}6 4.0–0 \textit{gg}4 5.c4 \textit{ee}6 6.b3 \textit{dd}6 7.\textit{bb}2 0–0 8.\textit{ee}5

The H6 Book has 8.\textit{xa}3 here, so it’s now on its own. The position is very even, and remains so almost throughout the game.
8...\textit{gf}5 9.d4 \textit{bd}7 10.\textit{dd}2 \textit{cc}8 11.\textit{ee}1 \textit{ee}7 12.a3 \textit{bb}6 13.\textit{cc}1 \textit{xe}5 14.dxe5 \textit{ee}4 15.exd5 \textit{cx}d5 16.\textit{bd}8 \textit{cb}8 17.\textit{ff}3 \textit{bb}8

The H6 eval briefly reached $+34$ here, but there’s really little or nothing in it still.
18.\textit{wa}1 \textit{gg}6 19.\textit{cc}1 \textit{bb}5 20.\textit{dd}4 \textit{gg}5 21.f4 \textit{ee}7 22.\textit{xe}4 dxe4 23.\textit{cc}6 \textit{bb}7 24.\textit{xe}7+ \textit{xe}7

After this exchange we see that both sides have poor \textit{g}s, and some of the manoeuvres which follow see each player try to remedy this for themselves.
25.\textit{cc}2 \textit{bb}7 26.\textit{dd}4 \textit{bb}8 27.\textit{ff}2 f5 28.\textit{ee}3 \textit{ee}7 29.\textit{ee}1 \textit{ee}8 30.\textit{cc}7!

\begin{center}
\includegraphics[width=0.5\textwidth]{diagram.png}
\end{center}

\textbf{Once this was made known, the 'net folk pronounced Hiarcs6 the equivalent of an Eric Cantona or a Martina Hings}. What a fickle lot we are!
31.\textit{xe}2 \textit{bb}5+ 32.\textit{ee}1 \textit{xb}2 33.\textit{ee}8!

Worth a try!... there are two mistakes available to Black.
33...\textit{wh}1+!

\textbf{Thank goodness! Not, however 33...\textit{xc}8?? 34.\textit{xc}8+ \textit{ff}7 35.\textit{ee}7+ \textit{gg}6 36.\textit{xa}7 \textit{gg}3+ and now the \textit{g} can escape to the e-file! 37.\textit{dd}2–.}

Nor 33...\textit{xc}3+? 34.\textit{ff}2! \textit{dd}3 35.\textit{xd}x8+ (35.\textit{cc}7!!?) 35...\textit{xd}x8 36.\textit{cc}6 and a draw is the most likely, though White still has slight chances.
34.\textit{ff}2 \textit{ff}3+ 35.\textit{ee}1 \textit{wh}1+ 36.\textit{ff}2 \textit{ff}3+

Game drawn by mutual agreement $\frac{1}{2}$–$\frac{1}{2}$.

We began to doubt that Hergott could get back into the Match now — we were wrong!

\textbf{Hiarcs6.0 (2600) – Deen Hergott (2485) \[C11\]. Game 5}

1.e4 e6 2.d4 d5 3.\textit{cc}3!

Hiarcs has given Hergott the chance of another French, in which he’s supposed to have prepared the special trap. However the definite advantage of having a wide Opening Book guarantees we won’t see it in this Match, now that H6 has varied quickly from game 1.
3...\textit{gf}6 4.e5 \textit{ff}d7 5.f4 c5 6.\textit{ff}3 \textit{cc}6 7.\textit{ee}3 \textit{bb}6 8.\textit{wa}4 \textit{wa}5+ 9.e3 c4 10.\textit{bd}4 \textit{cc}7 11.\textit{ee}2 \textit{ee}7 12.0–0 f5 13.\textit{ex}f6

H6’s first move out of Book, and reading +-75.
13...\textit{xf}6 14.\textit{gg}5 \textit{ff}8 15.\textit{cc}2 \textit{ee}7 16.\textit{gg}4 b6 17.\textit{ae}1 h6 18.\textit{ff}3 \textit{dd}7 19.a3 0–0–0 0
20.\textit{ff}5 \textit{xe}5 21.fxe5 \textit{ee}8 22.\textit{bb}2 \textit{gg}6
23.\textit{aa}4 \textit{ff}5?!

Black looks to be wrapping himself up, and most commentators wanted to see the freedom—seeking
23...\textit{ff}3.

24.\textit{ff}4 \textit{ud}7
25.b5

\textbf{Diagram}
White’s attack is beginning to look a little dangerous, with Black’s minor pieces still looking disadvantaged.

25...a5!
A fine and very unexpected move which will turn the game! Would or does any computer choose this?... I would think not, as all those I have tested show a 50-100 eval. jump for White, having expected $\text{e}e7$ (Crafty suggests $\text{d}h7$).

H6 in fact went from $+158$ (a bit too high?) to $-279$ (much too high!).

26.bxa6
A key to the PCs' big plus eval. here is that they expect Black’s $\text{w}$ to move away! White is a $\text{A}$ up, so the traditional 'rule' is that Black won't want to exchange pieces and White will.

But I.M’s and G.M’s know better that sometimes the rules (or, for PCs, the algorithms!) are there to be broken!

26...$\text{xa}4$! 27.$\text{xa}4$ $\text{c}7$
When we re-consider the position now, we note that White’s extra $\text{w}$ is: [1] doubled, and [2] on an open file, as well as [3] shorn of the $\text{w}$’s support. Thus, instead of being dangerous, it is in fact very weak.

Furthermore, if the a6-$\text{A}$ falls, the one on a3 could easily follow. And if a3 falls then the base of H6’s locked $\text{A}$-chain at c3 will become even weaker. Thus Hergott has some valuable targets to aim for and, in this blocked position, time to build up the attack.

28.$\text{b}2$ $\text{Ba}8$! 29.$\text{a}4$
29.$\text{d}1$ $\text{xa}6$ 30.$\text{a}4$ looks a slightly better defence. I think H6 should aim to contest the a-b files, but it gets tangled up and can’t respond quickly enough at vital moments. However Bob Hyatt later said that he thought H6 had handled its now difficult position 'fine', which I think means as well as could be expected!

29...$\text{xa}6$ 30.$\text{h}3$? $\text{d}7$ 31.$\text{g}3$ $\text{Ab}8$
32.$\text{Ee}1$!

Well we see what H6 is up to, aiming for a breakthrough on the f-file, so we can at least commend it for following through with a purpose. But time is against it.

32...$\text{b}5$ 33.$\text{axb}5$ $\text{xb}5$

See DIAGRAM top of next column.

Targets update, from move 27:
[1] captured,
[2] exchanged, and the vulnerability of
[3] is quite plain to see!

34.$\text{f3} 2\text{b}3$ 35.$\text{d}1$ $\text{d}8$ 36.$\text{e}2$ $\text{e}7$!
37.$\text{g}4$ $\text{c}6$ 38.$\text{g}3$ $\text{a}7$ 39.$\text{h}4+$ $\text{c}7$

It is now the H6 pieces which are all getting in each other’s way. The $\text{e}2$-$\text{Q}$ stops one $\text{Q}$ from reaching the b-file; similarly the d1-$\text{Q}$, which cannot move, stops the other $\text{Q}$ getting to b1.

40.$\text{f4} 2\text{b}5$ 41.$\text{e}1$ $\text{Ba}1$ 42.$\text{f}4$ $\text{c}6$
43.$\text{d}2$ $\text{d}6$ 44.$\text{g}5$
44.$\text{xh}6$?! gxh6 45.$\text{f}6$ was seriously considered by H6 here, and when the observers on the 'Net were told by folk analysing with their H6 versions at home, everyone wanted it to happen! A blood-thirsty crowd we are, when it's not our own Elo ratings and reputations at risk!

It's an interesting idea which might have continued: 45...$\text{d}3$ 46.$\text{xd}3$ $\text{xd}3$ 47.$\text{xe}6+$ $\text{d}7$ 48.$\text{xd}6$ $\text{h}1$. Sadly, as we see, Black wins quite easily!

44...$\text{h}5$ 45.$\text{e}1$ $\text{a}4$ 46.$\text{f}8$ $\text{x}c3$
46...$\text{bb}1$ was feared by H6, and it looks perhaps even stronger. However the exchanges will (this time!) suit the player who’s a $\text{A}$ up, and the move played is good.

47.$\text{xc}3$ $\text{xc}3$ 48.$\text{xc}3$ $\text{xf}1+$ 49.$\text{xf}1$ $\text{xc}3$
50.$\text{c}8+$

Computer horizon-effects were still giving the optimists some hope, as a series of checks keeps the inevitable at long range for another few moves! In fact, instead of driving Black’s $\text{Q}$ into the heart of White territory, an immediate $\text{g}8$ might have served better.

