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## **Computer Chess NEWS SHEET 19**

Late August, 1988

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The intention in publishing the "NEWS SHEET" has always been to provide a survey of the CHESS COMPUTER scene, with special emphasis on assessing and comparing realistically the different PLAYING STRENGTHS of the many machines. I do work professionally with COMPETENCE LTD (one of the longest established Chess Computer retailers) and enjoy freedom to maintain personal opinions and preferences which I seek to share with NS readers. Final Games and Articles selection for each Issue is also done quite independently. The NEWS SHEET is still financed solely by myself with help from readers whose voluntary contributions are always welcome (please!) and occasional adverts. Articles or Games sent in by readers (or others involved in Chess Computing in some way) will always receive consideration for publication. It is often the lack of such material rather than any editorial bias which determines the final NS content!

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Greetings again! Many thanks to those of you who have written, sent Games or Results or kept in touch any other way. Especially thanks to those who've sent donations to help out with the NEWS SHEET Funds. I know some folk aren't keen on the system and want me to make a positive statement about Price per Issue etc - in just the same way there are folk who take advantage of me for doing it in the way I do. But generally speaking it works out fairly well and I still like the friendliness that prevails with NS folk. Enough!

### **CONTENTS this ISSUE**

NEWS ROUND-UP including

- \* Fidelity's soon forthcoming Micro is first to the USCF MASTER Title!
- \* Latest Results from France, Germany, Sweden, USA of Computers vs Humans

REPORTS and GAMES on

- \* Novags and VSS
- \* Conchess PLYMATE
- \* Kephisto's new MEGA 4

INTERVIEW with the Spracklens on Endgame Programming

RATING LISTS, an EXTENDED List plus a vs HUMANS List

GAMES Section, from Swedish and USA Tournaments

ADVERTS -Machines for sale

### **Reader's ARTICLES**

The YORK UNIVERSITY Team has sent me a Report on their Latest TOURNAMENT, for which many thanks. Unless there's some unexpected last-minute space it's been squeezed-out this time, but never despair. Such efforts are always welcome and I can at least give you all the Result (1 min per mover Tourney):- 1 Psion Atari v2.0 6½/7, 2= Neph Rebel and Psion Atari v2.1 4½, 4 Novag Forte A 4, 5= Fid Club B and Nov Super Const 3, 7 Adv Star Chess 1½ and 8 Turbo Kasp- arov 1. Obviously the Turbo Kasparov coming last was a shock (it won the 1987 Event!). There were 2 Psion Atari's entered as a loaned Nov Super Forte went 'poorly'.

### **A new MAIN-FRAME Star...DEEP THOUGHT!**

NS Readers are used to the names Belle, Cray Blitz and HiTech... all leaders over recent years amongst the Main Frame machines. (Incidentally, last time I discussed main-frames a couple of NS Readers wrote requesting info. on where they could BUY them! Sorry, folks, you can't!). HiTech has regularly produced

Results against both Computers and Humans close to the 2400 USCF figure and a recent win in the Pennsylvania Champs increased its Official Grade to 2405 USCF.

More recently we have been hearing of another Main Frame Programme being developed at the Carnegie-Mellon University, this time by Feng-hsiung Hsu, and a Result did reach us that this Programme (CHIPTEST) had actually beaten HiTech by 11-5 in a Match! The 'rumour' was proved true when the Result of the North American Computer Champs was released: ~ 1 Chiptest 4/4 (perf. grading 2584 USCF!), 2= Cray Blitz and Sun Phoenix 3, 4 Lachex 2<sup>+</sup>, 5= Cyrus 68K (Sphinx), Bebe, Novag X, Belle, Waycool and GNU Chess all 2.

Now a further result has been sent me by Larry Kaufman showing the Result of the latest version of CHIPTEST, now known officially as DEEP THOUGHT. D.T has scored 4<sup>+</sup>/6 against Opponents rated 2386 for a 2599 USCF Grade in the recent Fredkin Masters. CHIPTEST was there as well, and got 4/6 for a 2496 Grade. I gather neither programme has much of an Opening Book, but Larry is putting one into DEEP THOUGHT in readiness for the U.S Open where it is going for an Official C.R.A Test and Grading. Larry writes, "In the process of preparing my Book for D.T., it (D.T) found several tactical errors in lines copied straight from E.C.O. They appear to be true oversights by the E.C.O authors and not mis-prints".

DEEP THOUGHT is basically a full-width, brute force Programme, but uses a search system called 'Singular Extension'. I am not fully sure what this means, but I do know that the Fidelity programmers have produced great improvements between the Mach 2 and 3 by forcing the Programme to do deeper searches of 'Active' positions. In a sense this is aiming for a similar effect to a Selective Search system but, instead of the Programme Searching Selectively all the time, the Programme is being taught how to recognise when the normal Search still leaves an 'Active' position, i.e. one where there are Checks, Captures, important Positional gains, a passed Pawn that can progress etc. These specific positions are then searched until they become 'Quiet' enabling fullest accuracy in the Evaluation of each 'final' position being looked at. I gather that 'Singular Extension' is even more advanced than this (and may not work on Micros in the end), but that's a general principal. However all progress amongst the Main Frames is good news as their developments usually translate themselves into progress for the Micros in some way or another in the end.

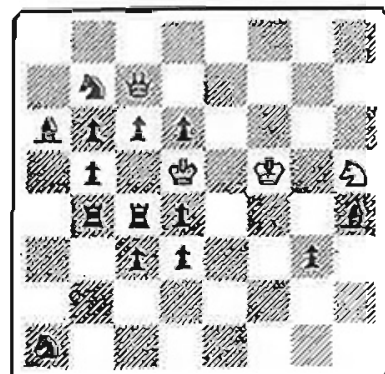
Finally, on the subject of the U.S Open, I believe that NOVAG and SAITEK are also entering, though not for Official Gradings but with Experimental machines. I understand the two Novag machines are expected to be running at 9MHz without Turbo-boosters; Saitek will have one unit at 8MHz and the other Turbo-boosted.

