Computer Chess News Sheet
SELECTIVE SEARCH 38
Feb-Mar 1992

Selective Search

Editor's Note: The purpose in publishing **SELECTIVE SEARCH** (launched as the **NEWS SHEET** in 1985) has always been to provide a survey of the CHESS COMPUTER scene, with a special emphasis on reliable assessments of the PLAYING STRENGTHS of the many machines now available. My work at COUNTRYWIDE COMPUTERS is of special help in this as they provide the financial backing and allow me some time off during office hours in which to prepare part of the material. Eric Hallsworth. **PRICE £2 per ISSUE,** or by SUBSCRIPTION.

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ARTICLES, REVIEWS, GAMES sent in by Readers, Distributors, Programmers etc. are _always welcome_ and will receive fair consideration for publication.

Contents

GAME OF THE MONTH - and back to 28 pages (!) NEXT ISSUE. Surprised at the front cover of Issue 37? Newer readers may not know that I am (part-time) Pastor of the Baptist Church in Wilburton - yes, I do SELECTIVE SEARCH in my _spare_ time!

Results Section

From Leonardo LJUBICIC. Leonardo (our first Croatian reader... though we now have 2!) has been playing the **SIMULTANO** against the old Richard Lang **PSION 2** program - sorry, it's the Psion program that is relatively old, not Richard of course!). The PSION has been running on an 80286/16MHz PC and won 8½-3½ overall. Interestingly for comparison, Leonardo then repeated the match with PSION now on an 80286 at 10MHz and the victory narrowed to 6½-5½.

From Golo DARKO. And Golo is our second Croatian reader, also putting some of our British readers to shame by sending in results already! This one follows the entry of his Novag **SUPER FORTE C/6** in the SPLIT '91 TOURNAMENT (Active Chess) where it scored excellently with 5/9 for a 2120 Elo rating. This included a Round 1 loss on time when showing +586 and an easy win! Golo had used a poor time control setting for his machine, but then copied the SS/33 suggestion for Active Chess after discussions with Leonardo, whom he had met at this very Tournament and who recommended him to SS and the time control suggestion.

The computer ended up =21/66 entrants, and obtained pleasant coverage in a couple of local papers. To put things into context, but without wanting to over-detract from this good result, readers will remember that I commented following the SIMULTANO performance at the OMIS TOURNAMENT (see SS/35) that Croatian folk are not yet as "chess computer conscious" as perhaps we now are. Thus the machines are still able to achieve very high gradings over there, in the same way that they often did when they were first seen in Tournaments in the USA in the mid-1980's for example (SENSORY 9 with 1771 USCF - now 1608 Elo, SUPER CONSTELLATION with 2014 USCF- now 1823 Elo).

From G SEDMAN, who has also been making use of his **SUPER FORTE C/6**, which recorded an 8-2 over his Novag **EXPERT/5**, and then 9-1 over his **SUPER VIP!** A later match (also at 40/2) pitched the **SUPER VIP** against his Novag **MENTOR 16**, and the SUPER VIP won this one by 7-3. I think this is one reader who could be called a Novag fan!

From Thomas MALLY, the Editor of Austria's excellent MODUL MAGAZINE, kindly sends me English translations of the *'important bits'*. He also wrote recently to report on the **1991 VIENNA OPEN** which saw two computer entries.

Firstly the Fidelity **ELITE 68040-v10** (wow!!), which did *'quite well'* (Thomas's view! - if a British reader had a £10,000 68040 and I said it had done "quite well", I would expect serious repercussions!). Actually it scored 6½/9 for 6th. place/112 and a 2200 Elo performance. Okay - quite well is about right.

The other entrant was **ZARKOV 2.5,** one of the newer PC PROGS, running here on a *'rather fast'* 80486/33MHz! This program is hopefully reviewed elsewhere in SS,

being superb on features, but its results are a bit *up and down* (you see how
kind I can be when I try a little). In Vienna, despite the ultimate in hardware,
it only managed 5/8, but all against lesser opponents resulting in a 2050 Elo
grade. Thomas, less generous than I you see, comments that *the consistent
pattern was for Zarkov to play feeble and uninspiring chess, often incurring a
lasting weakness in the early middle game before defending tenaciously, which it
was rather better at, obtaining 4 draws*.

From Frank HOLT, an irrepressible worker for SS! He had barely
completed his series of new M CHESS (80286/12) v Mephisto LYON 68020 matches at
different time controls than he upgraded to the new VANCOUVER program. Within
days he was on the 'phone again - 'complaining' that new games v M CHESS and his
Novag SUPER FORTE had become *too one sided*... could he buy the CHESS MACHINE?

Of course!

The next set of results should be VERY interesting! I think the VANCOUVER 68020
has quite enough on its plate against CHESS MACHINE under normal circumstances,
so what will happen when it's on Solid and Risky I just don't know. In Sweden
this match-up went 12-8 to the CHESS MACHINE/GIDEON, but the early score from
Frank was 3-2 for VANCOUVER 68020/12.

I should give you the LYON 68020/12 v M CHESS 286/12 scores:

LYON (risky) won 14-4; LYON (active) won 13-5; LYON (solid) won 15½-2½.

Chess COMPUTER Reports, by Larry Kaufman is full of
interest as usual. Larry reports on owners MEPHISTO replacing Sid Samole as
president of FIDELITY - Sid of course was the <u>founder</u> of Fidelity, and at the
helm during the pre-Richard Lang days when FIDELITY and the SPRACKLENS were the
annual winners of the World Micro Championship. The production go-ahead for the
Fidelity DESIGNER 2325 DISPLAY was one of Sid's last decisions: an interesting
one as the 68020/20MHz at its DOLLAR price must surely be making life hard for
the <u>Mephisto</u> products in the States! Over here the DESIGNER 2325 is also a
competitive £579.

Their *new man* is one of Mephisto's own people, DR ALFRED PROMMER. One of his
first tasks has been to sort out the *fun and games* with the TRAVELMASTER. Not
only because of the program and quality problems referred to in SS/37, but
because the Hong Kong manufacturers (CXG) also went bankrupt! The work was
quickly transferred to another Hong Kong company and supplies have been coming
through quite steadily. Despite the program hiccups, this product is selling
very fast and being well-received by virtue of its excellent strength + features
for the modest price.

Larry also refers briefly to the SPRACKLEN's intended new program for SAITEK,

which is expected to go onto the 20MHz SPARC processor. According to Larry it is __still__ under development - date of release and likely price unknown.

Another article made me smile by the time I'd finished it. It was a good effort at answering the question "HOW DO COMPUTERS PLAY CHESS?" in simple layman's language, with discussion on mobility, alpha-beta searches, iterative methods, quiescence, marginal forward pruning and some other basics. I laughed when I saw **Paul DeStefano**'s article, commenting on Larry's "How do Computers Play Chess?"... Answer: *"A LOT BETTER THAN I DO!"*

Larry also runs a letter page - with Larry's answers. Some bright spark had written commenting that *'selling chess computers is a piece of cake!'* Larry suggests they visit him and the staff at the **ICD Corporation** premises where they would find the conditions, *'frenetic, chaotic, feverish, frenzied, hectic, frantic, and turbulent'*. Goodness knows what he'd say if he had to spend a week at Countrywide! ALTOGETHER AN EXCELLENT ISSUE, LARRY - __thanks__.

The BAD MERGENTHEIM Open

took place last November, with 4 CHESS COMPUTERS taking part. It was an Active Chess Tournament (30 mins each for the whole game) involving no less than __260 players__ including a fair number of GM's and IM's. Winner was Hungarian GM **Farago** with 12/15, followed by three players on 11½: GM **Dautov** (Russia), GM **Barlov** (Yugoslavia) and IM **Dautov** (Russia). Then, sharing 5th place on 11/15 came a **Mephisto VANCOUVER**! A terrific result, though peculiarly it was the 68020 which managed this, whilst the 68030 came 1½ points behind! The positions shown are from tie-break calculations:-

6	**Mephisto VANCOUVER** 68020/12	11/15
21	**Fidelity ELITE 68040**	10
31	**Mephisto VANCOUVER 68030**	9½
77	**Mephisto POLGAR/5**	8½ (also a good result)

From George WALMSLEY

- probably *SELECTIVE SEARCH*'s very first subscriber back in the days of NEWS SHEET 1! George reports on games between his new TRAVELMASTER and the MOBIL MM4, which we had forecast would be a pretty even and interesting struggle. And so it was, but with the MM4 just winning at both 1 and 2 mins per move. George found that endgame ability was the major influence which gave his MM4 the edge, with one or two of the games which saw TRAVELMASTER looking stronger in the middle game - and coming out a Pawn up - ending with the MM4 out-manouvering its opponent in the later stages and grabbing a draw and a couple of wins from 'lost' positions.

Results were: 1 min per move, **MM4 6½, TRAVELMASTER 5½**
            2 mins per move, **MM4 2½, TRAVELMASTER 1½**

North AMERICAN OPEN Computer Chess.

This popular, but too-short (i.e. no. of games played), Annual Event has varied over the years as the

DEDICATED machines have TRIED to compete, and then mainly opted NOT to compete, and now started to enter again encouraged by the good MEPHISTO (Richard Lang) performances in the past 2 years as the only dedicated program present in coming 2= and then 1= amongst the likes of DEEP THOUGHT, HITECH and CRAY BLITZ.

Here was the list of entrants:

Program	Machine	Language(s)	Nodes/Sec
Bebe	S-P	Assembler	40K
BP	80486/33	C & Assembler	1.6K
Chess Machine	ARM-2(RISC)/32	??	??
Cray Blitz	Cray YMP 8/64	Fortran, Assembler, C	200K
Deep Thought II	S-P	C + microcode	5M(!!)
Delicate Brute	Sun Sparc 2	??	6K
HiTech	S-P	C + Microcode +assem	100K
LaChex	Cray YMP 1/16	Fortran + Assembler	50K
M Chess	80486/33	C + Assembler	5K
Mephisto	68030/50	Assembler	10K
Socrates	80386-33	Assembler	13K
Zarkov	HP9000/732	C	10K

Still only MEPHISTO from the dedicated manufacturers, but a good range of the new PC PROGRAMS was there and, though running on very fast hardware, still not in the DEEP THOUGHT, HITECH and CRAY BLITZ class for speed - as indeed you can see. Incidentally the '??' means it's a secret (i.e. I don't know!). The ZARKOV 'super chip' was the fastest processor for the PC entrants, and achieved around 5 or 6 times the speed of an 80486/33 for its program (250CMHz can you believe - my Laptop 80286/12 is about 6CMHz! So why do I bother!?).