50...$\text{b}6$ 51.$\text{b}8+$ $\text{a}5$ 52.$\text{a}8+$ $\text{b}4$
53.$\text{b}8+$ $\text{a}3$ 54.$\text{a}8+$ $\text{b}2$ 55.$\text{a}6$ $\text{e}5$
56.$\text{e}2$ $\text{g}6$ 57.$\text{f}2$ $\text{h}3$ 58.$\text{g}2$ $\text{h}4$
I thought our H6 operator could have resigned here – our eval. was $+622$ – but the game went on for just a few more moves 'to make sure'.

59.$\text{f}3$ $\text{x}d4$ 60.$\text{f}2$ $\text{c}3$ 61.$\text{h}6+$ $\text{f}1$
62.$\text{e}1$ $\text{d}2$ 63.$\text{h}4$ $\text{b}2$ 64.$\text{c}6$ $\text{c}2$ 65.$\text{d}1$
\[ \text{\texttt{b1 66.\texttt{xc2+ \texttt{xc2 67.\texttt{d6 \texttt{c4 68.\texttt{d2}}}}}} \\
\text{\texttt{\texttt{Hxh4 69.\texttt{yb6+ \texttt{a}a2 70.\texttt{a}a6+ \texttt{b3 71.\texttt{c6}}}}}} \\
\text{White resigned 0–1} \\
\]

Wow! With one to play, it's now down to a 3–2 lead for Hiarcs.

On the 'net the feeling as this game came to its close was that Deen Hergott had 'sussed (worked) H6 out and, as he had White for game 6, he'd quite possibly now be able to tie the Match with another display similar to the one just seen.

This, of course, is what some of the discussion has been about – given time to evaluate the program, IM's and GM's are able to apply the appropriate areas of their chess knowledge and experience to gain the upper hand. The programs should not be called IM strength on the basis of individual games against a variety of half-prepared opponents, but must show that they can win Matches against them before any claims can properly be made.

This is the opinion, shared by quite a few observers and taken one logical step further, which believes our Rating Lists are set too high. They had expected Hergott, especially with his pre-Match preparation, to 'prove' it, thus showing that not only Hiarcs, but Rebel, Genius, MCPro and Fritz et al, are all over-rated.

After 4 games, they'd gone a bit quiet, but now they were thinking Hergott was going to provide their evidence after all!

Here is the maths: a drawn Match vs. Hergott would put Hiarcs 6 on a Pentium/200 equal to Hergott, at 2485 Elo.

After deducting 60 points to equate the result to a standard Pentium/100–133 (as used in the SS Rating List), we get Hiarcs 6/133 = 2425. Of course, that's only if we lose the... last game!!

Deen Hergott (2485) – Hiarcs 6.0 (2600) [D23]. Game 6

\[ \text{1.d4 \texttt{f6 2.e3 d5 3.c4 dxc4 4.\texttt{a}a4+ \texttt{c6}}}} \\
5.\texttt{dxe4 \texttt{c6}} \\
\text{Hergott has found another little-known line (as far as H6 is concerned!), and this is the program's last Book move.} \\
6.\texttt{dxe5 \texttt{e5 7.c3 e6 8.\texttt{c3 \texttt{b4 9.\texttt{d2 \texttt{xf3}}}}}} \\
10.\texttt{gxh3 a6 11.a3 \texttt{xc3 12.bxc3 d5}} \\
13.\texttt{g1 0–0 14.e4 \texttt{d6?!}} \]

A very interesting move, apparently offering White a material-winning pawn fork.

15.e5? \\
If this isn't best, then 15.\texttt{g5 looks the choice move of various alternatives.} \\
15...\texttt{dxe5!} \\
The exchange of the \texttt{Q} for three \texttt{A}’s raised many eyebrows amongst the 'net observers, but we think Hergott will have expected it. Indeed most/all programs go for it now (though not the invitation at 14...\texttt{d6, of course} – indeed such exchanges don't always work out so well).

But what was the alternative? 15...\texttt{b5 is best, but 16.exd6 \texttt{bxa4 17.dxc7 (17.\texttt{h6}} \\
17....\texttt{h5 18.dxc7 \texttt{bxc7 19.g5 also offers White a small +)} 17...\texttt{xc7 18.\texttt{b1 \texttt{xc7}}}} \\
19.\texttt{b4 leaves White with a useful advantage.} \\
16.dxe5 \texttt{dxe5+ 17.\texttt{c2 \texttt{b2}}}} \\
The material ‘difference’ is that White has 2 bishops for knight and 3 pawns. I half-feared that the IM would slowly succeed in using his extra piece to knock off one or two pawns.

18.0–0 0 ...\texttt{xd8 19.\texttt{xf4 \texttt{xf4 20.exf4 xd1+}} \\
21.\texttt{xd1 \texttt{xd5 22.e5?!}} \\
This results in the loss of Hergott's main source of possible advantage, the 2 \texttt{Q}s – perhaps he underestimated H6's 23rd.

22.d2, although passive-looking, looks best, aiming to follow up with \texttt{e4} and then the return of the \texttt{Q} to \texttt{f4}.

22...\texttt{f6 23.e4} \\
23.\texttt{d4?! \texttt{c5 24.c5 \texttt{e3+}}}} \\
23...\texttt{e8! 24.cxd5?!} \\
\text{Was 24.\texttt{d2 better? Perhaps, e.g:} \\
24...\texttt{d5 25.\texttt{h7! \texttt{xe2+ 26.\texttt{d2.}}}} \\
\text{Despite trapping the \texttt{Q} and so regaining the piece, after 26...\texttt{d4 27.\texttt{xd4 \texttt{e7, the game is beginning to look drawn... and don't forget that Hergott must win!}}}}

24...exd5 25.\(\text{exd5}\)
25...\(\text{exc6}\) has also been suggested, then
25...\(\text{exb2}\) 26.\(\text{ed6}\).
25...\(\text{exe5}\)
It's time I told you how \(H6\) evuls, this...  
\(+33\), in fact. Hergott now wants to get his
\(K\) in amongst the \(Ks\) via either the 7th or
8th rank. But firt he has to secure his \(Q\)
26.\(\text{ed8}\) 27.\(\text{df7}\) 27.\(\text{d3}\) 26.\(\text{f4}\) \(\text{h8}\) 29.\(\text{d4}\)
There was no choice but to retreat if
White still wants to play for the win.
29...\(\text{e7}\) 30.\(\text{d2}\) \(h5\) 31.\(\text{e4}\) 3f 32.\(\text{e1}\) \(\text{h6}\)
33.f4 a5 34.\(\text{hbl}\) c6 35.\(\text{e1}\) \(\text{h7}\) 36.\(\text{f1}\) \(h4\)!
37.\(\text{e3}\)
Although Hergott clearly doesn't want to
see his \(Q\) reduced to the rank of pawn-
blockader, maybe \(Q3\) was still better here.
37...\(\text{d7}\)  
\(H6\) now shows \(+104\).
38.\(\text{e3}\) \(\text{ed1}\) 39.\(\text{e2}\) \(\text{hbl}\) 40.\(\text{d3}\) \(\text{e7}\)

For those expecting \(\text{e6}\), this is not actu-
ally so mysterious. What it does is cover all
the \(d3\)–\(\text{ed1}\)'s 6th, 7th and 8th rank entry
squares!
41.\(\text{d2}\)!
41.\(\text{d3}\) was expected by \(H6\) here, intend-
ing 41...\(\text{h4}\) 42.\(\text{a3}\), and then 42...\(\text{d6}\).
41...\(\text{e1}\) 42.\(\text{f3}\)
42.\(\text{d4}\) \(\text{g1}\) 43.\(\text{f3}\) was the other possi-
blity, though White's \(Q\) looks sadder than
ever either way.
42...\(\text{b5}\)!
This is okay – as it turns out! But what if
Hergott had played the move in my note
below? Therefore, objectively, I think
42...\(\text{e4}\) would be the right move; then, af-
after 43.\(\text{h2}\), \(\text{d6}\).
43.\(\text{axb5}\)!
What about 43.\(\text{a2}\) b4 44.\(\text{e2}\) 45.\(\text{xex2}\) \(\text{d6}\) 46.\(\text{d3}\), and I think we could
have been looking at a draw.
43...\(\text{axb5}\) 44.\(\text{d5}\) \(\text{hbl}\) 45.\(\text{e3}\) a4 46.\(\text{e5}\)

\(\text{f8}\)
This was questioned by observers on the
net, but again \(H6\) seems to be restricting
White's access to the 7th and 8th ranks.
47.\(\text{c6}\)
Free at last!... but
47...\(\text{h3}\)!
\(H6\) reads \(+252\).
48.\(\text{xb5}\)
Having struggled so hard to achieve the
opportunity of getting his \(K\) onto the 8th.
it's surprising that White didn't at least try
48.\(\text{e8}\) !? here. Then 49.\(\text{g7}\) 49.\(\text{e7}\) (if
49.\(\text{a8}\) ? \(h2\) ! wins) 49...\(\text{h6}\) 50.\(\text{e8}\) but
this time it's 50...\(a3\) ! which wins, as played
in the game now.
48...\(\text{a3}\)!
\(H6\) reads \(+395\). White just cannot cope
with the timing of the \(K\)-pushes on both
flanks.
49.\(\text{e8}\) 50.\(\text{a8}\) \(\text{xb5}\) 51.\(\text{xa3}\) \(\text{hbl}\)
Exemplary endgame technique by \(H6\).
52.\(\text{a7}\) 53.\(\text{a8}\)!
Threatening \(\text{h8}\) mate! But \(H6\) had spot-
ted this, and shown its solution at move 50.
53...\(\text{h5}\)!
Clinching the game.
54.\(\text{h8}\)  
If 54.\(f3\) \(\text{h4}\)!
54...\(\text{g4}\) 55.\(\text{h6}\) \(\text{h3}\)  
\(H6\) now shows \(+532\).