How does your Computer get on with this Problem?

Not all of them will be able to do it - for example some Computers are restricted in the depth of search to which they will go, and this is a MATE in 12!

Don't worry if your Machine doesn't have a Level for Mate in 12. Simply put it on Infinite and leave it to work it out for itself. As there are not so many move alternatives available, it may not take as long as you think!

Incidentally, it's WHITE to move and Mate in 12!  
Please let me know the timings for your Machine!



## TOURNAMENT RESULTS v HUMANS

A valuable series of games in Tournaments against Humans has recently taken place - plus 1 result from last year which appears to have slipped through the NEWS SHEET net but was spotted in the new Spanish CHESS COMPUTER magazine.

### MASTER TITLE obtained by a MICRO!

Undoubtably the most exciting of the Results concerns the FIDELITY MACH III which, in its Sept/Oct release commercial form, obtained the MASTER TITLE in the World Open at Philadelphia, July 1-4. Here were the Results:-

FIDELITY MACH 3	68020. +27-11=10	against opponents	2195.	Rating	2325
FIDELITY MACH 3	68000. +26-15=7	against opponents	2177.	Rating	2265
MEPHISTO MEGA 4 + TURBO.	(25-23)	against opponents	2194.	Rating	2209

Availability of the Fidelity 68020 32 bit (probably in wooden ELITE board) will not be announced until 1989. However the Fidelity MACH III MASTER 68000 will be available Sept/Oct for around £469 in exactly the same hardware/software as in the World Open. The first 2,500 will actually be boxed with a United States Chess Federation MASTERS CERTIFICATE for those, like me, who have no way of getting their own! On the hardware side the 68000 MACH III has a 16MHz processor (instead of the current 12MHz) and the DRAM (Dynamic RAM) is actually reduced. I gather that improvements in the DRAM processing methods enabled equal results to be obtained with less DRAM which will be of particular value I expect in the 68020 version as DRAM is both in short supply and rather expensive at the moment. One of the Games from the Tourney is included in the Games Section.

Finally I hear that the existing MACH II should be upgradeable to the same programme in Feb/March, but will obviously then run at 12 rather than 16MHz so be perhaps 30-40 Elo weaker.

The MEGA 4's arrival commercially is reported elsewhere and the version currently available runs at 4.9MHz. The units in the World Open had 18MHz Turbo-boosters which probably improve playing strength by around 100 Elo.

### Other Tournament Results

#### In FRANCE 1988

NOVAG SUPER FORTE	6 2/9	2054
MEPHISTO MEGA 4	6	2009
LEONARDO MAESTRO+TURBO	6	1964
FIDELITY MACH 2C	5 2	1951

#### In FRANCE 1987 (previously missed)

FIDELITY MACH 2A	7 1/2 /11	1865
MEPHISTO DALLAS 32	7	1810
NOVAG FORTE B	5 1/2	1818
LEONARDO MAESTRO/6	5	1660

#### In SWEDEN Jul 1988

MEPHISTO MM4+TURBO	+5-0=4	2122
MEPHISTO ROMA 32	+5-2=2	1979
MEPHISTO MEGA 4	+3-2=2	1965
NOVAG SUPER FORTE/6	+2-6=1	1718

#### POZ Aug 1988

FID MACH 3 32bit	5 games	1960
MEPH ROMA 32	9 games	1805
NOV SUPER EXPERT/6	8 games	1793
LEONARDO GALILEO ANALYST/8	9 games	1776
FID MACH 2 16 bit	9 games	1700
CXG COMMANDER	9 games	1632
CXG SPHINX	9 games	1593

NEWS SHEET Readers will recall from previous Issues that the Rating LEVELS in Sweden (and France) and especially the Poz Opens are below ours, whilst in the USA they are above ours. This explains the apparent discrepancies between the various Ratings when you compare one Country with another. There is also an enormous discrepancy between the 2 results of the Novag Super Forte (2054 and 1718!). However where only 9 games in each Tourney are involved statistics tell us that there is a Standard Deviation of around 160 points for each one, so such a fluctuating Result really is just possible!

### Conchess PLYMATE/5.5MHz

It has to be admitted that there has been very little coverage of the CONCHESS Machines in the NS and so I was glad of the chance to put that right at least partially when Andy Roland of CONTEMPORARY CHESS COMPUTERS kindly lent me a PLYMATE/5.5MHz Module. The main purpose was so that I could use that Computer for one of the Pergamon CHESS series "Beat the Masters" in which I have been providing the Computer Analysis for them from a variety of Machines. (My reward for 20+ hours work each Issue for them is no mention, no pay, and when their Kevin O'Connell quotes a Rating List in same he uses the SWEDISH one... and calls it the "World Authority". Thanks, friends!).

Anyway Andy Roland agreed for me to keep the PLYMATE for a few weeks to run some mini-Matches and the reward for Conchess is quite a good result and one or two exciting games for publication.