DEEP THOUGHT II now runs with 24 processors derived from the old DT processors. The main enhancements are in the hardware evaluation function and the search code has been completely rewritten at IBM. Thus far it has had about one third of the planned search extensions implemented since DT (I), in readiness for KASPAROV. However before then the machine will be fitted with new silicon chips, and the finished version won't be playing games until late next year. The programmer would like to win this time!

Back to the TOURNAMENT. DEEP THOUGHT (1), HITECH (2), CHESS MACHINE/Schroeder (3) and CRAY BLITZ (5) all won their first round games. MEPHISTO (3) did not, going down to SOCRATES (10). The figures in brackets are the seedings produced by the organising committee. M CHESS (6) also won. ZARKOV was seeded (7).

Round 2 saw DEEP THOUGHT beat M CHESS and HITECH beat CHESS MACHINE, and these two became (already) the sole leaders as SOCRATES now held the "mighty" CRAY BLITZ to a draw. In Round 3 it was inevitable that the leaders should meet, and DEEP THOUGHT won again. M CHESS quietened SOCRATES down, CHESS MACHINE got a

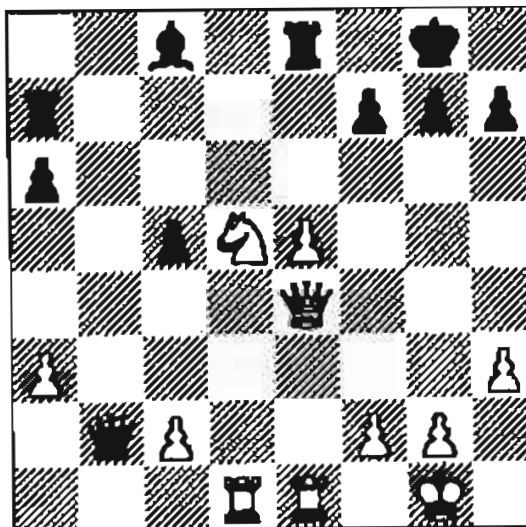draw with CRAY BLITZ, but MEPHISTO went down again - this time to ZARKOV.

White **ZARKOV**
Black **MEPHISTO**
1.e4 d6 2.d4 Nf6 3.Nc3 c6 4.Be2 Nbd7
5.Nf3 e5 6.0-0 Be7 7.a3 (MEPHISTO has 7 a4 in its Book,
so is now on its own) 7...0-0 8.h3 d5 9.exd5 e4
10.Ne5 cxd5 11.Bf4 Re8 12.Re1 a6 13.Bh5
Nxe5 14.dxe5 Nxh5 15.Qxh5 Bc5 16.Rad1
Qb6 17.Qe2 Qxb2 18.Nxd5 Ra7 19.Be3 b6
20.Bxc5 bxc5 21.Qxe4

(What now? MEPHISTO went...)
21... Qxa3 (A heavily
criticised move by some - and that is
right I suppose, IF you see what the
White reply is! The main frames were
tested later (the position soon became
a big talking point) and all spotted
the danger in less than a minute. For
example CRAY BLITZ does, and goes 21 -
Be6 with Black around -100 as it is
behind anyway. CHESS MACHINE on the
other hand is perfectly happy to play
Qxa3, evaluation only -061 and
expecting 22 Re3. On the other hand I
tested THE KING - which was not at the ACM, and it spotted the danger at just
under 3 mins and chose 21 - Bd7. It's better, though it doesn't quite save the
day altogether, I think) **22.Nf6+** (The 'stunner' MEPHISTO, and others,
never saw. ZARKOV - on its 250CMHz equivalent - took just over 3mins to find it
(i.e. over 2 hours on my 80286!), and the MEPHISTO 68030/50 needs 8mins. CHESS
MACHINE hadn't found it after 4 mins, but THE KING has it in 58 secs. Tests on
the Fidelity 68000/68020 program show that it would need to run at no less than
2000MHz to find Nf6+! No doubt my educated SS Readers can see the back-rank
problems looming after 22 - gxf6 23 exf6. Better for Black is 22 - Kf8, but 23
Qxh7 still has him in serious trouble).

In **Round** 4 DEEP THOUGHT cruised over CRAY BLITZ, ZARKOV amazingly now held
HITECH to a draw, M CHESS beat BP, CHESS MACHINE gave SOCRATES its 2nd. straight
defeat after such a nice start.... and MEPHISTO won! Scores were:-

4 DEEP THOUGHT II. 3½ -. 3 M CHESS. 2½ CHESS MACHINE, HITECH, ZARKOV. 2 BP,
CRAY BLITZ, MEPHISTO. 1½ SOCRATES. 1 BEBE, LACHEX. 0 DELICATE BRUTE (half
living up to its name!?)

The 'electronic mail' report of the final **Round** 5 read as follows:- 'DELICATE

BRUTE was doing well as Black in a Petroff Defense against SOCRATES until 12...g5. Don Beal, the programmer, explained that the machine has no King safety criteria and such moves are the result. SOCRATES soon thereafter put several pieces en prise enroute to a mating attack. HITECH got blown away in the opening against M CHESS! An early Queen sortie seemed to be the source of the problem and cost HITECH a full piece. THE CHESS MACHINE got the better of the opening against DEEP THOUGHT, but rashly attacked on the King side giving away its edge plus a Pawn. DEEP THOUGHT eventually won another Pawn. DEEP THOUGHT had difficulty in making progress in the R+P endgame, but eventually they figured it out and won it and the championship. BEBE did well in the opening, but got into trouble in the early middle game and had to give up the exchange. LACHEX simply pushed the h-Pawn down to make a new Queen and the game was over. MEPHISTO played well to defeat BP out of an unclear Queen's Gambit Accepted. It's 41.Ra5! was especially pretty. CRAY BLITZ defended ZARKOV's Ruy Lopez with a risky line, but survived the opening. CRAY BLITZ gained a small advantage but seemed to be unable to do anything with it. Finally, ZARKOV went wrong in a difficult endgame and collapsed". Here are four of those last Round games:-

SOCRATES-DELICATE BRUTE

1.e4 e5 2.Nf3 Nf6 3.Nxe5 d6 4.Nf3 Nxe4 5.d4 d5 6.Bd3 Nc6 7.0-0 Bg4 8.Re1 f5 9.c3 Be7 10.h3 Bh5 11.Bf4 0-0 12.Qc2 g5 13.Bh2 Qc8 14.Nbd2 Bxf3 15.Nxf3 Rd8 16.Rad1 a5 17.Ne5 Nxe5 18.Bxe5 Bd6 19.Bxd6 Rxd6 20.f3 Ng3 21.Kh2 f4 22.Re7 h5 23.Bg6 b6 24.Bf7+ Kf8 25.Bxh5 Nxh5 26.Qh7. 1-0

M CHESS-HITECH

1.e4 e5 2.Nf3 Nf6 3.d4 Nxe4 4.Bd3 d5 5.Nxe5 Nd7 6.Nxd7 Bxd7 7.0-0 Qh4 8.c4 Bc6 9.g3 Qf6 10.cxd5 Bxd5 11.Bxe4 Bxe4 12.Re1 Qg6 13.Nc3 f5 14.f3 0-0-0 15.fxe4 a6 16.Bf4 fxe4 17.Nxe4 Bb4 18.Rc1 c6 19.Re3 Rd5 20.Qa4 Bf8 21.Rec3 Kd8 22.Qb3 Rb5 23.Qc2 Bb4 24.Rb3 Re8 25.Be5 Qh6 26.a4 Rb6 27.Rf1 Qg6 28.Rbf3 a5 29.Rf5 Qh6 30.Rf7 Be7 31.Rxg7 Qe3+ 32.Kg2. 1-0

DEEP THOUGHT-CHESS MACHINE

1.e4 e5 2.Nf3 Nc6 3.Bb5 a6 4.Ba4 Nf6 5.0-0 Nxe4 6.d4 b5 7.Bb3 d5 8.dxe5 Be6 9.c3 Be7 10.Bc2 0-0 11.Nbd2 f5 12.Nb3 Qd7 13.Nbd4 Na5 14.Nxe6 Qxe6 15.Bf4 c5 16.Qc1 h6 17.h3 g5 18.Bh2 g4 19.hxg4 fxg4 20.Bxe4 dxe4 21.Nd2 Bg5 22.Qe1 Bxd2

23.Qxd2 Nc4 24.Qe2 Rad8 25.b3 Nxe5
26.Qxe4 Rf5 27.Rae1 Re8 28.Re3 Qf6
29.Bxe5 Rfxe5 30.Qxg4+ Kh8 31.Rxe5 Qxe5
32.c4 Rd8 33.Qh3 Qg5 34.Qe6 bxc4 35.Qxc4
Rg8 36.g3 Rg6 37.Re1 Qf5 38.Re7 Qb1+
39.Kg2 Qf5 40.Qc3+ Qf6 41.Qxc5 Qc6+
42.Qxc6 Rxc6 43.Re5 Kg7 44.Ra5 Kf6 45.f4
Ke7 46.g4 Kf6 47.Kf3 Re6 48.Rc5 Rb6
49.Rc7 Rd6 50.Ra7 Rc6 51.Ke4 Rb6 52.Ra8
Rb4+ 53.Kf3 Rb6 54.Rh8 Kg7 55.Rd8 Kf6
56.Rd7 Ke6 57.Ra7 Kf6 58.Kg3 Rc6 59.Kh4
Ke6 60.Kh5 Kd5 61.f5 Ke5 62.Re7+ Kf4
63.Re6 Rc3 64.f6. 1-0

MEPHISTO-BP

1.d4 d5 2.c4 dxc4 3.Nf3 Nf6 4.e3 e6
5.Bxc4 c5 6.0-0 a6 7.Qe2 b5 8.Bd3 cxd4
9.exd4 Nc6 10.a4 bxa4 11.Rxa4 Nb4
12.Bb5+ Bd7 13.Bxd7+ Qxd7 14.Nc3 Be7
15.Bg5 Qb7 16.Bxf6 Bxf6 17.Ne4 Be7
18.Nc5 Bxc5 19.dxc5 0-0 20.Qc4 Rab8
21.Rc1 Rfd8 22.Nd4 a5 23.c6 Qc7 24.g3
Rd5 25.Qc3 Rb6 26.f4 Rb8 27.Qe3 Rbd8
28.Rc4 R8d6 29.Kf1 Kh8 30.Qc3 f6 31.Rxa5
Rxa5 32.Qxb4 Kg8 33.Nb5 Rxb5 34.Qxb5 Rd5
35.Qb4 Rd1+ 36.Kg2 Rd6 37.Qc3 Kf7 38.b4
Rd8 39.b5 Qb6 40.Rc5 Qc7 41.Qb4 Rb8
42.Rc2 h6 43.Qc4 Rd8 44.f5 Ke7 45.Qc5+
Kf7 46.fxe6+ Kg6 47.b6 Qc8 48.c7 Rd1
49.Qc6 Qa6 50.Rf2 Re1 51.c8Q Qxc8
52.Qxc8 Re4 53.b7. 1-0

All RESULTING in a FINAL TABLE as follows:-

	DT	MC	MP	CB	HT	CM	ZR	SC	LC	BP	BB	DB =	TOTAL
DEEP THOUGHT II	x	1		1	1	1	1						5
M CHESS	0	x			1			1		1		1	4
MEPHISTO			x				0	0	1	1	1		3
CRAY BLITZ	0			x	½	1	½		1				3
HITECH	0	0			x	1	½		1.				2½
CHESS MACHINE	0		½	0	x		1			1			2½
ZARKOV	0		1	0	½		x					1	2½
SOCRATES		0	1	½		0		x				1	2½
LACHEX			0		0				x	0	1	1	2
BP		0	0	0					1	x	1		2
BEBE			0			0			0	0	x	1	1
DELICATE BRUTE		0					0	0	0		0	x	0

Did I hear someone say, *'THE KING? What's that - another new program?'* - *'Or something to do with your Christmas message on the front of the last SS?'* Or perhaps a regal promotion for Paul Cohen? (Think about it!)