56.\(\text{e2}\) 57.\(\text{g6}\)
57.\(\text{h4}\) was the only move likely to ex-
tend the game, but 57...\(\text{g5}\) 58.\(\text{h8}\) \(\text{e4}\)
59.\(\text{h6}\) \(\text{f2}\) 60.\(\text{f1}\) \(\text{h1}\) 61.\(\text{e2}\) \(\text{g5}\) is still
comfortably conclusive.
57...\(\text{b2}\) 58.\(\text{f1}\) \(\text{h1}\) \(+0\)–1

Followed by mayhem and celebration in
Wilburon... but Mark was in Aegon,
operating Hiarcs6 in its draws with Anand
and Timman in a pre-Tournament Simul.,
and wouldn't know until the following day!

Match Table:

| Hiarcs6.0 | 1 1/2 1 1/2 0 1 = 4 |
| Deen Hergott | 0 1/2 0 1 1/2 1 0 = 2 |

Match Performance by Hiarcs6.0

2485 (Hergott) + 133 (for winning 4:2) = 2618 on a Pentium MMX/200.
Equivalent for a P/100-133 is 2618-60 = 2558.
# AEGON, 1997

**COMPUTER and PLAYER’s Scores: Full account SS/71**

## FINAL STANDINGS

- To distinguish:-  
  **COMPUTERS** capitalised, **Players** normal.
- Most PC programs were on PPro/200MHz machines.
- **CILKCHESS** and **ZUGZWANG** are main frame (i.e. non commercial) programs.

<table>
<thead>
<tr>
<th>Pos</th>
<th>Name</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yona Kosashvili</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>Yasser Seirawan</td>
<td>5½</td>
</tr>
<tr>
<td></td>
<td>Johan van Mil</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>KALLISTOV3.1*</td>
<td>4½</td>
</tr>
<tr>
<td></td>
<td>REBELv97*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ye Rongguang</td>
<td></td>
</tr>
<tr>
<td></td>
<td>John van der Wiel</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lembitt Oil</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CHESSMASTER 5000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gert Jan de Boer</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>ZUGZWANG</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>DRAGON</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CILKCHESS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NIMZ03.5</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Heiner Matthias</td>
<td>3½</td>
</tr>
<tr>
<td></td>
<td>Roberto Cifuentes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DARK THOUGHT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sofia Polgar</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M CHESS PRO6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Peng Zhao Qin</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ARTHUR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TASC R30-1995</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FRITZ4</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>Gert Ligttering</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>VIRTUAL CHESS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GENIUS5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ISICHESS 2.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KASPAROV SPARC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jeroen Noomen</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hans Lee</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hebert Perez Garcia</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stefan Looftier</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FERRET</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MEPHISTO ATLANTA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rob Hartoch</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MEPH GENIUS 68030</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CHESS SYSTEM TAL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HECTOR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jan Joost Lindner</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MEPH BERLIN PRO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TASC R40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NOVAG DIAMOND</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SCHACH 3.0</td>
<td></td>
</tr>
<tr>
<td>62</td>
<td>NOW</td>
<td>2½</td>
</tr>
<tr>
<td></td>
<td>Peeewe van Voorthuijzen</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gerrit Visser</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gert Jan Ludden</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DIEP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MACCHESS AEGON'97</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dick van Geet</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SHREDDER</td>
<td></td>
</tr>
<tr>
<td></td>
<td>COMET</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Paul Bierenbroodspot</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MEPH MILANO PRO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ZZZZZ</td>
<td></td>
</tr>
<tr>
<td>74</td>
<td>CHEIRON</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Jeroen Blokhuis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Henk Arnoldus</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mathias Feist</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lex Jongsma</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Piet Bakker</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ad van der Berg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Martin Voorn</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CENTAUR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Maliankay/Oranje</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DAPPET</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MIRAGE</td>
<td></td>
</tr>
</tbody>
</table>

Fre Hoogendoorn  
NIGHTMARE  
Tom Fuerslenberg  

89= Frank de Hoog          1¼  
Henk de Kleijnen  
Nico Vromans  
Alexander Kure  
Rudy Bloemhard  
NOVAG SAPPHIRE  
Pam/Maes  

96= XXXX II               1  
Peter van Wermeskerken  
GOLDBAR  
Loewenthal/Wiarda  

100 BIONIC                ¼  

---

**Final Score**  
Man 148½ - Machine 151¼  
[1996- 137¼-162¼]  
G.Ms 51¼ - Machine 20¼  
[More GMs/IMs this year!]  

---

**Top PC Computer Tournament Performances:**  
1. KALLISTOV3.1  4½ 2632  
2. REBELv97  4½ 2619  
3. C’MASTER5000  4½ 2452  

---

Good to see some Dedicated Computers there! TPR’s, as far as I know them, were:

- Tasc R30-1995  3½ 2221  
- Kasparov SPARC  3 2402  
- Meph ATLANTA*  3 2288  
- Meph GENIUS68030  3 2272  
- Meph BERLIN PRO  3 2188  
- Novag DIAMOND  3 2051  
- Meph MILANO PRO  2½ 2179  
- Novag SAPPHIRE  1½ 1987  

---

**Notes:**  
Kallistov3.1* these are NOT  
Rebel97* currently available  
Zarkov* commercial versions.

Mephisto Atlanta* should be available soon, probably £499.
DEEP[er] BLUE2 vs Gary KASPAROV
IBM Challenge - the RE-MATCH

I'm not entirely sure which is the more daunting - me setting out to present a Match between arguably the two strongest 'players of chess' in the world, or Kasparov himself preparing to do battle with the fastest chess calculator of all time!

Not that I believe Gary saw it as of particular concern a few weeks ago! Maybe a bit the reverse: 'just' the repeat of a minor hazard on the way to another big payout cheque ($700,000)!! Nearly as many zeros in the winner's prize as there are in DB2's node count per second!

The Dust Settles

I take it that none of my readers have been vacationing on Mars, and you all know the result! Mainly you want to know 'how?', and 'why?', and 'where next'?

■ How much better was DB2 than the 1996 version? - quite a bit, I'd say.
■ Did Kasparov's chess do him full justice? - probably not, though I do think the match arrangements were set against him (which nobody had minded so much, as most people were pretty sure he'd win whatever).
■ Will this result be damaging to chess? - I'll try to leave some space to dwell on these questions after you've had chance to go through the games.

But let's start at the beginning.

Prologue

Deeper Blue2 has faster CPU's, more memory capacity, better logic, and improved chess programming over the original Deep Blue.

Some of its approximately 4x power, available for speed increase, has been used to improve the chess knowledge. G.M Joel Benjamin in particular has been working hard to improve DB2's positional play.

Their team is "very optimistic" and seem genuinely to think they can win. Over recent years DB has been developed by a committed team of scientists, researchers, engineers and chess experts, for the specific purpose of beating Kasparov. It will have a database full of his games and favourite openings. It has to be daunting to face an opponent with such a background, even if Kasparov did win 4-2 last time. 15 months is a long time in terms of computer progress in the 1990's!

But what of Kasparov? His results in 1997 suggest he is back to playing at the top of his form - even old arch-rival Karpov, whilst in Monte Carlo in April 1997 for the Melody Amber Tournament, said 'It is clear that Kasparov will win easily. The score is unimportant'.

He is "well prepared", we are told... but can one prepare so fully for an opponent one knows next to nothing about?!

The Popular View: 'GK will win'!

I scoured my Internet pages during the 10 days of anticipation, leading up to game one. 95% agreed with Karpov, though a handful went for a draw. The favourite forecast was that Kasparov would "toy with it" for the first 3-4 games, to make it look close and guarantee another rematch (plus pay cheque)... then he'd clean up at the end. Pretty much like, er, last time.

The first game made it appear there would be few problems! Gary completely and cleverly outplayed DB2, and left it looking little different to the 1996 pre-decessor which had lost the last two games in match 1.