The PLYMATE is very fast indeed tactically, especially where there are Mate possibilities in the offing. It played reasonably well positionally and actually got quite decent results against the Computers 'known' as positionally good machines. It drew both Matches against the NOVAG SUPER EXPERT, 2-2 against the 5MHz on Normal and 2-2 against the 6MHz on VSS. Then it only went down in a very interesting match by 1½-2½ to the STRATOS which I would class as a positional Machine rather than a tactical. Then a loss by 1-3 to FIDELITY's MACH 2 but this, in fact, was more to do with the latter's very strong endgame play than anything else. Fidelity saved one 'lost' endgame and won a 'drawn' one. The MACH 2's other win was part middle and part endgame. Finally the PLYMATE's crowning glory was a very good win by 3-1 over MEGA 4 after losing the first game with the White pieces. The overall performance in my 20 games would give PLYMATE around a 2040 rating which is quite a bit higher than its current figure on my actual Rating List from everybody's else's results. Of course 20 games is 'small sample' so it would be foolish to imply that my result is necessarily a more accurate one. Even so, I will add that it generally performed better than I had expected and I enjoyed the loan.

Contemporary Chess (and without reading the above!) has already agreed to lend me the new CXG 68000 SPHINX for a forthcoming "Beat the Masters" (and comment in the next NS) plus, later, maybe CXG COMMANDER (a 6502 programme) and KASPAROV CORDONA when it becomes available (a STRATOS upgrade in wood Board I believe). But now, back to the PLYMATE and 1 or 2 games, all 1 min per move. First a really excellent win:-

**CONCHESS PLYMATE/5.5MHz White, NEPH MEGA 4 Black.**

1 d4 d5 2 c4 e6 3 Nc3 Nf6 4 Bg5 Be7 5 e3 0-0 6 Nf3 Nbd7 7 Bd3..  
 (Conchess is now out of Book, Mega stays in until move 10 so gets a good start) ..dxc4 8 Bxc4 c5 9 0-0 cxd4 10 Qxd4 Nb6 11 Bb3 Qxd4 12 Nxd4 Bd7  
 13 e4 e5 14 Nf3 Bb4? 15 Nxe5!.. (He!) found. Conchess gets the upper hand now) ..Bxc3 16 bxc3 Nxe4 (-0.74) 17 Be7 Rfb8? 18 Bxf7+ Kh8 19 Rad1 Bf5  
 20 g4 Nxc3 21 gxf5 Nxd1 22 Rxd1 Rc8? (Here Conchess had a bit of 'luck' which helped to emphasise the point! It had expected this completely bad move and so immediately played its next move with mate announcement! Quite a shock to the system. In fact 22..h6 is needed to stave off immediate defeat, though Conchess already has a nicely won position anyway) 23 Ng6!.. (Announcing Mate in 4. Obviously PLYMATE/5.5 finds this very quickly, as does MACH 2 and SUPER EXPERT normal) HSE on VSS would miss it at 1m per move... and MEGA 4 takes 20m! Peculiarly the special Check Extension that can be selected on the MEGA 4 for finding such things (and which normally seems to work pretty well if there is a Mate about) causes MEGA 4 to take 40m to find this instead of 20! Funny old game!) ..hxg6 24 Rd3 Rcl+ 25 Kg2 and Mate in 2, 1-0.

The following sees a close struggle with STRATOS finally coming out on top after some really nice play in the middlegame.

**CONCHESS PLYMATE/5.5** White, **STRATOS** Black.

1 e4 c5 2 Ne2! Nf6 3 Nc3 Ncb (Both now go out of Book) 4 d4 cxd (And now both come straight back in!) 5 Nxd4 e6 6 Nb5 Bb4 7 a3 Bxc3+ 8 Nxc3 d5 (Back out again with Black probably equal. He makes no further impression in a keenly contested game until around move 30) 9 Bg3 d4 10 Bxf6 Qxf6 11 Ne2 e5 12 c3 0-0 13 cxd bxd 14 Ng3 Bb6 15 Bb5 a6 16 Bxc6 bxc6 17 Qc1.. (Looks wrong, but seems to work out o.k) ..Bd7 18 0-0 Rab8 19 b4! Rfd8 20 Qc5 Rb4 21 Qa7 c5 22 Rfc1 cxb 23 axb Rxb4 24 Rxa6 Qf4 25 R6a1 h6 26 Qa5 Rdb8 27 Qc7 Qxc7 28 Rxc7 Rb1+ 29 Rc1 Rb2 30 Rd1 Rb4 31 Ra8 Kh7 32 Ra7 Ba4! 33 Rf1? d3 (After staying around +0.20 for most of the game, Stratos now shows itself at +0.75) 34 Nf5 d2 35 Ne3 Rxe4 36 h4? f6 37 g4? Rxe3 (+3.72, Under some pressure, Conchess has not played the last moves well) 38 fxe3 d1=Q 39 Rxd1 Bxd1 40 g5 hxg 41 fxg fxg 42 Rd7 Bg4 43 Rdb Re2 44 Rd3 Kg6 45 Kf1 Kf7? 46 Rc3 Bf3 47 Rb3 Ke6 48 Rc3 g4 49 Rc6+? Bxc6 50 Kxe2 g3 51 Kf1 Bf3 52 Kg1 Kd5 53 Kf1 Ke4 54 Kg1 Kxe3 55 Kf1 g2+ 56 Kg1 Be4 57 Rh2 Kf2. 0-1.

The games vs NOVAG were played with 5MHz on Normal and 6MHz on VSS, and both 2-2 draws! So a Novag win from the first match and a Conchess from the 2nd.