In fact, the former (sorry Paul) - though you can be forgiven if this new PC program's arrival on the scene in the pages of SS/35, plus <u>a whole game</u> in SS/36, went almost straight past you.

H. G. Wells Rides Again!

THE KING might well have been created by the author of *'THE INVISIBLE MAN'* from the way in which it has quietly slipped in half-unnoticed, then disappeared for a spell, only to re-appear in an exalted position in the Rating List of our last Issue. If there has even been an INVISIBLE chess program, this is it (though I'm embarrassed to admit I can't actually remember if H. G. Wells was responsible for the book - I do know it wasn't a cowboy).

Actually the chess program was written by **Johann de Koning** and, though his work with it started 3-4 years ago, it first came really to the forefront by finishing 3= in the last **World Computer Championships** in Vancouver. There it shared the same RISC hardware and Opening Book (and a victory over Richard Lang's MEPHISTO entry!) as the victorious GIDEON. In fact if you work it out, it was precisely the GIDEON's win over THE KING at Vancouver that determined the Championship. After that the minor 'mystery' starts!

A couple of months ago, immediately after Vancouver, **GIDEON** (by Ed Schroeder) was renamed **THE CHESSMACHINE** for its commercial appearance. Customers obtained a 15MHz RISC Card for inserting within their PC, and Disk software for installing onto their Hard Disk (though you can also run it from floppies). Lo and behold, hidden away on the software of those first **ChessMachine** 2 arrivals (1 represents pre-Vancouver, 2 represents post-Vancouver), is **THE KING**! A nice bonus, I thought... and took it for granted I'm afraid that its unheralded appearance there was implication of an inferior ability, at least as compared with the GIDEON program.

Yet now it seems, perhaps NOT! Suddenly results for THE KING started to appear from Sweden, admittedly in small numbers, but implying close to <u>equality</u> with 'THE' CHESSMACHINE... and immediately THE KING completely **disappeared** (just like the *INVISIBLE MAN*) from the next set of software packages which reached us containing The ChessMachine. To complete this strange saga, however, you <u>can</u> still buy it for an extra £59... though, of course, you would <u>need</u> The ChessMachine itself and its RISC hardware in order to run it.

Playing Strength

Amongst the early results which made us sit up and take notice were a win over the Fidelity MACH 3 by 16½-3½, and a lead over the Novag DIABLO of 6-0 (in my own games played since, I have a score of 5-1 at 1 min per move). But THE KING's most staggering success thus far is certainly its **10-10 draw** with the Mephisto VANCOUVER 68030 - you will probably remember that ChessMachine itself (i.e. GIDEON) lost narrowly by 11-9 in what I suggested then was the true "commercial" World Championship! I don't have copies of the games from these exalted confrontations, but here are a couple of lesser ones which should make you blink a little!

White **The King/PC, 2340**
Black **Meph Milano, 2100**

1.e4 e5 2.f4 exf4 3.Bc4 Nf6 4.Nc3 c6 5.Bb3 d5 6.exd5 Nxd5 (The Opening Books are now exitted) **7.Qe2+ Be6 8.Nf3 Nxc3 9.dxc3 Qf6 10.Nd4 Kd7 11.0-0 g5** (11 - Bd6 was the better way to protect the Pawn, also giving the King some cover on the d-file) **12.Nxe6 fxe6 13.Be3** (Continuing to develop his pieces as quickly as possible - and also connecting Rooks which will inevitably be dangerous against the exposed King) **13... Bd6 14.Rad1** (A fine move. 14 Rae1 Re8 15 Qd3 is not as immediately effective)
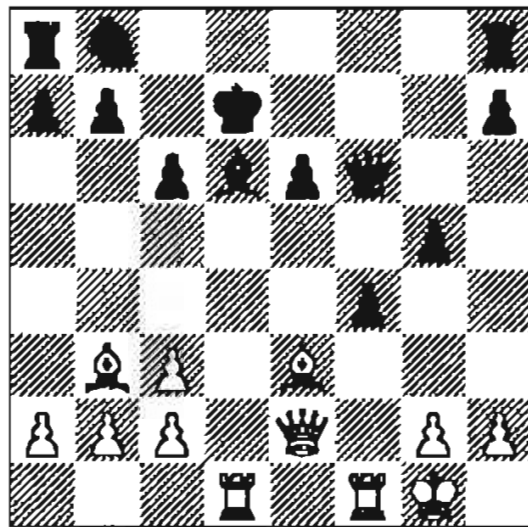
14... Kc7 (This doesn't work. 14 - Rd8 15 Bc5 Kc7 appears to keep Milano alive, though 16 Bxd6 Rxd6 17 Rxd6 Kxd6 18 Qc4 is certainly going to be healthy for The King) **15.Rxd6** (Beautiful! A quite brilliant move which destroys Black's defence totally) **15... Kxd6 16.Bd4** (16 Rd1+ Ke7 17 Bd4 is also deadly) **16... e5 17.Bxe5+ Qxe5 18.Rd1+** (This is the move that finishes it altogether. Black knows it too now of course, and can't really be criticised either since move 14 or in what follows. But White's eval. when it played 15 Rxd6 was over +300 which shows an

amazing awareness of the power of open lines against a stranded King, compared with the mere loss of a Rook for Bishop) **18... Qd5 19.Bxd5 cxd5 20.Qe4 Nc6 21.Rxd5+ Kc7 22.Rxg5 Raf8 23.Rg7+ Kb8 24.Rxh7 Rxh7 25.Qxh7 a5** (There is nothing Milano can try - White wins as soon as the h/Pawn advances - which it now proceeds to do) **26.h4 Ka7 27.h5 Rd8 28.h6 Rd1+ 29.Kh2 Rd5 30.Qf7.** 1-0

White **The King/PC, 2340**
Black **Nov Scorpio, 2150**

1.e4 c6 2.c4 d5 3.cxd5 cxd5 4.exd5 Qxd5 5.d4 e5 6.Nf3 exd4 7.Nxd4 Bb4+ 8.Nc3 Nc6 9.Nxc6 Bxc3+ 10.bxc3 Qxc6 11.Rb1 Qxc3+ 12.Bd2 Qe5+ 13.Be2 Nf6 14.Rb5 Qc7 15.Bb4 Bd7 16.Bd6 Qc3+ 17.Kf1
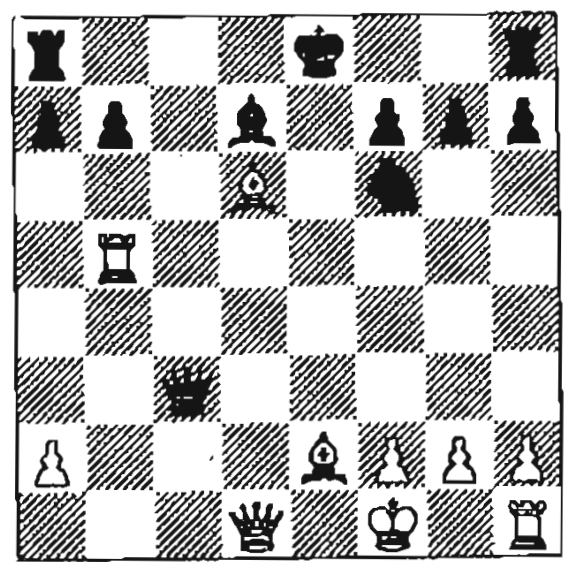
(The position is pretty even at this point - but of a type in which The King excels. Whilst his h1/Rook is out of the game, his four active pieces have great attacking scope - and Black can't castle! Thus White already shows an optimistic evaluation) **17... Qc8 18.Rc5 Qd8 19.Qe1** (Some of these moves now virtually play themselves, of course, but they're none the worse for that!) **19... Be6** (Novag still seemed reasonably content - but The King's eval was beginning to go mad!) **20.Bb5+ Nd7 21.Rc7** (Oooh. That's nasty, and the move White saw a while back which removes Scorpio from all hope) **21... Qg5** (Neglect of prime duty in this case, though 21 - Qxc7 22 Bxc7 0-0 is hardly enticing I know) **22.Bxd7+ Kd8 23.Bxe6 fxe6 24.Qxe6** (There's nothing more to say - Black's position is a mess, and the checks only prolong the agony on a temporary basis) **24... Qb5+ 25.Rc4 Qb1+ 26.Ke2 Qxa2+ 27.Kf3 Qb3+ 28.Kf4 Qxc4+ 29.Qxc4 Rc8 30.Be7+ Kxe7 31.Re1+** (Aha! The King's Rook emerges at last... and ends the game!) 1-0

PROCESSOR SPEEDS - ANOTHER VISIT!

We continue carefully with the work from Issues 34 and 37 and, as promised, now attempt to bring all the programs to a common denominator. In other words we take away all of the HARDWARE/PROCESSOR advantages (or disadvantages) and try to find out which programs would be best if they were all on EXACTLY the SAME processor?! Isn't this something we have all wanted to know?

Since **Larry Kaufman's** excellent initial work with his CHESS MIPS, the idea has been taken up with some gusto by **myself** (as you know) and the Austrian **MODUL** and Swedish **PLY** Magazines. These two, however, have dealt with the matter at a too simple level, and used Chess MIPS instead of my surely preferable CHESS MHz.