Game 1: Kasparov – Deep Blue2. [A07]

1.е3 d5 2.g3 9g4 3.b3!? 9d7 4.еb2 e6 5.еg2 We will have to get used to these quiet strategy, anti-computer openings, which Kasparov uses in 4 of the 6 games. 5...еg6 6.0-0 0.c6 7.d3 0.d6 8.еbd2 0-0 9.h3 0.h5 10.e3?!
10.e4 is normally the strategic aim in this type of position, so Kasparov appears to be losing a tempo here. 10...h6? The waiting strategy earns its early reward. DB's h6 is not only pointless, but weakens the Black 0-side, as we will see shortly. 11.еe1 0a5?! 12.a3 0c7 13.еh4 g5? DB2 is scattering moves, first on this side, then on that. Those on its 0-side look more likely to help White! 14.еh3 e5 15.e4 This makes f3 a strong square if White can get a 0 there. GK can aim for this with 0-f3-h2-e3-f5 but DB2, having offered the outpost, now defends against its occupation extremely well! 15...еf8 16.еh2 0d6 17.еc1 a5 18.еe1 0d6 19.еf1 dxe4 20.dxe4 0е5
An interesting concept: neither White 0 can avoid being exchanged en route to the f5
outpost! Also Black has created heavy pressure against f2. 21...e3 dxe8 22.hf1 22.f5?? xf2+ ouch. 22...g4?! 23.hxg4 dxg4 24.f3 dxe3 25.xxe3 e7

Please take a look at Kasparov's A's on the f and g files - these, plus his Q taking across the board from b2, will win the game. 26.h1 Qg5 27.e2 a4 28.b4 f5!? Generally viewed as a strong effort by DB2 which creates temporary piece activity. Indeed its attack begins to look quite dangerous, but the long-term strategic weaknesses on its Q-side won't go away. 29.exf5 e4 30.f4! dxe2 30...xf4 would be too greedy: 31.gxf4 dxe2 32.f2+ Qh5 33.Qc3+! - 31.fxg5 Qe5 Desperately blocking the long b2–h8 diagonal. Remember the b2/Q and those f and g A's! 32.g6 Qf3 33.Qc3 John Nunn pointed out that this is prophylactic - White will want to move his Q and doesn't wish to allow Qd2. 33...Qb5? DB2, along with many fast-search programs, sees that this should lead to the exchange of Q's, which it favours in view of its material advantage. Game 5: Hiarcs6–Hergott saw a similar theme and misunderstanding. In fact Hiarcs is not among those playing this move here, and quite rightly... because of White's dangerously advanced A's, this exchange is NOT good for Black! 34.Qf1 Qxf1+ 35.Qxh1 h5 36.g1

A check round Black's position reveals that most of its pieces can't move easily, as they're already tied to key duties. Thus Kasparov has time to prepare the g4 push which will enable his advanced A's to press forward. 36...Qf8 37.Qh3 b5 38.Qf2 Qg7 39.g4 Qh6 40.Qg1 hxg4 41.Qxg4 Qxg4 42.Qxg4+ Qxg4+ 43.Qxg4 Qd5 44.f6 Qd4 45.g7. Black resigns 1–0.

The criticism of DB2 by some of the all-knowing Interneters knew no bounds! It was slammed as a "pathetic", "hopeless" and "clueless" to use some of the printable expressions. "We've been deceived! Bring on Hiarcs or Rebel" was another cry.

Kasparov felt so encouraged by this early success, that he reverted to a normal opening in game 2, though there is still a surprise in his choosing 1...e5 (when did he last play that?), rather than his beloved 1...c5.

**Game 2: Deep Blue2 - Kasparov. [C93]**

1.e4 c5 2.d3 Qc6 3.Qb5 a6 4.Qa4 Qf6 5.Qo–Qe7 6.Qe1 b5 7.Qb3 d6 8.c3 0–0 9.h3 h6 The Sicilian Variation is a somewhat antiquated and passive defence. 9...Qb7, the Zaitsev system is best. 10.d4 Qd8 11.dbd2 Qf8 12.Qf1 Qd7 13.Qg3 DB2's set-up, achieved without difficulty, is just about ideal. 13...Qa5 14.Qc2 c5 15.b3 Qc6 16.d5?? Most PC-workers are trying to dissuade their programs from ending up with blocked centres against humans, but DB2 shows that it can handle these positions pretty well! 16...Qe7 17.Qc3 Qg6 18.Qd2 Qh7?! 19.a4 Qh4 20.Qxh4 Qxh4 21.Qe2 Qd8 22.b4 Qc7 23.Qc1 c4 24.Qa3 Qec8 25.Qc1 c5 26.f4!

A unique find by DB2, putting Kasparov under enormous pressure. 26...Qf6 27.fxe5 dxe5 28.Qf1 Qe8 29.Qf2 Qd6 30.Qb6 Qe8
31. 3a2 6e7 32. 6c5 6f8 33. 6f5 6xf5
34. exf5 f6 Desperately trying to stop White from making further inroads by playing f6 himself. 35. 6xd6! A simple solution, found by many PC-programmers. H6 has +217 with this, for example. 35... 6xd6 36. axb5?!
See note to White's next move. 36... 6xb5
37. 6e4! Both here and at move 36, all tested PC-programs choose 6b6, which might well have been better than White's actual 36th. But here 6e4 deserves the ! as it successfully stops Kasparov playing 37...e4! activating his own Q.
37... 6xa2?! 38. 6xa2 6d7 39. 6a7 6c7
40. 6b6 6b7 41. 6a8+ 6f7 42. 6a6 6c7
43. 6c6 6b6+ 44. 6f1? Readers will think it strange to question DB2's penultimate move in the game, and just before Kasparov resigns! However 44. 6h1 was correct, to remove any chance of a perpetual check. 44... 6b8 45. 6a6

The next question was to Dr. Tan, IBM's project manager: "Had DB2 seen the draw?" "No!" was the reply, "It was blissfully playing for, and expecting, a win".

Of course, whether even Kasparov could have found absolutely every needed move over-the-board and under pressure, when he'd missed 6e3, is probably another matter!

**Game 3: Kasparov - Deep Blue2. [A00]**

1.d3?! e5 2. 6f3 6c6 3.c4 6f6 4.a3 6d6 5. 6e3 6c7 6.g3 0-0 7. 6g2 6e6 8.0-0 6d7 9.6g5 6f5 10.e4 6g4 11.f3 6h5 12. 6h4 6d4 13. 6f2 6h6 14. 6e3 c5 15. 6b4 b6 16. 6b2 6h8 17. 6d3 a6 18.bxc5 bxc5 19. 6e3 6c7 20. 6g4 6g6 21.f4 exf4 22.gxf4 6a5

Black resigns? 1-0. But within the hour the analysis was appearing on the 'Net, suggesting that Kasparov had definite perpetual check drawing chances. Here it is:-

45... 6e3! 46. 6xd6 (46. 6d7+ 6g8 47. 6xd6 6f8 will be a draw) 46... 6e8!

Now analysis of 47.h4, 47.6f3 and 47. 6c5 has all been tried, and indications are that it would end up a draw. SS readers may still see a decent + for White on their computers, but that's the horizon effect, and the figure will drop move-by-move.

By the next morning informed opinion was definite - Gary had resigned too soon. "The tough part", said Frederic Friedel, "was knowing how to tell him!"

They broke the news gently after breakfast, and it was obvious he'd never thought about it at all... DB2 had been on top for quite some moves, and he'd relied on it's tactical ability to finish him off. "How could it miss a perpetual?" was about all he could ask, apparently blaming Deep Blue that he'd missed it as well!

The game is nicely balanced, but Kasparov does not want to retreat with 6b1. He therefore decides to sacrifice a 6, after which he gets considerable positional pressure. But will it be enough..... 23. 6d2?! 6xa3 24. 6a2?!
A slightly surprisingly choice, forcing the exchange of 6s. 24. 6b7 6xg4 25. 6xg4 is Nunn's (and H6's) suggestion, though the latter's sneaky 25... 6h4! looks interesting. 24... 6h3
25.f5 6xd1 26. 6xd1 6h7 27. 6h3 6f8 28. 6f4 6d8 29. 6fd5 6c6 30. 6f4 6e5 31. 6a4 6xd5 32. 6xd5 a5 33. 6b5 6a7 34. 6g2 6g5! 35. 6xe5+ 6xe5 36.f6 6g6 37. 6h4 gxh4 38. 6h3 6g8 39. 6xh4 6h7 40. 6g4 6c7! Neatly clearing the back rank for 6h6. 41. 6xc7 Winning back his 6, but according to the draw. 6e7 or 6h1 were ways to pursue the full point, but Gary counted them as possibility happy to get this draw after the events of game 2. 41... 6xc7 42. 6xa5 6d8 43. 6f3 6h8 44. 6h4 6g8 45. 6a3 6h8 46. 6a6 6h7 47. 6a3 6h8 48. 6a6. ½-½

After this game Kasparov, in interviews, was
confessing that his confidence was shaken. He had not got over the shock of being generally outplayed in game 2, and finally missing a drawing chance. Now DB2's fine defence under pressure in this game, culminating in 40...c7, had equally surprised him.

These remarks went down like a lead balloon on the 'Net's "Critics Corner". To them he'd "thrown" game 2 - (that would be a first for Karpov, but they just couldn't believe he'd miss $\text{c3}$) - and now they were sure he was only making these latest remarks to heighten public and commercial interest.