**NOV SUPER EXPERT/5** Norm White, **CONCHESS PLYMATE/5.5** Black

1 e4 Nf6 2 e5 Nd5 3 d4 d6 4 c4.. (Puts Conchess out of Book) ..Nb6 5 f4 dxe 6 fxe c5 7 d5.. (Also out of Book now) ..e6 8 Nc3 Qh4+ 9 g3 Qd4 10 Qe2 Bd7 11 Nf3 Qg4 12 Bf4.. (Fairly even so far, but HSE just beginning to get an advantage) ..exd 13 cxd Na4 14 Nb5! Nab (White had expected Kd8. You won't find any recommendations in books on Positional play concerning having both Knights out there on the a-file) 15 Ndb+ Bxd6 16 exd6+ Kf8 17 Qe7+ Kg8 18 Ne5 Qf5 (Black's moves have been forced and Novag is well on top) 19 Bd3 Qf6 20 Qxf6 gxf6 21 Nxd7 Nb4 22 Nxf6 Kg7 23 Nh5+ Kg8 24 0-0-0 Nxa2 25 Kb1 N2c3+ 26 bxc3 Nxc3 27 Kb2 Nxd1 28 Rxd1 c4 29 Bxc4 f6 30 Re1 b6 31 Nxf6+ Kf7 32 Re7+ Kxf6 33 Be5 Kf5 34 Bxh8 Rxb8 35 d7 Rdb 36 Bb5 Kg5 37 Re8 Rxd7 38 Bxd7 Kf6 39 d6 and 1-0.

**PLYMATE/5.5** White, **NOV SUPER EXPERT/6 VSS** Black.

1 e4 c5 2 c3 Nf6 3 e5 Nd5 4 d4 cxd 5 cxd d6 6 Bc4.. (Plymate first out of Book again, but once more finding correct Book moves under its own thinking) ..Nb6 7 Bb5 Bd7 8 Bxd7+ N8xd7 (Now also out of Book, 8 Qe2 had been expected) 9 Nf3 Qc7 10 exd exd 11 0-0 Nd5 12 Bd2 Qe7 13 Qb3 N7f6 14 Qb5+ Qd7 15 Qxd7 Nxd7 16 Re1 0-0 17 Nc3 N7b6 18 g3 Rfe8 19 Nb5 a6 20 Nc3 Bf8 21 Nxd5 Nxd5 22 a4 Rac8 23 Rxe8 Rxe8 24 Re1 Rc8 (I am pretty sure Novag was just winning at this stage, though Conchess was probably earning a 1/2 pt. But HSE perhaps tries too hard to create a result and his opponent deals with him firmly) 25 Rc1 Rxc1 26 Bxc1 g6 27 Kg2 Kg7 28 Nd2 f5 29 Kf3 g5 30 Ke2 Kf6 31 a5 Bg7 32 Nc4 Ke6 33 Bxg5 Bxd4 34 b3 Bc5 35 f3 Nb4 36 g4 d5 37 Ne3 fxg 38 fxg Ncb 39 Nc2 Bg1? 40 h4 Nxa5 41 b4 Nc4 42 Kf3 d4 43 Ke4 Nd6+ 44 Kd3 Ke5 45 Ne1 Kd5 46 Nf3 Bf2 47 Bf6 Nb5 48 h5 h6 49 Bg7 Be3 50 g5! hxg 51 h6 Nd6 52 Ne5! Ne8 53 h7 Nxc7 54 h8=Q Ne6 55 Ng6 Nf4+ 56 Nxf4 gxf4 57 Qf6 b6 58 Qxb6 Ke5 59 Qc5+ Kf6 60 Ke4 Kg6 61 Qf5 Kg7 62 Ke5 d3 63 Qf6+.. (With Mate announcement) ..Kg8 64 Qg6+ etc. 1-0.

It will be interesting to see how CONCHESS comes out in CHESS' "Beat the Masters" .. (Sept. Issue). So far MACH 2, MMA and SUPER EXPERT have done pretty well, STRATOS not quite so good. The CONCHESS should be okay, then MEGA 4 in the Oct. Issue followed by CXG SPHINX, MACH 3 and SUPER EXPERT with VSS (not necessarily that order... depends on theirs and others availability).

## 6 NOVAG's and the VSS Factor!

Since the 2nd. Version of the SUPER EXPERT/FORTE Programme became available a few weeks after the original launch, there has been considerable interest in the fact that the Computers can be used in 2 different modes! Of what value is this? And is one better than the other?

For those not 'in the know' the later Versions all have a VSS (Very Selective Search) mode accessible via 'Set Level' and 'Square 64'. The Normal Search is basically a Full Width Method, but VSS causes the Programme to virtually ignore 'foolish' initial moves after the first Ply's work is done. This is quite similar to the Mephisto Rebel/MM4/Mega 4 Tapered Search system, and enables the work through each Ply to be done quicker often resulting in an extra Ply being searched. I nearly said an extra *complete* Ply, but of course that is just what it isn't! as the Computer's 'foolish' moves are not done. A 'foolish' move would be one that clearly loses material for example. However here is the rub - a move that looks foolish at 1st or 2nd Ply is occasionally an outright winner... a temporary sacrifice that leads to massive material gain or even a Checkmate. So, occasionally, VSS misses the best, attacking move! On the other hand, it may be the Opponent who has a winning move or sacrifice available on his next move. The fact that VSS gets through an extra Ply's work on many occasions therefore means that VSS sometimes finds a defence to stop an Opponent's opportunity which Normal mode wouldn't get to! So which is better?

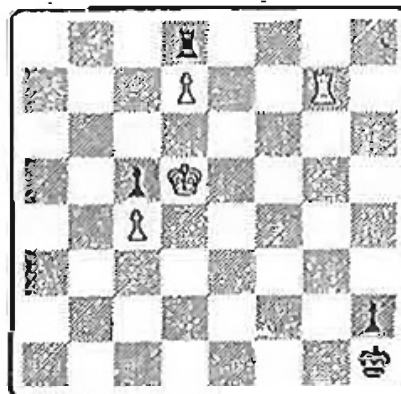
One imagines that NOVAG themselves, or their top programmer Dave Kittinger, must at first have believed that VSS was No. 1 as it was entered in the Los Angeles Tournament last December using VSS. However after getting only just over 2000 USCF from its first 30 games it was requested that Normal Mode be used instead. The USCF agreed to this and NOVAG re-started the Grading Test from the beginning, making up the lost games by entering a second Tournament during the New Year. The Normal Mode resulted in the Official USCF Grading of 2164, a very marked improvement. So the resulting assumption is that Normal Mode is much better, and I confess that that was my early conclusion.