Perhaps "too simple" is rather harsh, as their method starts correctly by comparing those programs which are available on different processors (e.g. Lyon 68030-Lyon 68020-Lyon 68000; same with Portorose; M Chess 80486-386-286; Polgar 10MHz-5MHz; Conchess 6MHz-4MHz-2MHz; Constellation 3.6MHz-2MHz etc). The ELO DIFFERENCES and SPEED DIFFERENCES are then calculated, added and averaged, and a figure of **76 Elo** is reached for the AVERAGE speed doubling factor. Readers from an earlier era will remember that David Levy proposed 100 Elo a long time ago, and this was modified by myself, and others later, to 80 about 4 years ago. So the latter figure has stood up well... but (and, as they say, it is a BIG "but") there is little or, probably, NO doubt that the faster the processing speeds get, the LESS value there is in successive doublings because the extra analysis reached by the computer goes further and further away from the root (1 ply) position, and any changes become both rarer and of less likely importance.

This is where my friend **Steve Maughan** comes in, as he is the SS resident **mathematical genius**! I sent Steve a wide range of figures, more extensive than those used in MODUL (PLY, in fact, copied the MODUL article exactly), and asked him if he could produce a formula to equal the "falling off curve" which I believed would show itself under scrutiny. "Eureka!" A few days later my morning post arrived with a 3½" floppy disc all ready to load into my Spreadsheet with the most wonderful formula you have ever seen. **And it WORKS!**

Steve will be writing for SS/39, showing and explaining(!) some of the background mathematics; but in general terms his calculations show that, at 1600 Elo the doubling factor is around **100**, and at 2300 it is around **55**! Thus Levy was right in Sensory 9 days, but there's quite a difference now! The higher beyond 2300 of course, the more this figure of 55 drops.... we have even been able to reduce the number-cruncher DEEP THOUGHT to 6502/5MHz standard!! - but I will leave that for Steve to explain next time. For now, we can produce a listing with the machines all standardised to, say, a 6502 at 5MHz (5CMHz), or a RISC system at 15MHz (30CMHz) like ChessMachine. In other words, what would Richard Lang's programs have been like if he had been processor-restricted? And what might Dave Kittinger achieve if he could use a 15MHz RISC card?

Our final ability, this time, is to see the progress programmers such as Kittinger, Lang and Schroder have made over the years by normalising their successive programs to a single CHESS MHz speed. Next time we will produce our DEEP THOUGHT figure for you - and show you how long each computer would have to think on each move to produce INTERNATIONAL MASTER standard analysis!

Program	CMHz	Actual	@5CMHz	Program	CMHz	Actual	@5CMHz
1 Vancouver 68020	10.8	2306	2244	21 Sup Forte-Exp B/6	6	2027	2009
2 The King-TCM/PC	30	2365	2222	22 MM4	4.9	2000	2002
3 Gideon-TCM/PC	30	2362	2219	23 Amsterdam	6.6	2030	2002
4 Lyon 68020	10.8	2281	2217	24 Monte Carlo	4	1975	1998
5 Portorose 68020	10.8	2243	2177	25 CXG Sphinx	4	1969	1992
6 Almeria 68020	10.8	2213	2145	26 Mach 2C	6.6	2020	1992
7 M Chess 80386/PC	18.8	2255	2141	27 Travelmaster	6.5	2018	1991
8 Milano	5	2126	2126	28 Psion 80386/PC	18.8	2118	1989
9 Scorpio-Diablo	8.8	2153	2101	29 Sup Forte-Exp A/6	6	1992	1973
10 MM5	4.9	2083	2085	30 Turbo King II	5	1965	1965
11 Polgar	4.9	2079	2081	31 Saitek D	10	2019	1947
12 Fid 2325 68020-v7	18	2188	2070	32 Rex 80386/PC	18.8	2077	1943
13 Roma 68020	10.8	2137	2065	33 Zarkov 80386/PC	18.8	2063	1927
14 Academy	4.9	2047	2049	34 SuperMondial 1	4	1898	1923
15 Sup Forte-Exp C/6	6	2062	2044	35 Rebell	4.9	1917	1919
16 Dallas 68020	10.8	2114	2040	36 Forte B	5	1918	1918
17 Mondial 68000XL	6.6	2060	2033	37 Par Exc-Des 2100	5	1913	1913
18 Fritz 80386/PC	18.8	2157	2032	38 Forte A	5	1909	1909
19 Monte Carlo IV	4	2007	2030	39 Expert	4	1883	1900
20 Mega IV	4.9	2026	2028	40 Club B	6.6	1935	1905

RICHARD LANG'S PROGRESS:-

Program	CMHz	Actual	@30CMHz
1 Vancouver 68020	10.8	2306	2384
2 Lyon 68020	10.8	2281	2361
3 Portorose 68020	10.8	2243	2325
4 Almeria 68020	10.8	2213	2297
5 Roma 68020	10.8	2137	2227
6 Dallas 68020	10.8	2114	2205
7 Mondial 68000XL	6.6	2060	2199
8 Amsterdam	6.6	2030	2172
9 Psion 80386/PC	18.8	2118	2161

DAVE KITTINGER'S PROGRESS:-

Program	CMHz	Actual	30CMHz
1 Scorpio-Diablo	8.8	2153	2258
2 Sup Forte-Exp C/6	6	2062	2209
3 Sup Forte-Exp B/6	6	2027	2170
4 Sup Forte-Exp A/6	6	1992	2147
5 Forte B	5	1918	2100
6 Forte A	5	1909	2092
7 Expert	4	1883	2092
8 Super Nova	3.2	1826	2066
9 Super Const	4	1823	2042
10 Super VIP	3.2	1788	2035
11 Constellation/2	2	1677	1995

THE SPRACKLEN'S FIDELITY PROGRESS:-

Program	CMHz	Actual	
1 2325 68020-v7	18	2188	2232
2 Mach 2C	6.6	2020	2163
3 Par Exc-Des 2100	5	1913	2096
4 Club B	6.6	1935	2089
5 Excellence/3	3	1846	2088

Of course the KAPLAN, MORSCH and SCHRODER progress can all be examined in just the same way! Interesting, isn't it?!

The Mephisto MILANO at BURY ST EDMUNDS

The bare bones of this Event were reported in SS/37 - the MILANO came 4= with
3½/5. Winners were I.Ms PETER WELLS and JOHN COOPER; also on 3½ was I.M ANDREW
MARTIN, so the MILANO was in good company. Unfortunately, only from a grading
point of view, its wins were gained over players graded around 150 BCF, so its
tournament rating this time was only 1983/173 BCF.

However its actual games were particularly interesting and attracted a lot of
interest, as did the new style of board with both stand-up and (very nice) disc
pieces - all properly magnetised! This means the improved POLGAR program offers
genuinely portable possibilities! When using the disc pieces a shallow lid,
which fits comfortably under the board whilst in play, now clicks firmly over
when you've finished/adjourned, protecting the board surface so you can leave
the pieces securely in their places. There is a magnetic area under the lid so
that even captured pieces are stored safely, and the MILANO can be nicely tucked
under your arm or into any decent-sized briefcase.

The ACADEMY/POLGAR graphic display and features are all present and correct -
only choice of playing style is missing (Ed Schroeder has decided which is best,
and that's what you get!). But there are a couple of new features for analysing
games already played, and a user-select method to restrict searching to your own
choice of say 3 or 4 "best" moves for Correspondence play. Here are two of the
games from Bury, rounds 4 and 5.

White **R P Ginger, 1820**
Black **Meph Milano, 2100**
**1.d4 d5 2.Nf3 Nf6 3.e3 Bg4** (Computer out of Book)
4.c4 e6 5.Nbd2 Bb4 6.Qa4+ Nc6 7.Ne5 Rb8
8.a3 Bd6 9.Nxg4 (9 Nxc6 better (+106 King)) **9... Nxg4**
10.c5 (10 Be2 Qh4 11 g3 Qh3 12 Bf3 best. White has missed Milano's reply)
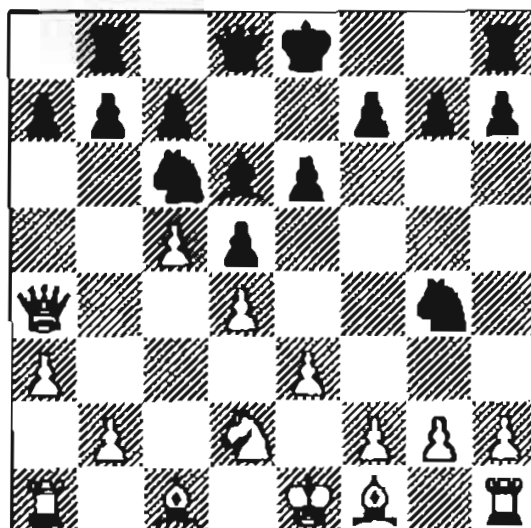
10... Qh4 11.g3 (Of course the Bishop couldn't be taken 11 cxd6 Qxf2+ 12 Kd1 Nxe3 mate) 11... Bxg3 (A genuine Bishop sac this time!) 12.hxg3 (12 fxg3 was better, but Qf6 (still with a mate threat) 13 Ke2 is also 0-1) 12... Qxh1 13.Qd1 Nh2 14.Qh5 e5 (Opening up the position!) 15.dxe5 0-0 16.f4 Qg1 17.Qe2 Qxg3+ 18.Qf2 Qxf2+ 19.Kxf2 Nxf1 20.Kxf1 g5 (Another excellent move, increasing the threat from the K-side Pawns. The rest is straightforward) 21.b4 gxf4 22.exf4 f6 23.b5 (The pressure from Black's 2 passed Pawns causes White to help Milano's infiltration gain further ground. 23 exf Rxf6 (or Nd4!) 24 Nf3 was best) 23... Nd4 24.Bb2 fxe5 25.Bxd4 Rxf4+ 26.Ke2 Rxd4 27.Rg1+ Kh8 28.Nf3 Re4+ 29.Kd2 Rf8 30.Ng5 Rf2+ 31.Kd3 Ra4 32.Ke3 Rf5. 0-1