Personally I got the feeling he was finding it a lot tougher than he'd expected, and the next 2 games included, in my view, some of the most exciting spectator moments of the Match!

**Game 4: Deep Blue2 – Kasparov [B12]**

1.e4 c6?! 2.d4 d6?! So, not a Caro Kann – an opening which Kasparov 'only' plays from the White side – it's another anti-computer job. Thus both program and player are soon out of their normal books, but in all of these situations Kasparov is [1] in foreign territory, [2] in a "poor" line, and [3] having to work everything out for himself from the very beginning. An exhausting choice for a player with his encyclopaedic knowledge and understanding, in my view! 3.$\text{c3}$! Compared with its over-exuberant play in game 1, this is downright passive from DB2! Have they adjusted it's solid–aggressive setting?... the rumour was that they HAD! 3.c4 or 3.$\text{f4}$ was more positive in this now Fire-type opening. 3...$\text{f6}$ 4.$\text{c3}$ $\text{g4}$ 5.$\text{h3}$ $\text{h5}$ 6.$\text{d3}$ e6 7.$\text{e2}$ $\text{d5}$. A neat strategy by GK! With his white–squared $\text{Q}$ outside the chain, he offers a blocked centre, after which he will exchange said $\text{h5}$-$\text{Q}$ and be left with his good one. He counts this as worth the lost tempo. 8.$\text{g5}$! New! White aims to exchange off Black's good $\text{Q}$ as well! 8.exd5 $\text{Qxf3}$ 9.$\text{Qxh3}$ exd5 10.$\text{Qxh3}$. $\text{Qf6}$. 10.$\text{Qxe7}$ $\text{Qxe7}$ 11.$\text{g4}$ $\text{Qg6}$ 12.$\text{Qg6}$?!

Strange, because it releases the h8-$\text{Q}$ against White's backward h3-$\text{Q}$. Probably 12.0–0–0 was better. 12...$\text{hxg6}$ 13.$\text{h4}$! This advance was apparently the point behind White's 12th, and is an interesting idea. 13...$\text{a6}$ 14.0–0–0 0–0–0 15.$\text{Qd1}$ $\text{c7}$. To support $\text{e6}$, so that $\text{f6}$ can be played. The alternative was to commence a $\text{Q}$ side attack with $\text{Qb6}$. 16.$\text{Qb1}$ $\text{f6}$ 17.$\text{Qxf6}$ $\text{Qxf6}$! 17...$\text{gxh6}$? 18.$\text{g5}$! opening up the $\text{Q}$ side for the benefit of his $\text{R}$'s! 18.$\text{g3}$
It really does look as if Black should win from here. 33...d4 34...e2 35...e2
36...e2 Playereame almost automatically. However, the surprising 35...d6 36...c1 (36...xe6+ ...e6 is also good for Black) 36...e7 37...g5 38...e4 38...e7+ ...e8 39...e7 40...e4 (40...e4 40...e4 40...e4 41...e2) 40...e4 41...e4 41...e4 42...e4 43...e4 From here Black's win should still surely come through his connected passed b-pawns, and the far superior scope of his pieces. 37...e4 38...e4 39...e4 40...e4 41...e4 42...e4 43...e4 43...e4 From here Black's win should still surely come through his connected passed b-pawn, and the far superior scope of his pieces.

Game 5: Kasparov – Deep Blue 2 [A07]

1...e4 2...d5 2...e4 3...g4 3...g4 4...d7 4...h3 4...xf3
5...e6 6...d3 6...d3 7...e4 7...e4 8...g2 8...g2 8...dxe4
9...xe4 9...xe4 10...g2 10...g2 11...d2 11...d2 Kasparov frowned, almost smirked, at this. Yet it opposes the slight weakness in White's position from the 4...h3 move. 12...e2 12...e2 13...e2 14...e2 15...h4 15...h4! Black's typical freeing move in this type of position, played early and well by DB. 16...d4 16...d4 17...d4 17...d4 18...g5 18...g5 19...e8 19...e8 20...h5 20...h5 21...e8 21...e8 20...e2 20...e2 21...b1 21...b1 22...h5 22...h5 23...e6 23...e6 23...e6 23...e6 23...e6 23...e6 23...e6 24...b3 24...b3 25...c1 25...c1 25...c1 The position looks equal, though with enough play for things to be changed. Right now Kasparov wants to drive the g-pawn out of c4, which he does neatly. 26...a4 26...a4 27...e1 27...e1 28...g2 28...g2 29...c4 29...c4 29...g6? A mistake which gives Kasparov his chance. The Black wins he can keep only briefly. If a pawn exchange was wanted, then Gurevich had 29...d3 (Black +47) 30...xd3 30...xd3 "Definitely better", says Nunn, "but drawish". 30...b6 30...b6 31...b3 31...b3 32...f2 32...f2 32...e6 32...e6 33...e2! was preferred by such as Gurevich. Then 32...e2 32...e2 33...e2 33...e2 37...e7 37...e7 38...e7 38...e7 39...d5 39...d5 40...g5 40...g5 41...e7 41...e7 The g-pawn is very strong, and should win for White. 39...e4 39...e4 40...e4 40...e4 41...d1+ 41...d1+ 42...e1 42...e1 43...d8 43...d8...
have fallen into a known (to Caro Kann regulars!) Gambit! Not what he wants, against the mighty tactician, in the deciding game! 8...\textit{\texttt{e7??}} This has a score of 13/14... for White!... in the databases! 8...\textit{\texttt{e6}} 9.\textit{\texttt{g5}}+ \textit{\texttt{e7}} 10.0-0 \textit{\texttt{c7}} 11.\textit{\texttt{e1}} \textit{\texttt{d8}} gives White a useful, but not conclusive, attack. 9.0-0 \textit{\texttt{e6}}
10.\textit{\texttt{g6}}+ \textit{\texttt{d8}} 11.\textit{\texttt{c4}} B A new move, apparently to stop the recently popular c4. But White has plenty of good alternatives... 11...\textit{\texttt{d5}} may be the only slight chance, then 12.\textit{\texttt{g3}} \textit{\texttt{d4}}. Though Nunn says either 13.\textit{\texttt{e1}} or 13.\textit{\texttt{e2}} win easily enough for White, I think this is closer to playable! 12.a4 \textit{\texttt{b7}} 13.\textit{\texttt{e1}} \textit{\texttt{d5}} 14.\textit{\texttt{g3}} \textit{\texttt{c8}} 15.axb5 \textit{\texttt{cxb5}} 16.\textit{\texttt{d3}}

Worth a diagram: we think Kasparov may have missed a win here. 44.\textit{\texttt{f4??}} If 44.\textit{\texttt{e6}}! \textit{\texttt{xb3}}+ 45.\textit{\texttt{b1}} \textit{\texttt{h2}}! 46.\textit{\texttt{e4}} c4 47.\textit{\texttt{g6}} \textit{\texttt{d7}} (47...\textit{\texttt{d2}}+ 48.\textit{\texttt{e1}} \textit{\texttt{b3}}+ 49.\textit{\texttt{d1}} wins) 48.\textit{\texttt{e5}} \textit{\texttt{d2}}+ 49.\textit{\texttt{e1}}! \textit{\texttt{d4}}+ 50.\textit{\texttt{e3}} and Black is in trouble, again from the g-\textit{\texttt{f}}. 44.\textit{\texttt{xb3}}+ 45.\textit{\texttt{b1}} \textit{\texttt{d2}}
46.\textit{\texttt{e6}} c4! As in the previous games, DB2 has again conjured-up mate threats, which immediately outweigh the force of White’s g-\textit{\texttt{f}}. 47.\textit{\texttt{e3}} 47...c3 HAD to be stopped. 47.\textit{\texttt{e4}} also works, according to Hiarc6 and Fritz3, as 47...\textit{\texttt{c3}} allows 48.\textit{\texttt{e4}}+ of course. 47...\textit{\texttt{b6}}!
48.\textit{\texttt{g6}} \textit{\texttt{xb5}} 49.\textit{\texttt{g7}} \textit{\texttt{b4}} 50.\textit{\texttt{d3}}+ \textit{\texttt{cxd3}} 51.\textit{\texttt{g8}} \textit{\texttt{d1}}+ 52.\textit{\texttt{b2}} \textit{\texttt{d2}}+ etc. ½–½

Kasparov was pretty unhappy after this game, making noises which suggested he wondered where DB2 was getting its moves from. Did he think they had a human over-riding DB2’s own choices? Is there a human ‘guiding-hand’ that could thus beat Kasparov? Whatever, he demanded to see the computer printouts from this and game 2, so something underhand would seem to be the implication.

After Kasparov had had his say, the Deep Blue team appeared on stage briefly… and were booted!

Suddenly the awareness that Gary had to play all the games in pairs on consecutive days, and the 2nd. always as Black, seemed to count heavily against him. It was not so much now, ‘Could he win it?’, as ‘Could he save it?’ Was there the energy and self-belief to do it?