However NEWS SHEET Reader Charles Palmer has sought to convince me on more than one occasion that VSS actually has the edge - mainly based on his Testings against the Mephisto Roma 32 bit where his original 5MHz was not losing by so many and his later 6MHz actually leads by 5-3 at latest news. He also sent me a couple of the games played and I decided to do a little VSS Testing myself.

Certainly it is the use of *Normal* Mode that sees the Novag's at their most aggressive (and exciting?). But I now have no doubt that VSS improves defensive qualities, puts a slight emphasis on its positional play and only occasionally results in a de-merit for missing a necessary attacking move.

Here is an example of the benefit of VSS:-

The point in the diagrammed position is that 1 Kxc5 allows Rc8+ which draws because 2 dxc=Q results in Stalemate. On the other hand 1 Rh7 wins. On Normal Mode Novag shows 1 Kxc5 for 4m 15s and only then changes to 1 Kc6. But VSS by getting through the Plies quicker only shows 1 Kxc5 for 2m 5s and then changes to 1 Kc6 and plays 2 Rh7 on its next after 1 - Ra8. A VSS win instead of a Normal draw!



And here is an example of the benefit of Normal!:-

NOVAG SUPER EXPERT/5 (Norm) White, NEPH MEGA 4 Black. 1 min per move.

1 d4 d5 2 Nf3 e6 3 c4 Nf6 4 Nc3 Be7 5 Bg5 0-0 6 e3 Nbd7 7 Rc1 c6 8 Bd3  
 dxc 9 Bxc4 Nd5 10 Bxe7 Qxe7 11 Ne4.. (Mega now leaves its Book) ..bb 12  
 0-0 Bb7 13 Ng3 f5 (NSE's Book had expected 13..c5. Now Novag exits Book as  
 well. Both Machines evaluate at virtually dead equal) 14 Bb3 c5 15 Nxf5!..  
 (This is the Normal mode winner! It is only chosen at the very last moment,  
 but it is a 'winning' sacrifice. Of course there is still plenty of work to do  
 to net the point, but this puts Novag nicely on the way. Until it's last second  
 decision, Novag had indicated 15 dxc +0.13 which is what VSS played with the  
 continuation 15..Nxc5 16 Ne5 Rad8 17 Qe1 Nxd3 18 axb3 Nb4 19 Rc3 Bae 20  
 Ne2 Bb5. Although both Machines evaluate Mega ahead here, it was finally drawn  
 at move 81! But not on Normal mode..) ..exf5 (Apparently missing the key for,  
 though expecting 16 dxc, Mega evaluates itself +1.39) 16 dxc Nxc5 17 Bxd5+  
 Kh8 18 Bxb7 Qxb7 (-0.75) 19 Ng5 Be7 20 Bh5 h6 21 Nf3 Nd3 22 Nh4 Qf7! 23  
 Qxf7 Rxf7 24 Rb1? Rd8 25 Rfd1 Kh7 26 Kf1 g6 27 Nf3 Rfd7 28 Ke2 Nb4 29  
 Rxd7 Rxd7 30 a3 Nd5 31 Ne5 Re7 32 Nc6 Rc7 33 Rd1 Rxc6 34 Rxd5 Kg7 35 Kd3  
 Kf6 36 Rd7 ab 37 b4 Ke5 38 f4 Ke6 39 Rd8 g5 40 g3 b5? (I was beginning to  
 think Mega had done enough to escape with a '2 till it played this) 41 e4 fxe+  
 42 Kxe4 Rc4+ 43 Rd4 Rxd4 44 Kxd4 gxf 45 g4!? f3 46 Ke3 f2 47 Kxf2 Ke5! 48  
 Kf3 Ke6 49 h4 Ke5 50 Ke3 Kd5 51 Kf4 Ke6 52 g5 hxg+ 53 Kxg5 Kf7 54 Kh6..  
 (What happens around here? I think I - or one of the Computers - missed  
 something! NSE shows +5.04 with this move; Mega replies showing -5.79. Yet by  
 move 57 they're both back at around + or - 1.50) ..Kf8 55 Kh7 Kf7 56 h5 Kf6  
 57 Kh6 Kf7 58 Kg5 Kg7 59 h6+!? Kh7 60 Kh5 Kh8 61 Kg6 Kg8 62 h7+ and 1-0.

A long game perhaps to demonstrate just a single move being changed; but Chess games are often so. Anyway this time Normal 1 VSS 1/2 And 1 1/2 each. To be honest I don't think there's very much between them either way - do other NS Readers have opinions? I would certainly think that VSS is better than the 2000 USCF it was getting in the LA Tournament. but the recent poor result on Normal mode obtained in the Swedish Tournaments adds more confusion to the issue.

Finally one of Charles Palmer's games on VSS.

NOVAG SUPER FORTE/6 VSS White, NEPH ROMA 32 bit Black. 1 min per move.