White **N A Hutchison, 1800E**
Black **Meph Milano, 2100**
1.e4 e5 2.Nf3 Nc6 3.Bb5 a6 4.Ba4 Nf6 5.0-0 Nxe4 6.d4 b5 7.Bb3 d5 8.dxe5 Be6 9.c3 Be7 10.Bc2 0-0 11.Qe2 f5 12.exf6e.p. Rxf6 13.Rd1 Qf8 14.Bxe4 dxe4 15.Qxe4 Rd8 (Taking off one of White's only defenders, this is clever stuff!) 16.Rxd8 Qxd8 17.Bg5 (White starts an attack - but you need the stronger forces in the appropriate area to do this) 17... Bd5 (Easily the best reply - it clears e6 for the Rook and drives the W/Q back) 18.Qe1 (18 Qc2 looks better. But 18 - Rxf3! 19 Bxe7 Qxe7 20 gxf2 Qe1+ 21 Kg2 Ne5!) 18... Re6 19.Be3 Bxf3 20.gxf3 Bd6 (Lovely. Threatens Qh4 and Rg6+) 21.Nd2
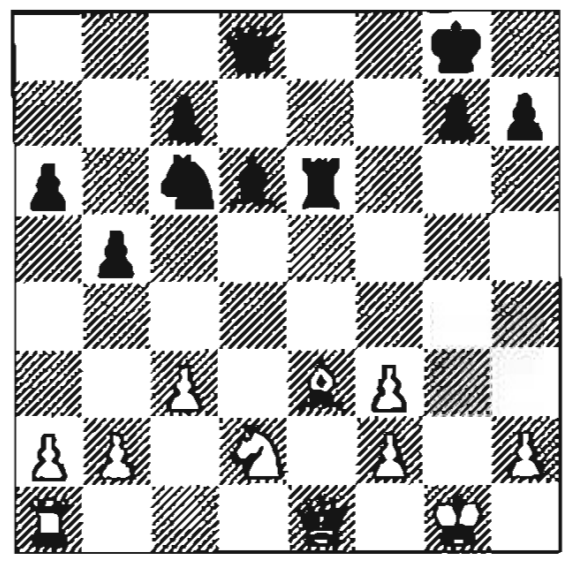
21... Rg6+ 22.Kh1 Bxh2 23.Bg5 (A shell-shocked move. But 23 Nf1 Bd6 24 Ng3 would only be prolonging the inevitable) 23... Rxg5 24.Kxh2 (Ooops. Allows an immediate M/2 announcement. But it was hopeless anyway) 24... Qd6+ 25.Kh3. 0-1

Mephisto VANCOUVER 68020/20
v
M CHESS 80386/33

Dave Overton has recently run a series of important tests between his Mephisto LYON 68020/20MHz, and M CHESS on a very fast 80386 PC (33MHz). Having since upgraded to the VANCOUVER program, he naturally wanted to do a repeat of the match to 'judge the improvement' for himself!

But these things don't always work out quite as you expect!

The grading difference between the LYON 68020/20 and M CHESS 386/33 is around 100 Elo, so the forecast if both were to play 'true to form' would be a 6½-3½ win for the Mephisto (or even closer, just 6-4). However Dave had a 7-3 win for the LYON in the first match (all games played at 1 min per move), which was very pleasing for all the Mephisto fan-club... until the VANCOUVER came onto the scene and Dave fancied another go. Then we got nervous!

We all wondered if VANCOUVER could possibly improve on this. Despite the fact that it is an upgrade, the LYON's achieving a result improving on probability suggested a disappointment might just be round the corner. Especially as 10 games has to be classed as small sample in truth, and the main areas of improvement in the Vancouver are acknowledged to be for the owner's pleasure rather than sheer playing strength improvement - though that is improved as well but perhaps to a lesser degree than in previous upgrades.

And indeed, at first it seemed such an upset could well be the case as a draw in the first game was followed by an M CHESS win in the second! Even the third was a very tight and long struggle, with M CHESS actually having the slightest of edge throughout as White, until it missed a trap at move 58, and the VANCOUVER quickly announced a mate combination.

This was the first of a series of VANCOUVER wins, and the final score table (much to Dave's relief... yes, and ours!) was:-

```
Mephisto VANCOUVER 68020/20  ½ 0 1 1 1 1 0 ½ 1 1 = 7
M CHESS 80386/33             ½ 1 0 0 0 0 1 ½ 0 0 = 3
```

Dave's own opinion was that "They are all very good games, even better than last time, my favourites being 3, 5, 6 and 10... My personal assessment, although the final result is the same as achieved with the LYON, is that it is certainly better in the opening, there are some improvements in the middle game (mostly positional: Pawn structure, emphasis on centre - Eric), and again some in the

end-game which, it seemed to me, were the most significant".

So there you have it: here are 2 of those 'best' games (light notes by Eric)...

White **Meph Vancouver 020/20, 2380**
Black **M Chess 386/33, 2260**
Nov 1991, Dave Overton.

**1.e4 c5 2.Nf3 d6 3.Bb5+ Bd7 4.Bxd7+ Qxd7
5.0-0 Nc6 6.c3 Nf6** (Both computers are now out of Book - and in a very even position) **7.Qe2 g6 8.d4 cxd4 9.cxd4 d5 10.e5 Ne4** (10 - Nh5 11 Nc3 Bg7 was a reasonable alternative) **11.Nbd2 Qf5** (Typically aggressive M Chess play - but I'd have preferred Nxd2 I think) **12.Re1 Ng5 13.Qb5** (How about 13 Nxg5! Qxg5 14 Qb5 Rb8 15 Ne4!) **13... Nxf3+ 14.Nxf3 Qd7 15.Qb3 Bg7 16.Bg5 h6 17.Bd2 Rc8 18.e6 fxe6**
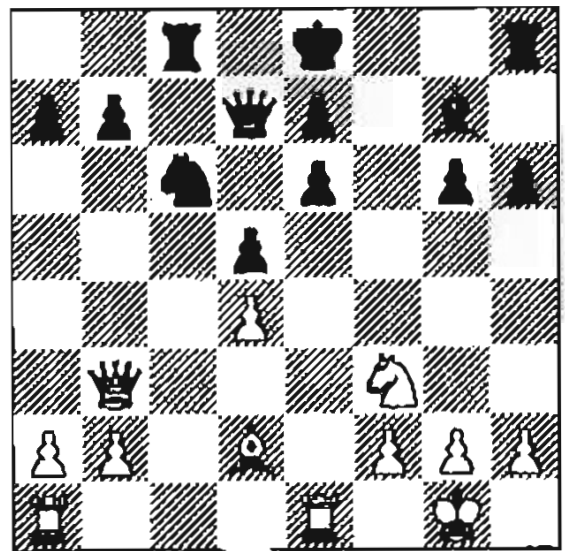


**19.Qd3 Kf7 20.Rac1 Bf6 21.Qe3 g5** (Black's King does not look safe enough to allow him a K-side Pawn charge. It'll look even worse in a moment or two!) **22.h4 g4 23.Ne5+ Nxe5 24.dxe5 Rxc1 25.Bxc1 Bxh4** (Probably the Bishop was best going to g7 to enable the King to use g8 as a hiding place) **26.Qf4+ Kg7 27.Qxg4+ Bg5 28.f4 Qa4 29.Qg3 Qd4+ 30.Be3 Qxb2 31.fxg5 h5 32.g6!** (M Chess is not impressed with this - until another couple of moves go by! But in truth it is the start of a rather fine attack to finish the game) **32... d4 33.Bc1 Qc3 34.Qf2** (Vancouver was never likely to exchange Queens in this position, but M Chess now knows it has problems, so will try anything it can. Some other computer programs still disintegrate when they're in trouble, I'm afraid!) **34... Rf8 35.Bh6+ Kxh6 36.Qxf8+ Kxg6 37.Qg8+ Kf5 38.Qf7+ Kg5 39.Qxe7+ Kg6 40.Qxe6+.** 1-0

White **Meph Vancouver 020/20, 2380**
Black **M Chess 386/33, 2260**
<u>Nov 1991, Dave Overton.</u>

**1.c4 Nf6 2.Nc3 g6 3.d4 d5 4.Bf4 Bg7 5.Nf3 0-0 6.e3 c5 7.dxc5 Ne4** (We are "out" of my opening books at home. BCO has very little at all on the 4 Bf4 line: *'too easy for Black to equalise'* says Keene... try telling M Chess that! MCO has more, but shows 6 e3 c6, or 6 Rc1 c5, but <u>not</u> 6 e3 c5. The ChessMachine program, however, actually has something in its book right here!... 8 Qb3. But the Vancouver is out of book, so proceeds to produce some excellent ideas all of its own)
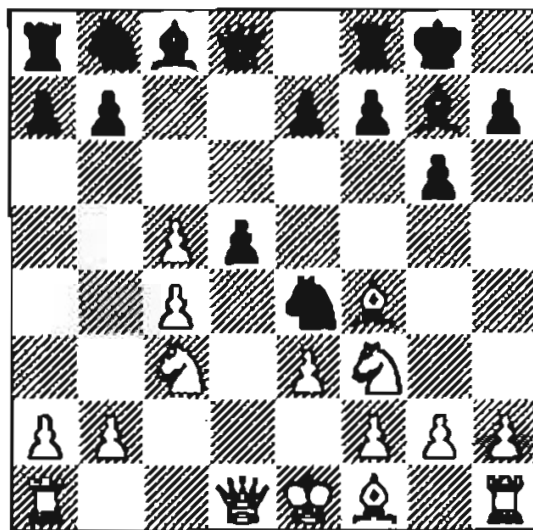


**8.Nxd5 Bxb2 9.Bc7 Qe8 10.Be5 Bxe5** (It is interesting that M Chess chooses this over the more likely "computer move" 10 - Bxa1 11 Bxa1 Qd8?! 12 Qd4. What's happened to all of those materialistic monsters that thought 'holes on the black squares' were from pressing down the pieces too hard on your Computer board, and nothing at all to do with the a1-h8 diagonal?) **11.Nxe5 Qd8 12.Qd4** (The idea is suddenly taking shape!) **12... Ng5 13.Rd1 Ne6 14.Qh4 g5 15.Qh6 f5** (Fending off the deadly threat of 16 Bd3, which really would cause mayhem against certain incautious moves by Black here) **16.h4 g4 17.Nf6+ exf6** (I think Rxf6 was better, trying to make White retreat his/its Queen a little) **18.Rxd8 Nxd8 19.Nd3** (Actually neither side is properly developed yet, so Vancouver decides it's done enough damage for the moment and wisely prepares its other pieces for a final onslaught!) **19... Ndc6 20.g3 Na6** (I think Ne5 is better as it offers more help to the rickety centre and King-side, and tries for some counterplay) **21.Nf4 Nc7 22.Bg2 Be6 23.Bd5 Bxd5 24.cxd5 Ne5** (I checked this on other Computers, and there was a liking for 24 - Nb4?! (or is it !?) 25 d6 Nd5 26 Nxd5 Nxd5) **25.Ke2 Nb5** (An irrelevant choice on the wrong wing again. 25 - Rf7 26 Rc1 Rc8 was a better way to struggle) **26.Nh5 Nc3+ 27.Kf1.** 1-0, I enjoyed that.