Game 6: Deep Blue 2 – Kasparov [B17]

1.e4 c6?! Simply because, as said before, the Caro Kann as Black is "not Kasparov". 2.d4 d5 3.\textit{\texttt{e2}} 3.\textit{\texttt{c3}} dxe4 4.\textit{\texttt{exd4}} 4.\textit{\texttt{d7}} 5.\textit{\texttt{g5}} 5.\textit{\texttt{g5}} 6.\textit{\texttt{d3}} e6 7.\textit{\texttt{f1}} 7.\textit{\texttt{f1}} h6? Currently a "0" line in Hiarc6 and, indeed, most other programs! 7...\textit{\texttt{d6}} is usual. \textit{\texttt{b6}} No! "as it’s played immediately from DB2’s book. Kasparov’s head drops into his hands, as he realises he must

How is Black to defend against the immediate loss of his b-\textit{\texttt{f}}-\textit{\texttt{f}} and then the invasion? 16.\textit{\texttt{c6}} 16...\textit{\texttt{c6}} 17.\textit{\texttt{c3}} 17.\textit{\texttt{d8}} 18.\textit{\texttt{cxe6}} 18.\textit{\texttt{c6}} 19.\textit{\texttt{c6}}! 19...\textit{\texttt{c6}} gets the same response as in the game. 17.\textit{\texttt{c5}}! More head–in–hands stuff from Kasparov, before he finally accepts the loss of his \textit{\texttt{c6}}. 17...\textit{\texttt{exf5}}. 17...\textit{\texttt{c4}} might be best, though after 18.\textit{\texttt{c5}} White has too many threats. 17...\textit{\texttt{f7}} 18.\textit{\texttt{c7}} \textit{\texttt{c7}} 19.\textit{\texttt{c7}} is an easy win. 18.\textit{\texttt{c7}} \textit{\texttt{c7}} 18...\textit{\texttt{c7}} 19.\textit{\texttt{c7}} 20.\textit{\texttt{c7}} 20.\textit{\texttt{c7}} 21.\textit{\texttt{c7}} 22.\textit{\texttt{c7}} 23.\textit{\texttt{c7}}+ is one possible finish. 1–0

A sad end for Kasparov, indeed. Overall I think \texttt{Deep}[er] Blue 2 probably plays quite a bit better than DB[1]... but also I think Kasparov played somewhat worse in this Match, and that was the real key. It was almost as if the computer psyched him out when he missed, first a draw in Game 2, and then probably 2 possible wins... in part at least due to some excellent chess by the machine, it should also be said.

Kasparov did not take the defeat well, at the final ceremonies, but we'll not go into that here! Since then, he’s brightened up, and offered \texttt{Deep Blue} a 10 game Match... for his Title!
GAMES SELECTION

TOP programs display some new SKILLS... and old weaknesses!

We start with a game between two highly rated programs, on fast hardware, and playing at Tournament 40/2. Nevertheless one succumbs to an old style series of 'sucker-punches', the sort of thing humans liked to do to our beloved charges, but now being done by some of the programs themselves! As you'll see for yourselves...

King2.5 P/90 (2450) - MCP166 (2500) [B45. Sicilian, Classical] 40/2, 1997

1.e4 c5 2.\$f3 e6 3.d4 cxd4 4.\$xd4 \$f6
5.\$c3 \$c6 6.\$xc6 bxc6 7.e5 \$d5 8.\$e4 \$c7
9.f4 \$b6 10.a3
10...\$e7
10...\$e7
MCP showed +60 here, which I consider over-optimistic... and not just because it lost!
11.c4! \$c3 12.\$d3 \$xf1 13.\$xf1
The potential danger for Black, from \$e1, \$f1-\$f3, \$e1 and K-side pawn push, is there for all to see - but MCP castles right into it.
13...0–0?! 14.b4 a5
Black shows +140 here, but can it really be winning? King has +66... and there I agree!
15.\$e3 \$b8?
\$d8 had to be better, over-protecting the f6 square for future necessity.
16.\$f3! axb4 17.\$h3!

17...h6
17...g6? 18.\$c5! and the \$ can cannot be taken - it allows the \$ into f6 for mate!
18.\$f6+!!
And the \$ goes there anyway - a great move! Test your computer/program and see how long it takes to get this.
18...\$xf6

Not 18... gx6 19.\$xh6!
19.\$xf6 \$xa3
Here Black's eval drops from +156 on the previous move, to -159.
20.\$xa3 bxa3 21.fxg7 \$xg7 22.\$d4+ f6
23.\$g3+ \$f7 24.\$e5 f5 and the game was resigned by Black after a few more moves.
An excellent demonstration of a de Koning program at its attacking best. 1–0

The next Section is an Article which Bill REID sent me, after venturing again into 'The Veiled Attack'.

"One of the joys of owning a dedicated chess computer, or running a top level PC program, is the challenge of searching for some blind spot in the performance of what is, otherwise, at the very least an awesome calculating machine.

In early 1993, after some experiments with the Kasparov RISC 2500, then new on the market, I noticed that in spite of its overall strength, it had problems with attacking manoeuvres which unfolded at a slow pace.

In spite of my lowly grading of only about 150 BCF, I was often able to make use of this idea to upset the machine when I was on the Black side of a King's Indian. For example:

RISC 2500 (2250) - Bill REID (1800)
[B92] 60/30, 1997

1.d4 \$f6 2.c4 g6 3.\$c3 \$g7 4.e4 d6 5.\$f3 0–0 6.\$e2 e5 7.\$c3 \$c6 8.d5 \$e7 9.0–0 \$e8 10.\$b3?!
This \$d1–b3xb7 'threat' is a great temptation to many programs in such positions, but it is actually one of the moves which help the plan work.
10...h6 11.\$ac1
f5 12.\$d3 f4
13.\$d2 g5
14.\$e2 \$g6

DIAGRAM
The attack almost plays...
itself:
15...exd6 exd6 16...b3?! g4 17.fxg4 hxg4
18...b5 h7
Giving up the -side altogether, to speed-up the -side attack. Presumably many strong (i.e. "known") players would hesitate to do this, because a loss to a computer might look foolish. But for the weaker player who can expect to lose, it's not a bad gamble!
19...xa7...xa7 20...xa7
Rebel now has a big plus evaluation!
20...b7 21...xb7 h4 22...c3 f3 23...a6
f4 24.b3?!

I imagine SS readers can see what I'm going to play now!?
24...f8 25...e3 h7 26...xf4 exf4 27.h3
26...a8 xe4 29...xg3 fxg3 30...xg3
31...d3 h7 32.a3 g7 33...a7 c5!
34...d4+ 35...h1 g7 36...b6 c5
37.b4 e4 38...c1 g3+ 39...h2
39...g1 h8 40...h8 g3
39...g4 40.h2 e4 41.h1 h5 42.h7
43...c4 g3 44...d2 f3 45...f2 g6
46...c1 e2+ 47...xe2 fxe2 48...g4 hxf2
49...f2 e4 50...c7+ h7 51...xe2 a4+
52...e1 g3 53...c2 f6+ 1-0!

"What!" I almost hear you shout. "Shouldn't that be 0-1?" You'll certainly think so when you look at the Diagram.

Unfortunately Rebel doesn't resign Blitz games just because it's in a lost position, and I went down on time at move 69. It was

The attack preparation is hardly unfolding "at a slow pace" this time! However Rebel8 will still place its on the wrong side of the board.

First I tried my dependable King's Indian:

REBEL8 P/150 (2500) - BILL REID
(1800) [E98] G/30, 1997
1.d4...f6 2.c4 g6 3...c3...g7 4.e4 d6 5...f3
0-0 6...e2 e5 7.0-0...6 8.d5...e7 9...e1
d8
9...d7 is also played.
10...e3 f5 11.f3 f4 12...f2 g5 13.c5...g6
14...c1 h5

"When I discussed this weakness in the computer's play with Eric, we came up with a name for my strategy - "The Veiled Attack" - hence the title of this little Article.

Recently I acquired Rebel8 to run on my Pentium/150MHz... a program a year or four years beyond the RISC 2500 in development and, running on fast hardware, probably at least 200 Elo ahead in strength.

So I was keen to see whether the 'Veiled Attack' could upset it, or whether the on-going march of programming and power technology had rendered the strategy obsolete.

The program shows signs of evaluating attacks on either wing as equal, regardless of where the 's are. I'm going through the game on Fritz/ChessBase I noticed it also wanted to play c5, reading only -03: Eric.
21...f8 22...e1 g3 23...h3...h3!
You don't need to be Gary Kasparov to play this, but I'll give myself an exclamation mark anyway!
24...xh3...xh3 25...xg3 fxg3 and the RISC 2500 resigned. 0-1
my own fault—I foolishly exchanged Queen for Rook to go into a 'simple', winning, but long-winded, endgame! I'm sure Rebel would have killed itself off quite quickly, but I couldn't click my dear old mouse fast enough!