1 d4 d5 2 c4 Nc6 3 Nxc3 dxc 4 Nf3 Nf6 5 e4 Bg4 6 Be3 Bxf3 7 gxf3 e5 8  
 d5 Ne7 9 Qa4+ c6 10 Bxc4 a6 11 d6 Nc8 12 Bxf7+.. (All in Novag's Book so  
 far, including this! But from now on it is on its own, in VSS) ..Kxf7 13 Qb3+  
 Kgb? (My first reaction on seeing this game was to give all the credit to the  
 Opening Book. However on further reflection I feel that 13..Ke8 would actually  
 have left Novag with only a fairly nominal advantage in reality. So it's  
 probably a partial credit to the Opening Book, a partial debit to Roma and, not  
 least, a credit to VSS... though Normal Mode proceeds just the same in truth)  
 14 Rg1+ Kh5 (What an awful place to have one's King after only 14 moves! 15  
 Qf7+ g6 16 Rg3.. (Please note that it takes VSS 6m 59s to get to this when  
 presented with the position 'from scratch'. Up till then it has 16 Rg5 which  
 probably still wins, but nothing like so convincingly. Is the game as played  
 the Roma had taken some time on deciding about the expected 15..g6 and Novag,  
 having already started its 7th Ply, decided to go through that Ply resulting in  
 its finding this winner. However Normal Mode actually came up with 16 Qe6 in  
 only 1m and THAT proves to be Mate in 5!) ..Mephisto resigned, 1-0.

Finally, in fairness to the Roma it should be said that this 5-3 score is the only Match score given to me thus far between these two which has the Novag winning. Most others have Roma in front, e.g. Gerald Murphy has Nov Super Forte/SMHz and his score is 23 1/2-4 1/2 for Mephisto (Novag on Normal).

## ENDGAMES and the FIDELITY 68000

John Roycroft of 'THE CHESS ENDGAME CIRCLE' (which has an excellent periodical for players who are keen on the Endgame... write to John at 17 New Way Road, London NW9 6PL for details) has occasionally included Chess Computer items showing at one time their failings in this area, but now giving some of them a much better 'press'. Having found that the Fidelity 68000 was able to do the Rook & Pawn 'bridge-building' technique they contacted Fidelity's programmers and then published the following Article in their May 1988 Issue.

It is noted that Kathe Spracklen's replies are dated around the time when the MACH 2 was still in its A version; the B programme came out very shortly afterwards and is generally regarded to be considerably stronger in the Endgame than the A had been, so it is good to see theory and practice in agreement! The later C and C+ versions affected the Opening Book, Middlegame and DRAM usage rather than the Endgame.

### EXCEL 68000 AND THE ENDGAME

Kathe Spracklen, who with husband Dan forms the renowned programmers from San Diego, California, responds below to EG's questions concerning the endgame capability of the commercially available EXCEL 68000 (MACH 2 version) chess-playing machine.

Q. EXCEL will checkmate the lone K with R, with SB and with BN, even at its fastest playing speed. Are these three distinct check-mating algorithms? If 'yes', is this proliferation inevitable in your opinion? If 'no', how much do the algorithms have in common?

A. These checkmates are for the most part accomplished using the normal end-game 'wop-up' techniques of restricting the enemy King to the edge and bringing the attacking King over to the defending King. The single exception is the mate with the Bishop and Knight. We accomplish this mate with a small amount of table data (64 bytes) and the normal search. As more and more complex endgames are handled by the programme, proliferation of table data is, in my opinion, inevitable, but it should be possible, through data compaction and through supplementing tables with search, to keep the amount of data down to a reasonable size.

Q. What other (specific) endgames have been 'algorithmed'?

A. Other endgames which have had special treatment are K + P vs K, R + P vs R, and the Rook's P with the 'wrong' Bishop.

Q. EXCEL fails to win significantly deep positions in Q vs R, 4-piece endgame. Why?

A. The actual solution of this endgame is quite complex, beyond the programme's normal wop-up methods, and we have not addressed it as a domain-specific end-game.

Q. EXCEL can handle some specific R + P vs R positions well, though at its longer response times. For example EXCEL can correctly defend the Philidor 'barrier' position and finds (or 'knows') the winning bridge-building manoeuvre attributed (wrongly) to Lucena. Can you tell us more about this? Do you think that this is tantamount to the programming of domain-specific knowledge? And how difficult is it?

A. When he worked with us Boris Baczynski pointed out our programme's failure to correctly handle some of the situations you describe in your question. He



diagrammed several positions for us, pointing out the moves the programme played in the situation, and the moves it should have played.

When Danny Kopec worked with us over the summer of 1986, we asked him about these positions. He was able to present a description of the knowledge our programme lacked in terms that were specific, programmable, and within the limits of computational complexity of our micro-processor. We coded up his suggestions and were delighted to see that we now played the moves Boris had suggested for us, and he also performed correctly in several other test positions which Danny Kopec had provided for us. These are definitely cases of domain-specific knowledge. Danny Kopec made it seem easy. You would have to ask him how difficult it really is!

Q. There seems to be a very unhuman contrast between the 'skill' shown by EXCEL in K + P vs K compared with a lack of skill in K + PP vs K + P. Would you care to comment?

A. Over that same summer of 1986, the other major area in which Danny Kopec assisted us was in K + P vs K. Again the knowledge is domain-specific. We have not yet addressed the question of K + PP vs K + P.

Q. What further plans have you, and what scope is there, for expanding EXCEL's endgame repertoire? Are you open to suggestions?

A. The scope is definitely there. Our studies in data compaction and our work with Danny Kopec in domain-specific algorithms have shown us that there is tremendous potential in programming specific endgames. The question is allocation of resources (i.e. our programming time!). It used to be considered that the endgame was the area in most need of work; right now the feeling amongst programme reviewers is that our middlegame needs most attention. So currently that is where our priority is.

By the way, the Hash Tables really shine in the endgame, and some problems we can now solve are due to increased depth alone.