# An INTERESTING ENDGAME!

The endgame position which we will study arose at move 57 in a game between Novag SCORPIO ((White) and Mephisto VANCOUVER (Black). It had been a 'typical' computer chess game, with nothing particularly outstanding coming from either side. The SCORPIO had played the Colle System (1.d4 d5 2.Nf3 Nf6 3.e3) but started to come under pressure around move 35 as the VANCOUVER succeeded in dominating open Q-side files with its Rooks. Finally White dropped a Pawn at move 40. However in the ensuing Rook and Pawn ending, the passed Pawn was on the h-file, and one would expect the game to be drawn as long as the Rooks stay on.

However Richard Lang has been working on multiple Pawn endings, also teaching his latest program to know when (and when not) to seek the exchange of remaining pieces. Readers can very quickly set-up on their own computer an example which shows a part of what has been achieved. Of course it is easy to know White has a won position if his Pawns are on a2 and h2 (King, say, e1), and Black's Pawns are on d7 and e7, King e8. Those isolated a and h-Pawns would have been losers with Rooks on the board, but now they must win the game.

Okay?! Turn then to our **first diagram**! Despite Black's extra Pawn, the position (played correctly) is **won** for **White**. Many computers may find some of the right moves, but they are all quite certain that White is losing at this point. Even the LYON took 2 minutes to conclude it 'might be a draw', and needed a couple of moves to be played in order to realise it <u>was</u> actually winning! However the VANCOUVER shows over +200 <u>within only 1 second</u> at the start position as given!
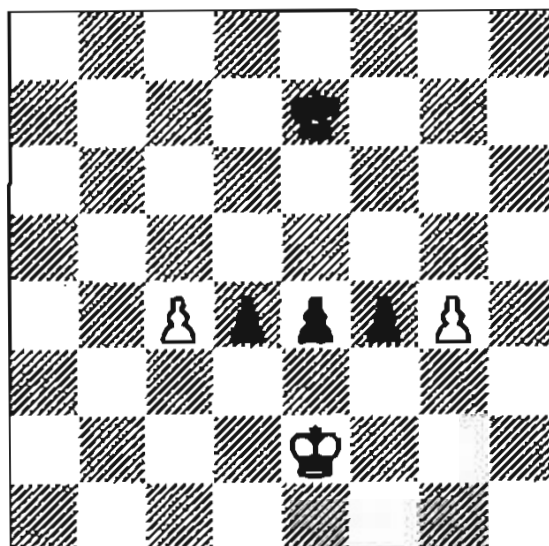
Of even more importance is the intention that, if each side had a minor piece in the position you have just looked at, the program should know: [1] If it is playing White that it should <u>try to exchange</u> the 2 minor pieces to get the win and, [2] If it is Black it <u>should</u> try to avoid such an exchange to keep the draw. Valuable half-points are won (or lost!) on such matters.

And so we come to the SCORPIO and VANCOUVER game (diagram 2)... the first time I had got an actual game position on
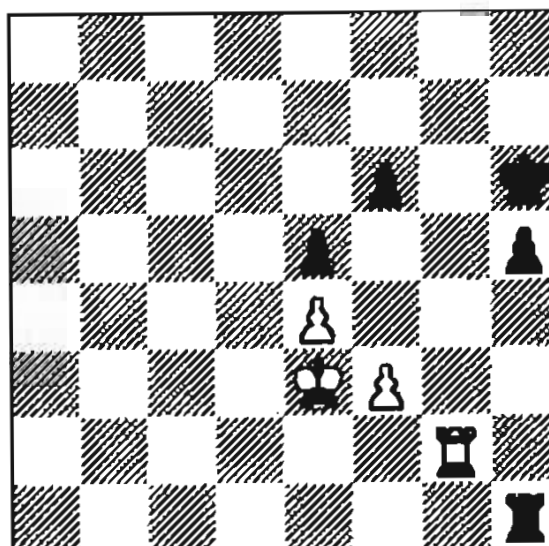
my board in which to see if the VANCOUVER could actually achieve something from its new knowledge-base. The game was played at my usual 60/60 Time Control.

**56... Rb1** (56...h4 looks 'likely', and was expected by Novag. But Mephisto does want to exchange Rooks if it can, as we shall see) **57.Rg3** (Perhaps the immediate Rg8 would have saved a tempo on the game as played) **57... h4 58.Rg8** (Blocking the Pawn with Rh3 was the alternative) **58... Rb7**! (That Mephisto has the right idea is becoming clear, and its chances of at least 'tempting' White are already looking more optimistic. The predecessor LYON program, like its competitors as far as I have tested them, would have kept it's Rook steadfastly wandering along the first rank, toddled around with its King, or over-pushed the h-Pawn, allowing the game to peter-out into an inevitable draw) **59.Kf2 Rg7** (First offer of the sought-for exchange) **60.Rh8+** (Refused by Novag - and quite correctly) **60... Kg5**! (Better than 60... Rh7 when 61.Rg8 gains the open g-file) **61.Kg2 Rg6** (Mephisto is now looking to offer the exchange on h6 which is even better than it would have been on g7 of course) **62.Kf2 f5** (An interesting and unexpected intermission. White should probably not take the Pawn, and the VANCOUVER expected 63.Re8 which seems best and probably still draws. However the current 'rave' Chess Machine add-on program THE KING chooses Novag's move, though GIDEON sides with Mephisto in recommending Re8) **63.exf5**?! **Rh6** (Superb! Not expected by the SCORPIO, and underestimated by THE KING. Now Mephisto's evaluation jumps from +066 to +148 as, if the exchange is avoided, Black's Rook is left nicely supporting the passed Pawn. But White's alternative is the unfavourable exchange which Mephisto has visibly been seeking. A tricky choice faces Novag) **64.Rxh6** (The wrong decision, and one which IS fatal. If 64.Rd8 Kxf5, White can play 65.Rf8+ or, better, shuffle his King over to g2. Then if and when Black plays h3, White blocks it with Kh2. Also his Rook should be able to get back to the first rank if needed and the position may still hold for a draw. I noted that THE KING evaluated Rxh6 as a disaster in around 15 secs and moved to Rc8 a little later. VANCOUVER was still easily the fastest, ahead of GIDEON, at getting the best moves and evaluations throughout this period) **64... Kxh6** (Black was very quick to play this and, with a +293 eval. it obviously now _knows_ it's won!) **65.f6 Kg6 66.Ke3**! (A clever little trap by the Novag! However it's eval. is only -160 which is much too small unless the Mephisto messes it up. Unlikely as it now registers a cheerful +745!) **66... Kf7** (Would you have quickly played the obvious Kxf6? Mephisto correctly avoids it... as it ONLY DRAWS! 67.f4!! Kf5 (forced: exf 68.Kxf4 is clearly ½-½) 68.fxe Kxe5 69.Kf3 Kf5 70.Kg2 and you can see it's a draw!) **67.Kf2** (The trap has failed; eval. -421; Vancouver +933) **67... Kxf6 68.Kg2 Kf5 69.Kg1** (And Scorpio resigned, 0-1).

Not only did this ending provide a fascinating conclusion to the game - and an interesting time of study afterwards - but also a heartening sign for programmer Richard Lang that the VANCOUVER will reap some benefits from his latest work.

There are currently plenty of new programs coming out for PC owners (IBM's and compatibles). Since PSION's 5/6 year reign as the PC's Champion was at last ended by Marty Hirsch's excellent M CHESS, there has been a rush of challengers for 2nd. place with REX, CHESSMASTER 2100 and 3000, FRITZ (review next issue I hope) and ZARKOV. Of course if you count the two ChessMachine RISC programs, GIDEON and THE KING, there have been even more - and M CHESS is not the 'no. 1"!

ZARKOV's main claim to immediate fame is its FEATURES! They are quite outstanding, and it puts ALL the others in the shade except as regards diagram printing which is rather basic. However I claim top-spot for its features still in a condition of awaiting FRITZ, which I ordered 7/8 weeks ago, and which is also advertised as being multi-featured. However it will have to go some! ZARKOV can even be asked to 'log' evaluations and analysis onto your hard disc or floppy during play, and then print it all out after the game alongside a record of the moves. In addition you could afterwards ask ZARKOV to go over the whole game at a slower time control (say 10 mins per move overnight) and again log the 'improved' analysis and alternative move recommendations, also for later printout to compare with the analysis produced during the actual game. You can also enter via monitor mode games played by others for this type of analysis.

The value of this would be greater of course if ZARKOV was a GIDEON or an M CHESS. This, I'm afraid, it isn't quite even on an 80486... more like a PSION or REX perhaps. But it's certainly not bad as the following will show.

### White ZARKOV 286/PC, Black Mephisto MILANO
1.e3 (What a start!) 1... d5 (And both programs go IMMEDIATELY out of Book!) 2.Nf3 Nf6 3.d4 Bg4 4.Nc3 e6 5.Be2 c5 6.h3 Bf5 (Not a key matter, but I'd have taken on f3) 7.Bb5+ Nfd7 (Something of a surprise; 7...Nbd7 looked much more 'obvious') 8.0-0 a6 9.Bd3 Bxd3 10.Qxd3 Nc6 (It's all come out pretty equal really - Black may even have an edge because of his better centre) 11.a3 c4? (A positional mistake, blocking the centre in this way. 11...Bd6 preparing 0-0 is right) 12.Qd1 Nf6 13.Re1 b5 14.e4 dxe4 15.Nxe4 (The result of 11...c4? is that White now has the better centre) 15... Nxe4 16.Rxe4 Be7 17.Bd2! (I like this move, using the Bishop to restrain all of Black's Q/side Pawns) 17... Bf6 18.Bc3 Qd5 19.Qe2 Rd8 20.Re1 0-0 (It's all fairly even, and time to do some gentle probing) 21.Rg4 Rd7 22.Kh1 Rfd8 23.Qe3 g6 24.Re4 Bg7 25.Qf4 a5 26.Qd2 (White has done well to resist Ne5 over the past few moves; the outpost looks tempting, but the resulting exchange would free Black's position) 26... a4 (A strange choice as it blocks his hopes of a Q/side advance) 27.Qe3 h6 28.Qf4 g5? (White is doing little or nothing to deserve it, but Black weakens his K/side. Others (e.g. THE