However, despite Rebel's stouter resistance, in the long run it seemed to be having the same problem as RISC 2500 in dealing with the 'Veiled Attack'. In particular moves like 24.d5 and 32.a5 are puzzling, given that they were played when pieces were threatening to invade the White King's side.

Finally I was able to chalk up a win, this time with a Sicilian. Once again I am Black. I suppose as White one can mount 'Veiled Attacks', but it never seems to work in quite the same way.

REBEL8 P/150 (2500) - Bill REID (1800) [B20] G7/30, 1997

1.e4 c5 2.b3 e6 3.Øb2 Øc6 4.g3 d6 5.Øc3 Ød4 6.Ød5 Øf6 7.e3 Øxd5 8.exd5 Øf5 9.Øb5+ Ød7 10.Øxd7+ Øxd7 11.Øf3 g6 12.0-0 h5 13.Øe2

The critical moment. Nasty threats are developing against e5. Black must either dig in with f6, or go for active play with 0-0-0. Castling rather invites b4, but maybe White's immediate initiative can be held up with a little pawn sacrifice?! 13...0-0-0!?! 14.b4 c4!?? 15.Øxe4+ Øb8 16.Øb3 h4 17.c4 h5g3 18.fg3 Øg7 19.Øae1 Øg3!!

Did our faithful SS readers see this coming?!

20.hxg3 Øh3 21.Øf2 Øf5 22.Øa1 An altogether mysterious move, at least to me, played after a long think.

22...Øh2+ 23.Øg1

23.Øe3?? allows 23...Øh6+ 24.Øg5 Øxg5+ 25.Øf4 exf4+ and m/3 from here.

23...Øh3 24.2xex5

- Rebel remains perfectly content with a high + evaluation as yet. 24...Øg5 25.Øg2 Ødh8!

- Of course!

26.Ød7+

The only move which offers Computer-thinking a plus evaluation.

26...Øc7 27.Øxg7 Øh2+ 28.Øg1 Øh8 29.Øxe3 Øh1+ 30.Øf2

I noticed Fritz within ChessBase announced mate against itself here, but presumably Rebel said nothing... or, if it did, Bill decided to take no notice! Eric

30...Øh2+ 31.Øe1 Øf5 32.Øe3 Øe4+

33.Ød1 Øe2+ 34.Øc2 Øxd2+ 35.Øb1 Øe1+

36.Øxe1 Øxe1+ 37.Ød1 Øxd1#

"And for once I was really glad that Rebel doesn't resign Blitz games! I enjoyed that. 0-1"

Eric shares a HIArcs6 Endgame demo!

I've played so many H5+6 games over the past 2/3 months, it's a good job I love the program or I'd..... well, maybe I wouldn't! But here's 'proof' of its high-class endgame technique, against another program respected as being one of the top 2 Computer endgame players.

GENIUS5 P/100 (2490) - HIArcs6 P/133 (2580) [B02. Alekhine's] 6/8/95, 1997

1.e4 Øf6 2.e5 Ød5 3.c4 Øb6 4.d4 d6 5.f4 dxe5 6.fxe5 Øc6 7.Øe3 Øf5 8.Øf3 e6 9.Øc3 Ød7 10.Øe2 0-0-0 11.0-0 Øg4 12.c5 Ød5 13.Øxd5 Øxd5 14.Øg5 Øxe2 15.Øxe2 Øxd4

16.Øxd4 Øxd4+ 17.Øh1 Ød2 18.Øxd2 Øxd2

Both programs, well-endowed in the Alekhine's it seems, have now left their Books. H6 shows +54, whilst G5 has it as equal.

19.Øc6 Øe7 20.cxb7+ Øxb7 21.Øe4 Øxb2 22.Øxf7 Ød4 23.Øg7 Ød8 24.Øxb7?!

24.Øc1 Øc2 25.Øb1 looks better for White, as H6 starts having fun with back-rank mate threats. 24...Øxa2 25.Øc1 Øc2

26.Øb1 a5!

See DIAGRAM at the top of the next page.

This 8 clearly poses a serious threat, and Hiarcs6 evaluates its chances at +134. However Genius5 remains very relaxed at close to +1 for a few more moves!
34.\textit{\textit{f1}}?! \\

\textit{Why, as it's not a threat! Yes, the c7-bishop is pinned, but cxd6 unfortunately allows \textit{b1} gaining a big advantage, as we show in a moment.}

34...a4 35.\textit{\textit{e1}} \\

\textit{Okay then, if 35.cxd6 g6 and now a3 is a big +.}

35.\textit{\textit{d2}} 36.\textit{\textit{h1}} a3 37.\textit{\textit{f3}} \textit{h2} 38.\textit{\textit{g1}} a2! \\

\textit{It is just becoming impossible for White to cope with everything at once!}

39.\textit{\textit{h3}}?! \\

\textit{A slightly strange positioning of the h-pawn, which could have gone to h5 for more scope, or h6 to play \textit{b6} and maybe relieve pressure on g3 and h2. Whatever, H6's endgame skills have already guaranteed the point is in the bag.}

39.a1 40.\textit{\textit{xa2}} \textit{\textit{xa4}} 41.\textit{\textit{h5}} \textit{\textit{a1}} \\

42.\textit{\textit{g2}} \textit{\textit{d1}} + 43.\textit{\textit{f2}} \textit{\textit{h1}} 44.\textit{\textit{f3}} \textit{\textit{a2}} \\

45.\textit{\textit{h4}} \textit{\textit{d1}} + 46.\textit{\textit{g4}} \textit{\textit{e3}} 47.\textit{\textit{f5}} + 48.\textit{\textit{e6}} \\

48.\textit{\textit{g3}} \textit{\textit{g3}} + 0-1

We close with a couple of PC Blitz wins against exalted opposition!

\textbf{FRITZ4 P/90 (2400) - Shabalov (2630)} \\
\textbf{[A40] Internet G/10, 1997/\textit{Eric}}

1.d4 e6 2.c4 b6 3.\textit{\textit{c3}} \textit{\textit{b7}} 4.\textit{\textit{f3}} \textit{\textit{b4}} \\
5.\textit{\textit{b3}} \textit{\textit{e7}} 6.\textit{\textit{c4}} \textit{\textit{xc3}} + 7.\textit{\textit{xc3}} d6 8.c5 \\

\textit{bxc5}?! \\

8...\textit{dxc5} 9.\textit{dxc5} \textit{f6} looks slightly better for Black, I think.

9.dxe5 \textit{\textit{e5}} 10.\textit{\textit{b3}} \textit{\textit{e6}} 11.\textit{\textit{cxd6}} \textit{cxd6} \\
12.\textit{\textit{g3}} \textit{\textit{f6}} 13.\textit{\textit{d1}} 0-0?! \\

\textit{This runs into trouble. I suggest} \\
13.\textit{\textit{d7}} 14.\textit{\textit{a3}} \textit{\textit{e4}} (14...\textit{\textit{c5}} 15.\textit{\textit{c1}}) \\
15.\textit{\textit{h4}} \textit{\textit{d6}} \\
14.\textit{\textit{f3}}?! \\

14...\textit{f5} seems better, then Fritz would have gone 15.\textit{\textit{h4}} so maybe 15...\textit{\textit{d8}} \\
16.\textit{\textit{c5}} \textit{\textit{e7}} 17.\textit{\textit{c4}} which still looks good for White. So I believe 13...0-0 was the culprit!

---

15.gxf3 \textit{\textit{d8}} 16.f4 e4 17.\textit{\textit{h4}} \textit{\textit{e6}} 18.\textit{\textit{c3}} \\

\textit{What a wonderful pair of bishops!} \\
18...\textit{\textit{e7}} 19.\textit{\textit{g1}}! \textit{\textit{h8}} 20.\textit{\textit{f5}} \textit{h6} 21.\textit{\textit{g3}} \\

\textit{\textit{f8}}? \\
21...\textit{\textit{g8}} was the last hope, though \\
22.\textit{\textit{xf6}} \textit{\textit{xf6}} 23.\textit{\textit{xe4}} should still be enough to win. \\
22.\textit{\textit{xf6}} 1-0

\textbf{Seirawan Y (2620) - MCP/2400} \\
\textbf{[A67] G/5, 1997/\textit{Eric}}

1.d4 \textit{\textit{f6}} 2.c4 e5 3.d3 \textit{\textit{e6}} 4.\textit{\textit{c3}} \textit{\textit{exd5}} \\
5.exd5 \textit{\textit{d6}} 6.e4 \textit{\textit{g6}} 7.\textit{\textit{c4}} \textit{\textit{g7}} 8.\textit{\textit{f5}} + \textit{\textit{c7}} \\
9.\textit{\textit{c3}} 0-0 10.\textit{\textit{e3}} 0-0 11.\textit{\textit{d3}} \textit{\textit{b6}} 12.\textit{\textit{h1}} c4 \\
13.\textit{\textit{c2}} \textit{\textit{b4}} 14.\textit{\textit{a4}} \textit{\textit{f6}} 15.\textit{\textit{e3}} \textit{\textit{d7}} 16.\textit{\textit{c4}} \\
17.\textit{\textit{d1}} \textit{\textit{h6}} 18.\textit{\textit{f3}}? \\

\textit{White doesn't like the look of the pin resulting from protecting the f4-pawn by \textit{\textit{c2}} or \textit{\textit{e1}}. Nevertheless either of those is better than moving the pawn, as we soon see.}

18...\textit{\textit{g5}} 19.\textit{\textit{f5}} \textit{\textit{d7}}!