(Kathe Spracklen, San Diego, California. Nov 1987)

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## Adverts

ALAN WILKINSON, Mulberry Green House, Mulberry Green, Harlow, Essex CM17 0ET has a **MEPHISTO MM4** in **EXCLUSIVE BOARD** for sale. Offers to Alan, please, around the £270 mark.

I have both the **MEPHISTO MM4** in **MODULAR BOARD** and the **MEPHISTO MEGA 4**. They are too similar to be worth keeping both as it turns out. Offers for the MM4 around £239 or for the MEGA 4 around £219 please. I only intend to sell ONE of them, so it will be whichever goes first!

I also have a 'nameless' customer who wants to sell his 6 month old **NOVAG SUPER EXPERT/5MHz**. It has the later and NOT the original programme and an offer close to £399 would be accepted. You will need to send your offer via me and I will make the arrangements.

Competence has a **NOVAG EXPERT/6** looking for a good home (£299'ish), and a **NOVAG SUPER CONSTELLATION**, £119'ish. For these 'phone Competence.

Readers with Adverts... as long as it only takes 3 or 4 lines up, as above, just send in the info with payment of £2 and it will automatically get into the next NEWS SHEET

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## The new MEPHISTO MEGA 4

The MEGA 4 is a follow-on to the MM4, but in the same press-sensory Board as used by the SUPER MONDIAL and MONDIAL DALLAS XL. This has enabled Mephisto to keep the price down to around £250 where it obviously provides interesting competition for other press-sensory Machines.

### Extra FEATURES

It only takes a quick browse through the Instruction Book to see that there are some useful added features compared to the MM4 (which itself had some valuable extras over the REBELL such as Scrolling Display and Countdown Levels). Included in the extras are:- Dual Display so there is always a little more Info available at any one time; Extra Levels being now 8 for Casual Play and 8 for Strict Tourney Play, 8 Blitz or Countdown Levels and 8 Handicap Levels (Countdown, but you get more time than the Computer!); a nice system for showing Alternative Opening Moves for Opening Book Study (but it's still a small Book by current standards, around 7,000 positions); special Check Search function and special Full Width function, rather similar to the Novag Normal and VSS idea. Personally I find this Machine definitely strongest on its standard setting but the Check Search function can speed things up if you're presented with a position in which you already know that checks play a vital part; finally there is a Save Game feature which will retain all the information concerning the actual game in progress while the Computer is switched off.

### PLAYING STRENGTH

This has already proved to be a slightly controversial issue, but here goes!

'Rumour' had it (at least the rumours which reached me!) that the MEGA 4 was going to be around 75 'Elo' stronger than the MM4. This rumour was amplified by the early Results coming from Sweden... but make note that no criticism of my Swedish friends is intended at all by this statement. In fact Hegener & Glaser had sent a MEGA 4 to Sweden in advance of official launch so that they could get on with some testing, and early results confirmed that there actually was something like a 75 improvement.

By this time I had my own and my first 6 games (oh the terrors of small sample) converted what had been an MM4 defeat by  $2\frac{1}{2}$ - $3\frac{1}{2}$  to the EXCELLENCE/3 into a 5-1 win for the MEGA 4. Nine out of every ten moves were exactly the same, but the occasional change always seemed to be a useful improvement. I was impressed. My next short Match had gone  $3\frac{1}{2}$ - $2\frac{1}{2}$  in favour of the MEGA also, this time against NOV SUPER EXPERT/6. But then  $2\frac{1}{2}$ - $3\frac{1}{2}$  defeats by STRATOS and MACH 2, and a 4-2 defeat by FORTE B and I was beginning to wonder what to make of everything. In many of these games the MEGA 4 and MM4 proved to make exactly the same moves. Larry Kaufman had also written saying that he couldn't see much difference between the machines at all.

Finally it had by now transpired that the H & G pre-launch in Sweden was in fact a 'special' running at 6MHz compared with the commercial version which is 4.9MHz. As with myself the Swedish folk are only interested in testing machines which all of us can actually buy so, credit to them, they returned the Machine explaining that they didn't want it... and started testing all over again with the proper units. The result is that, after 97 games, they now have MEGA 4 only 19 'Elo' above MM4, a figure which corresponds very closely to my own as Readers will see from the RATING LIST this Issue.

### Keeping the MATTER in PERSPECTIVE

Being critical of what has happened however should not detract from the basic

fact that MEGA 4 is a little better and it is at an attractive price. Also the Manufacturers must think pretty highly of the MEGA 4 as they entered it rather than a Richard Lang ROMA programme in the most recent Rating Test in the World Open at Philadelphia. Granted it had an 18MHz Turbo-Booster, but presumably H & G believe MEGA 4+TURBO is stronger than ROMA 32 BIT! (Or are they keeping Richard's latest in secret reserve for the WORLD MICRO CHAMPS in Spain at the end of September?!?). That MEGA+TURBO could be stronger is perfectly feasible! The Swedish List has MMA+TURBO 30 pts above ROMA 32 and it also out-scored the ROMA by over 100 pts vs Humans in the recent Swedish Tournaments. If the MEGA is only 20 pts better, it still extends the gap. The only question mark thrown on this is the MEGA 4+TURBO's actual result in the World Open. It's 2209 is (obviously) a very good effort in its own right (genuine MASTER standard) - but it has to be compared with the commercial version of FIDELITY's new Machine which obtained 2265 at that Event.

Larry Kaufman has the MEGA+TURBO and tells me that it is running rings round everything at Active Chess (30 wins for the Game) and, incidentally, MEGA+TURBO got an Active Chess Grade of well over 2300 from a Tourny also run during the World Open. Obviously the 4.9MHz commercial version would have to be around 100 pts less, but these are still good figures by any standard.