KING, play this strange 28...g5 too) **29.Qe3 Rd6** (29...Qf5 looked a useful transfer of emphasis to the K/side here) **30.Re2** (Zarkov shows +053 at this point due to Black's K/side weaknesses) **30... f5** (Further weakening his King position - and the analysis missed White's central breakthrough with gain of Pawn) **31.Rxe6 Rxe6 32.Qxe6+ Kh7** (32...Qxe6 33.Rxe6 g4 34.hxg fxg 35.Rxc6 gxf 36.gxf is worse) **33.Qxd5 Rxd5 34.Re6!** (This was a good find by Zarkov) **34... Nd8** (34...Nxd4 looks best. Then 35.Re7! Kg6 36.Rxg7 Kxg7 37.Bxd4+ Kf7 evals. at -130) **35.Re7 Kg6 36.Kh2** (This may look hesitant, but is a sound part of the build-up) **36... h5** (36...Bf6 would be better here) **37.Ne5+** (This move has been available to White literally for ages, but is now played with nice timing) **37... Kf6** (I would have exchanged off the dangerous Knight) **38.Rc7 h4 39.g3 Bh6 40.Kg2 hxg3 41.fxg3** (The endgame does not look so easy to me - but Zarkov reads +223) **41... Ke6 42.Kf3 Bf8 43.Ra7 Be7** (43...Bd6, virtually forcing 44.Ra6+ Ke7 to avoid a B/N exchange looks more useful) **44.Ra6+** (44.Nxc4 bxc4 45.Rxa4 Nc6 46.Rxc4 Kd7 and 47.a4! or b4! is an interesting alternative) **44... Rd6 45.Ra5 Rb6 46.Ra7 Bd6?** (Allows White access to attack the K/side Pawns. 46...Rb7 47.Nc6 Kd7 48.d5 Bd6 was the right way to preserve some chances) **47.Rg7** (The Zarkov evaluation leaps - Black's K/side is just not ready for this) **47... Nc6 48.Rxg5 Be7 49.Rg6+ Kd5 50.Nxc6** (Correct. Wholesale exchanges must suit White. I like the way Zarkov has handled this endgame) **50... Rxc6 51.Rxc6 Kxc6 52.Kf4 Bd6+ 53.Kxf5 Bxg3 54.Ke6 Bf4 55.d5+ Kb7 56.Bf6** (A delightful and simple little move, multiplying the value of the h/Pawn's) **56... Be3 57.c3 Kc7 58.d6+ Kb7 59.d7 Bb6 60.h4** (Cruel!) **60... b4 61.axb4** (Preferring total, immediate material annihilation to any suggestion of fancy endings. An impressive win). 1-0

However there are two sides to the ZARKOV program, as the following game shows!

### White **Mephisto MILANO**, Black **ZARKOV 286/PC**

**1.e4 e5 2.Nf3 Nf6 3.Nxe5 d6 4.Nf3 Nxe4 5.d4 Be7 6.Bd3 d5** (Both programs now out of Book) **7.0-0 0-0 8.Re1 f5** (Surely this is unnecessary; a dreadful weakening to his King protection. Simply 8...Nc6 was fine) **9.c4** (A good response putting indirect pressure on the f5/Pawn which would be the Knight's main protector if d5 was exchanged) **9... dxc4** (Bad as it surely helps White in his plan. Again I think Nc6 was best) **10.Bxc4+ Kh8 11.Nc3 Nd6 12.Nd5 Nxc4 13.Nxe7 Nd7** (Not 13...Bd7 14.Ng5 Nc6? 15.Qh5 and mate in 3!) **14.Bg5** (Milano's positive play is already making things look quite ominous for Black) **14... Nf6** (Best) **15.Rc1** (A quite excellent build-up) **15... b5** (I think 15...Nb6 must have been better than this) **16.b3 Nb6 17.Qd3 Bd7 18.Ne5** (This is

getting distinctly unpleasant for Black!) **18... Be8 19.Nxf5** (19.Qh3 also looks rather nasty!) **19... Nbd5 20.Qh3 Bh5 21.Ng3 Bf7 22.Nxf7+** (22.Ne4 looks more dangerous to me) **22... Rxf7 23.Nf5 Qf8 24.Re5 a6 25.Rce1 c6** (Black, showing -096, is threatening to just get back into this game) **26.Re6 Ne4** (Offering a mutual exchange of Knights may look best; but 26...Qb4 (h6 27.R1e5 Rc7 28.Bxf6 is winning) 27.Bxf6 Nxf6 28.Ne7 Qxd4 29.Nxc6 Qd2 is Black's hard to find move for chances through counterplay) **27.R1xe4 Rxf5 28.Rh4!** (This move was seen in Zarkov's analysis at 26...Ne4, but its impact was clearly not!) **28... Rxg5 29.Rxh7+ Kg8 30.Rh8+ Kf7 31.Rxf8+ Rxf8 32.Rxc6 Nf4** (This would be quite a strong response but for White's available check) **33.Qd7+ Kg8 34.g3 Rd5 35.Qe7 Nh3+ 36.Kg2 Rh5** (36...Ng5 37.h4 Nf7 was slightly better) **37.f4 a5 38.Rc7 Rh7** (The only way to avoid mate; but 39.Qe6+ Kh8 40.Rc8 (where it's immune) finishes it off easily). 1-0

As I have included ZARKOV's ACM Tournament win over VANCOUVER elsewhere, here is a game from a one-sided match using the commercial versions I have:

White **ZARKOV 286/PC**, Black **Meph VANCOUVER 68020**

**1.d4 d5 2.c4 dxc4 3.Nf3 c5 4.Qa4+** (4.d5 was in Book) **4... Bd7 5.Qxc4 cxd4 6.Qxd4?** (The Pawn loss should have been treated as a gambit for now. 6.Bf4 was best) **6... Nc6 7.Qd3** (7.Qd1 is probably sounder, but embarrassing - even for a computer?) **7... Bg4 8.Qb3 Qd7 9.Bf4** (The Bishop cannot be maintained here - in fact invites Black's e5 - so 9.Nc3 was better) **9... Bxf3 10.Qxf3** (Too many Q/moves?! 10.exf3 e5 11.Be3 with Be2 and 0-0 to follow looks best) **10... e5 11.Bd2 Rd8 12.e4** (Optimistic?! 12.e3 Nf6 (Bb4 13.Qd1) 13.Be2 Be7 14.0-0 looks best) **12... Nf6 13.Bb5 a6 14.Bxc6 Qxc6 15.Nc3 Bb4 16.Qf5** (16.0-0-0 Bxc3 (0-0 17.Rfe1) 17.Bxc3 Nxe4 18.Rxd8+ looks best) **16... 0-0 17.f3 Qc5** (Probably not Vancouver's best as White is not going to Castle K-side! 17...Rfe8 would get my vote) **18.Rc1** (A poor choice by Zarkov as he had a chance to go 0-0-0 here, and only a little behind) **18... Qd4** (Good. Or how about 18...Rxd2 19.Kxd2 Qf2+ 20.Kd3 Rd8, +220 eval) **19.Rd1** (It is getting quite complicated, but isn't 19.Qg5! better? Then 19...h6 (Bc5 20.Nd1) 20.Qe3) **19... Rd7 20.a3 Bxc3 21.bxc3 Qc5 22.f4?** (One cannot really excuse Zarkov, whatever his problems, for leaving the e/Pawn to fend for itself. 22.Rf1 must be better) **22... Re7** (Excellent response! A killing move) **23.Kf1** (This is probably best, even though Black's natural reply pushes it straight back to e1. Can anyone see anything better?) **23... Qc4+ 24.Ke1 Rfe8** (Indirectly but terminally attacking the poor e/Pawn) **25.fxe5** (25.Rf1 was better, but hopeless nonetheless) **25... Rxe5** (+675 approx!) **26.Qf3 Nxe4 27.Be3 Ng5** (And that's that, as they say!) **28.Qf1 Qxc3+** (Announcing mate in 7). 0-1