\textit{An excellent crossfire attack by MCP - perfect for Blitz chess!}

20.\textit{\textit{xf6}}? \\
20.\textit{\textit{xf6}} 21.\textit{\textit{b3}} c3 22.\textit{\textit{d3}} \textit{\textit{b6}} 23.\textit{\textit{xe8}} + \\
\textit{\textit{xe8}} 24.\textit{\textit{xc4}} \textit{\textit{g7}} 25.\textit{\textit{c7}} \textit{\textit{c8}} 26.\textit{\textit{e1}} \textit{\textit{c5}} \\
27.\textit{\textit{exe5}} \textit{\textit{dxe5}} 28.\textit{\textit{e4}} \\
28.\textit{\textit{c7}} might still have been rather interesting to see over the board! \\
28...\textit{\textit{f5}} 29.\textit{\textit{f1}} \textit{\textit{c8}}!! 30.\textit{\textit{b7}} c2! 0-1

---
The FUTURE of Computer Chess

By Graham Laight

Hello Eric,

I would like to submit the following as an article for your magazine. I believe it will be of great interest if Kasparov beats Deep Blue again, as people look for alternative technologies for beating grandmasters at chess.

Thoughts On The Future Of Computer Chess

I think there is a growing consensus that as computers become faster, knowledge in position evaluation (and search extension choice) becomes more significant than search depth.

The evidence for this comes, for example, by comparing Fritz with Hiarc. Fritz used to be very competitive by doing very deep searches with light evaluation. The GK2100 computer (which is also programmed by Franz Morsch, and which I have) is famous for winning by creating tactical mayhem in the middle game.

Hiarc, on the other hand, is reputed to have more accurate knowledge of how good a position really is - which undoubtedly takes more time to work out. With modern, faster PCs, this seems to give better results than very quick searching.

For many people, there does seem to be a definite trend of nodes per second yielding less and less extra benefit, while knowledge yields more and more.

The reasons for this include things like: long term positional weaknesses, trapped pieces, inaccurate piece placement etc., which deep searching simply does not find.

I think it is fair to assume that from now on, as computers continue to get faster, programmers will find that to improve play, they need to apply more knowledge to position evaluation and search extension choices.

At the moment, this extra knowledge is probably being written into the program. This is likely to lead to large, unwieldy programs in the long term, with additional problems in terms of adjusting the big evaluation function for one type of position, and not understanding why it is affecting play in other types of position. Several programmers have recently complained about this problem.

In the field of Expert Systems (a branch of Artificial Intelligence), the latest fashion is for CBR (Case Based Reasoning). The essence of CBR is that, in a given domain of expertise, when presented with a problem, you select the closest problem to it from the case base (a database of situations that have occurred in the domain), and adapt the solution to your new situation.

I have been giving some thought as to how this principle might be applied to chess.

What I think would be an elegant solution would be a database of chess positions, and, for each of these positions, an evaluation function.

In play, the computer would generate an alpha-beta search tree in the usual way. Then, to evaluate a leaf in the tree, the computer would find the nearest position to the current one in the database, and use the matching evaluation function to score the leaf position.

This simple system gives us the means to implement cleanly and easily as much knowledge as we like in a chess system.

It has been said that such a system would be slow - especially if a large case base is used. Here again, CBR has the answer.

There are basically two ways of finding the best match in CBR. The first is called "Nearest Neighbour" retrieval. Under this method, every case in the database is compared with the current case, and is scored for "closeness" using whatever measurements you like. If the database is large, this will be time consuming - and time is something one cannot spare in a game tree scenario, given the large number of leaves (or "nodes") which must be examined.

However, there is also a method called "retrieval by induction". Under this system,
the case base is split up into categories, in a binary tree.

To find your best match, you ask a question which divides your case into two. You then ask another question which divides it into two again, and so on.

We can easily see that the size of database which can be addressed with \( n \) questions is \( 2^n \). For example, 16 questions could select the closest match from a database of \( 2^{16} \), \( = 65536 \). Thus, the closest match to a position, from a database of 65536 positions, could be found by asking just 16 questions. This is certainly feasible - even in the short time available in a big game tree search.

Nothing is for free, of course. The price you pay for the speed of induction reasoning is that the entire case base has to be reclassified (induction indexes rebuilt) whenever any changes are made to it. However, this process could probably be automated, so it's not an insurmountable problem.

I think that a major benefit of such a system would be that a program could be set up for Chess players who do not enjoy C++ to easily produce their own computer chess player.

If the system would provide alpha-beta search, hash tables, and components for making position evaluation functions (the fundamental building blocks of modern chess programs), then all the chess player would need to do is to provide chess positions, and build an evaluation function (from the ready made components) for assessing this type of position. Some control over the inductive reasoning process would also be desirable.

I believe that this system, with today's top PCs, would be able to stand up to strong players with as little as 1,000 cases. With 50,000 cases or more, there's no reason why it shouldn't be able to beat grandmasters. (The magic number 50000 comes from the book "Chess Skill In Man And Machine", where studies are cited showing that grandmasters have expert knowledge of 50,000 types of chess position).

As PCs get faster and faster, this system will simply get stronger and stronger - much more so than the typical programs of today will be able to.

Above all, it answers the question, posed many times in the above-mentioned book, "Why can't a computer play more like a human?"

Editor's note: Additional or alternative ideas, or responses to Graham's article, especially from the programming fraternity, would be very welcome.

---

MINI-ADVERT!

Regular Readers will have noticed that, in this issue, I have sacrificed my 'BEST BUY GUIDE' advert for COMPUTER CHESS PRODUCTS, which normally appears on the inside front cover. This was to maximise the room available for the important Deep Blue-Kasparov and Hiarcs-Hergott matches.

However my part-time work and selling of Chess Computers and Programs with Countrywide is a vital part of my income - simply publishing Selective Search on its own would not be financially viable. I include the advert because Countrywide supports Selective Search, and Selective Search supports Countrywide, if you know what I mean!

Therefore can I invite readers 'in the market' for any Computer Chess product, to ring me at Countrywide - 01359 740923, most afternoons - if you are thinking of buying and want either a free copy of our CATALOGUE, or any help, advice... or encouragement!

Thanks-----------------------------------Eric

RATING LIST NOTES:

Congratulations to the HIARCS team, especially Mark Uniake, for finally achieving their long-time ambition of making it to the top of both the US and SSDF (Ply) Rating Lists. Since completing the News & Results section, I have added later HIARCS6 results which came in from Frank Holt, Harald Faber and Sylvanus McLeod, helping to confirm its no.1 status.

The 1997 AEGON gradings are also now included, with PPro/200 figures converted to P/100-133 level by deducting 60 Elo.
RATING LISTS and NOTES

A brief guide to the purpose of each of the HEADINGS should prove 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 combining each Computer's results with its results v humans. This determines the ranking order and, we believe, makes our Rating List the most accurate available anywhere for computers and programs. +/- The maximum likely future rating movement, up or down, for that particular machine. The figure is determined from the number of games played and calculated on precise standard deviation principles.

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

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

A guide to PC Program Gradings:
386-PC represents the program running on an 80386 at approx. 33MHz with 4MB RAM.
486-PC represents the program running on an 80486 at between 50-66MHz with 4-8MB RAM.

Pent-PC represents programs on a Pentium at approx. 100-133MHz, with 8-16MB RAM.
PPRO-PC represents programs on Pentium Pro/200, or a Pentium/200 MMX.

Users will get slightly more (or less!) in each case, if the speed of their PC is significantly different. A doubling or halving in MHz speed = approx. 50 Elo; a doubling or halving in MB RAM = approx. 5-10 Elo.

Approx. guide if Pentium/100 = 0
Pentium Pro/200 +60 Pentium/166 +40
Pentium/133 +20 486DX4/100 -60
486DX2/66 -80 486DX/50 -100
486DX-SX/33 -100 386DX/33 -200

SELECTIVE SEARCH

is © Eric Hallsworth

No part of this publication may be reproduced in any way without the express written permission of
Eric Hallsworth, The Red House, 46 High Street, Wilburton, Cambs CB6 3RA.
email: eric@elchess.demon.co.uk
www: http://www.elchess.demon.co.uk/

ARTICLES, RESULTS, GAMES and SUBSCRIPTIONS should be sent direct to Eric, please!

RATING LISTS (c) Eric Hallsworth, PC PROGRAMS £5.70 June 1997

2183 / 12

Hammers / Gates