RATING LIST (c) SS/38  Feb 1992

| BCF | Computer | Elo | +/- | Games | Pos | Human/Games | |
|---|---|---|---|---|---|---|---|
| 223 | MEPH VANCOUVER 68030 | 2390 | 60 | 60 | 1 | | |
| 222 | MEPH LYON 68030 | 2379 | 24 | 372 | 2 | 2407 | 51 |
| 219 | MEPH PORTOROSE 68030 | 2358 | 21 | 460 | 3 | 2354 | 82 |
| 219 | MEPH LYON 68020/20 | 2353 | 50 | 86 | 4 | 2327 | 10 |
| 213 | MEPH VANCOUVER 68020/12 | 2307 | 27 | 201 | 5 | 2029 | 4 |
| 210 | MEPH LYON 68020/12 | 2282 | 10 | 1800 | 6 | 2263 | 52 |
| 209 | FID ELITE 68040-V10 | 2279 | 55 | 69 | 7 | 2263 | 15 |
| 206 | FID ELITE 68030-V9 | 2248 | 19 | 583 | 8 | 2180 | 13 |
| 205 | MEPH PORTOROSE 68020 | 2242 | 11 | 1648 | 9 | 2258 | 182 |
| 204 | MEPH LYON 68000 | 2230 | 14 | 1055 | 10 | 2090 | 33 |
| 203 | MEPH VANCOUVER 68000 | 2224 | 42 | 110 | 11 | | |
| 201 | MEPH ALMERIA 68020 | 2212 | 14 | 1003 | 12 | 2188 | 215 |
| 198 | MEPH PORTOROSE 68000 | 2190 | 12 | 1421 | 13 | 2127 | 25 |
| 198 | FID MACH4+2325 68020-V7 | 2187 | 13 | 1126 | 14 | 2199 | 130 |
| 194 | NOV DIABLO/SCORPIO 68000 | 2155 | 25 | 344 | 15 | 2210 | 57 |
| 194 | FID ELITE 2+68000-V5 | 2152 | 29 | 248 | 16 | 1888 | 2 |
| 192 | MEPH MILANO | 2140 | 67 | 47 | 17 | 1983 | 5 |
| 192 | MEPH ROMA 68020 | 2137 | 14 | 1018 | 18 | 2052 | 64 |
| 191 | MEPH POLGAR/10 | 2135 | 19 | 550 | 19 | 2085 | 54 |
| 190 | MEPH ALMERIA 68000 | 2121 | 14 | 1025 | 20 | 2104 | 31 |
| 189 | MEPH DALLAS 68020 | 2113 | 14 | 996 | 21 | 2060 | 197 |
| 186 | FID MACH3+2265 68000-V2 | 2092 | 6 | 4517 | 22 | 2116 | 223 |
| 185 | MEPH MM5/S | 2084 | 15 | 951 | 23 | 1902 | 11 |
| 184 | MEPH POLGAR/5 | 2078 | 10 | 1860 | 24 | 2142 | 11 |
| 184 | MEPH DALLAS 68000 | 2072 | 12 | 1478 | 25 | 2000 | 50 |
| 182 | NOV SUPER FORTE-EXP C/6 | 2062 | 10 | 1922 | 26 | 2005 | 24 |
| 182 | MEPH MONDIAL 68000 XL | 2059 | 17 | 710 | 27 | 2060 | 77 |
| 181 | MEPH ROMA 68000 | 2052 | 10 | 2129 | 28 | 1975 | 54 |
| 180 | MEPH ACADEMY/5 | 2047 | 10 | 1800 | 29 | 2036 | 97 |
| 178 | MEPH AMSTERDAM | 2029 | 9 | 2363 | 30 | 2068 | 182 |
| 178 | NOV SUPER FORTE-EXP B/6 | 2026 | 13 | 1260 | 31 | 2020 | 82 |
| 178 | MEPH MEGA 4/5 | 2024 | 9 | 2230 | 32 | 2041 | 169 |
| 177 | FID MACH 2C 68000 | 2019 | 9 | 2582 | 33 | 2066 | 127 |
| 177 | KASP GAL-REN D/10 | 2018 | 13 | 1196 | 34 | 1967 | 109 |
| 177 | FID-MEPH TRAVELMASTER | 2018 | 33 | 197 | 35 | 1970 | 48 |
| 176 | FID MACH 2B 68000 | 2008 | 26 | 302 | 36 | 1968 | 25 |
| 175 | MEPH SUPMOND 2-MCARLO 4 | 2006 | 31 | 224 | 37 | 2074 | 8 |
| 175 | MEPH MM4/5 | 2000 | 8 | 2709 | 38 | 2013 | 89 |
| 173 | NOV SUPER FORTE-EXP A/6 | 1989 | 14 | 1093 | 39 | 2040 | 176 |
| 171 | MEPH MONTE CARLO | 1974 | 29 | 242 | 40 | 2046 | 10 |
| 171 | CXG SPHINX/4 | 1968 | 10 | 1780 | 41 | 1956 | 155 |
| 170 | KASP GAL-REN C/8 | 1967 | 26 | 313 | 42 | 2016 | 98 |
| 170 | KASP TURBO KING 2 | 1965 | 18 | 650 | 43 | | |
| 170 | CONCH PLY-VICTORIA/5.5 | 1960 | 19 | 574 | 44 | 1890 | 15 |
| 169 | FID MACH 2A 68000 | 1957 | 25 | 338 | 45 | 1910 | 35 |
| 167 | NOV EXPERT/6 | 1939 | 31 | 222 | 46 | 2036 | 22 |
| 167 | NOV SUPER FORTE-EXP A/5 | 1937 | 12 | 1450 | 47 | 1836 | 29 |
| 166 | FID CLUB B 68000 | 1934 | 12 | 1449 | 48 | 1827 | 18 |
| 165 | NOV EXPERT/5 | 1922 | 26 | 300 | 49 | 2052 | 62 |
| 164 | NOV FORTE B | 1917 | 10 | 1917 | 50 | 1975 | 208 |
| 164 | MEPH REBELL | 1916 | 10 | 2042 | 51 | 1948 | 69 |
| 164 | FID AVANT GARDE/5 | 1915 | 11 | 1721 | 52 | 1862 | 80 |
| 164 | FID PAR E-ELITE-DES2100 | 1913 | 9 | 2524 | 53 | 1927 | 220 |
| 163 | KASP STRATOS-CORONA | 1910 | 10 | 1944 | 54 | | |
| 163 | NOV FORTE A | 1908 | 9 | 2202 | 55 | 1930 | 134 |
| 162 | MEPH SUPERMONDIAL 1 | 1899 | 12 | 1333 | 56 | 1990 | 6 |
| 162 | KASP SIMULTANO | 1898 | 15 | 903 | 57 | 1830 | 36 |
| 162 | CONCH PLYMATE/5.5 | 1896 | 10 | 2000 | 58 | 1939 | 55 |
| 161 | KASP GAL-REN B/6 | 1894 | 14 | 976 | 59 | 1873 | 123 |
| 161 | FID CLUB A 68000 | 1891 | 30 | 228 | 60 | 1767 | 6 |
| 161 | KASP TURBO KING 1 | 1890 | 24 | 350 | 61 | 1910 | 61 |
| 160 | CONCHESS/6 | 1886 | 44 | 107 | 62 | 2037 | 8 |
| 160 | FID EXCELLENCE/4 | 1885 | 11 | 1728 | 63 | | |
| 160 | NOV EXPERT/4 | 1883 | 14 | 962 | 64 | 1975 | 43 |
| 158 | CONCH PLYMATE/4 | 1871 | 24 | 372 | 65 | 2027 | 6 |
| 158 | SCI TURBO KASP/4 | 1868 | 20 | 512 | 66 | 1959 | 52 |
| 158 | CXG SPHINX 40 | 1867 | 86 | 29 | 67 | | |
| 157 | FID ELITE C | 1859 | 34 | 182 | 68 | 1869 | 11 |
| 156 | FID ELEGANCE | 1853 | 17 | 685 | 69 | 1872 | 40 |
| 156 | SCI TURBOSTAR 432 | 1853 | 12 | 1337 | 70 | 1896 | 61 |
| 156 | MEPHISTO MM2 | 1852 | 16 | 781 | 71 | 1776 | 8 |
| 155 | KASP GAL-REN B/4 | 1846 | 76 | 37 | 72 | 1982 | 6 |
| 155 | FID EXCELLENCE-DES2000 | 1846 | 11 | 1641 | 73 | 1881 | 46 |
| 154 | KASP PRISMA-BLITZ | 1832 | 27 | 281 | 74 | 1796 | 59 |
| 153 | CONCHESS/4 | 1827 | 20 | 509 | 75 | 1937 | 23 |

RATING LIST (c) SS/38  Feb 1992

| BCF | Computer | Elo | +/- | Games | Pos |
|---|---|---|---|---|---|
| 152 | NOV SUPER CONST | 1822 | 7 | 3643 | 76 |
| 152 | NOV SUPER NOVA | 1822 | 22 | 411 | 77 |
| 151 | MEPH BLITZ | 1809 | 27 | 277 | 78 |
| 149 | NOV SUPREMO | 1795 | 75 | 38 | 79 |
| 148 | NOV SUPER VIP | 1788 | 25 | 323 | 80 |
| 147 | FID ELITE A | 1777 | 39 | 141 | 81 |
| 146 | FID PRESTIGE | 1775 | 17 | 715 | 82 |
| 146 | FID SENSORY 12 | 1772 | 12 | 1300 | 83 |
| 146 | MEPH EXCL S/12 | 1769 | 31 | 213 | 84 |
| 145 | MEPH EUROPA-MARCO POLO | 1764 | 32 | 205 | 85 |
| 144 | SCI SUPERSTAR 36K | 1758 | 14 | 987 | 86 |
| 144 | CONCHESS/2 | 1756 | 14 | 1096 | 87 |
| 142 | NOV QUATTRO | 1743 | 19 | 585 | 88 |
| 142 | NOV CONST/3.6 | 1742 | 16 | 825 | 89 |
| 142 | NOV PRIMO-VIP | 1740 | 24 | 354 | 90 |
| 141 | MEPH MONDIAL 2 | 1735 | 83 | 31 | 91 |
| 139 | FID ELITE B | 1718 | 47 | 97 | 92 |
| 137 | FID ELITE ORIG | 1696 | 39 | 139 | 93 |
| 136 | MEPH MONDIAL 1 | 1693 | 29 | 247 | 94 |
| 134 | NOV CONST/2 | 1678 | 13 | 1279 | 95 |
| 133 | SUPER ENT-ADV STAR | 1665 | 15 | 916 | 96 |
| 128 | CHESS 3000 | 1626 | 112 | 17 | 97 |
| 126 | KASP ASTRAL-COND-CAVL | 1611 | 59 | 61 | 98 |
| 125 | FID SENSORY 9 | 1607 | 14 | 1060 | 99 |
| 123 | NOV MENTOR 16-AMIGO | 1584 | 99 | 22 | 100 |

RATING LIST (c) SS/38 · Feb 1992  PC PROGS.

| BCF | Computer | Elo | +/- | Games | Pos |
|---|---|---|---|---|---|
| 220 | CHESS MACHINE 2 512/PC | 2364 | 24 | 374 | 1 |
| 220 | THE KING 512/PC | 2360 | 37 | 155 | 2 |
| 213 | CHESS MACHINE 1 512/PC | 2307 | 36 | 158 | 3 |
| 213 | M CHESS 486/PC | 2305 | 28 | 269 | 4 |
| 206 | M CHESS 386/PC | 2253 | 18 | 617 | 5 |
| 199 | REX 486/PC | 2199 | 46 | 98 | 6 |
| 195 | M CHESS 286/PC | 2164 | 24 | 350 | 7 |
| 195 | FRITZ 386/PC | 2161 | 60 | 60 | 8 |
| 189 | PSION 2 386/PC | 2118 | 52 | 77 | 9 |
| 188 | FRITZ 286/PC | 2108 | 109 | 18 | 10 |
| 186 | ZARKOV 386/PC | 2094 | 50 | 86 | 11 |
| 186 | M CHESS/PC | 2090 | 91 | 26 | 12 |
| 184 | REX 386/PC | 2075 | 23 | 392 | 13 |
| 183 | ZARKOV 286/PC | 2071 | 77 | 36 | 14 |
| 179 | REX 286/PC | 2032 | 93 | 25 | 15 |
| 176 | PSION 2 286/PC | 2013 | 70 | 44 | 16 |
| 172 | PSION PDOM 386/PC | 1981 | 67 | 48 | 17 |
| 171 | PSION 2/PC | 1970 | 10 | 1964 | 18 |
| 170 | PSION PDOM 286/PC | 1962 | 94 | 24 | 19 |
| 166 | COLOSSUS X 386/PC | 1931 | 94 | 24 | 20 |
| 164 | C'MASTER 2100 386/PC | 1916 | 48 | 91 | 21 |
| 164 | C'MASTER 2100 486/PC | 1914 | 94 | 24 | 22 |
| 154 | PSION PDOM/PC | 1836 | 34 | 185 | 23 |
| 149 | CHESSPLAYER 2150/PC | 1799 | 46 | 101 | 24 |
| 149 | SARGON 3/PC | 1797 | 46 | 100 | 25 |
| 149 | CHESSMASTER 2100/PC | 1795 | 29 | 246 | 26 |
| 147 | CHESS CHAMPION 2175/PC | 1779 | 28 | 259 | 27 |
| 145 | FINAL CHESSCARD/PC | 1762 | 38 | 148 | 28 |
| 142 | PSION DL/PC | 1739 | 54 | 73 | 29 |
| 140 | SARGON 4/PC | 1725 | 46 | 90 | 30 |

*That's all folks!*
ERic