So there we have the plusses and minusses - I've tried to present them fairly even if some might not think so. I remain with the feeling that we were just 'caught out' a bit when the Machine was launched... perhaps partly because of our own desire to see useful improvement being made we believe 'good news' that bit more easily, almost to the point where we can make-it-up in our own minds. Nevertheless, in the end, its CHEAPER, better FEATURED and a little bit STRONGER so has to be a fair buy. Which just leaves space for some MEGA 4 Chess!

**MEPH MEGA 4 White, FID EXCELLENCE/3 Black.**

1 d4 d5 2 c4 Nc6 3 Nc3.. (fidelity goes out of Book now - Mega stays in till move 9! Credit to both machines, (i) for a neat Book and (ii) for finding the right moves) ..dxc 4 e3 e5 5 d5 Na5 6 Qa4+ c6 7 b4 cxb ep 8 axb b6 9 Nf3 e4 10 dxc! exf3? (Already a difficult position for Black. Perhaps 10..Qd6 was right, but White's 10th was surely a good find) 11 c7+ Qd7 12 Bb5.. (And +3.18 already!) ..Qxb5 13 Nxb5 Nf6 14 Nxd6 Ke7 15 Ba3 fxdg 16 Rg1 Ke6 17 Rd1 Bd7 18 Qf4 Nxb3 19 Qc4.. (Announcing Mate in 4) ..Nd5 20 Qxd5 Kf6 21 Ne4+ Kg6 22 Qg5 mate. 1-0.

**MEPH MEGA 4 White, KASPAROV STRATOS Black.**

1 d4 Nf6 2 c4 c5 3 d5 b5? 4 cxb a6 5 bxa g6 (Mega now goes out of Book, Stratos stays in till move 9. However this is another example I think of Stratos having a deep Book but not one which is always so helpful to its own success) 6 e4 Bxa6 7 Bxa6 Nxa6 8 Nc3 Bg7 9 e5! Ng8 10 Nf3 f6 11 Bf4 Qb6 12 Qd2 Nc7 (Stratos regularly expects Mega to 0-0, but he is more interested in pressing on actively) 13 e6 dxe 14 Bxc7 Qxc7 15 dxe6 Ra6 16 Qe2 Qb7? 17 0-0! Nh6 18 Rfd1 Nf5 19 Rd7 Qc8 20 Rad1.. (What an attack!) ..0-0 21 g4 Nh6 22 Rxe7 Nxg4 23 R1d7 Bh8 24 Rxh7 Rb8 25 Qc2 f5 26 Nd5 Rxe6 27 Ne7+ Rxe7 28 Rhxe7 Kf8 29 Qc4 Ne5 30 Nxe5 Rf6 31 Rf7.. (Announcing Mate in 5. There are other e.g.s in this NS where MEGA 4 seems a little slow to find a tactical or check-mate solution. Yet this one takes only 7 secs in actual play! .. and that on Standard mode, not with the Check extension. So sometimes we see that it is remarkably fast as well!) ..Ke8 32 Rde7 Kd8 33 Qd3.. and you can work the rest out yourselves. 1-0.

Two stunning wins showing off the MEGA 4 in high-powered mood!

GAMES SECTION

From the SWEDISH TOURNAMENTS, with thanks to Goran Grotting of PLY Magazine for permission to use them.

First the quickest Computer win of the Tourney...

Bjorn Knoppel White (BCF equiv 158), Meph MM4+Turbo Black

1 e4 e6 2 d3 d5 3 Nd2 Nc6 4 g3 Nf6 5 Bg2 e5 6 h3 Be6 7 Ngf3 dxe4 8 dxe4 Bc5 9 0-0 Qd7 10 Ng5 0-0-0 11 Nxe6 Qxe6 12 c3 Rd3 (Looks dangerous, but 13 Kh2 looks to hold everything intact) 13 Qc2?? Rxd3 14 b4??.. (Gives up much too soon. Still 14 Kh2 would minimise the damage to 'just' a Pawn down. Mike Basman in his fascinating notes for the Competence "Chess Computer News" of the Mach 2's BCF Test against a Berkshire County Team comments interestingly on even the stronger human player's frailty in playing inconsistently by turning out the occasional weak move - that's what they always used to say about Computers! - and their tendency to collapse very quickly once they realise they've made a mistake and fallen behind. That tendency, to me, often seems to be demonstrated in the desire to play an aggressive move at a time when really the most stubborn defense possible is what is needed) ..Qxb3 announcing Mate next of course!

MM4+Turbo also claimed the highest scalp by the Computers in beating Jiretorn (2116 Sweden, BCF equiv. 205).

Next the Mephisto ROMA's quickest win...

Anders Svensson White (BCF equiv 183), Meph ROMA 32 bit Black

1 d4 d5 2 f4?.. (I'm not sure that the idea of getting a Computer out of Book really necessitates this type of move) ..Nf6 3 Nf3 Bf5 4 e3 e6 5 Nbd2 Be7 6 Ne5 Nbd7 7 Ndf3 0-0 (Black has developed 4 pieces to 2.. and he's Castled) 8 Be2 Nxe5 9 fxe5 Ne4 (Lovely outpost) 10 0-0 c5 11 c3 Rcb8 12 Bd2 a6 13 Rcl Qb6 (The start of an unwarranted crusade by the Queen) 14 b3 Qa5 15 a4 Qb6 16 Be1.. (Allows Black to take advantage of the Pawns which have been moved during his Queen's attack. With 16 c4 I think White would have been close to equality despite the doubled Pawns. Now however Black is willing to undouble his Pawns for him.. to win a Pawn!) ..cxd4! 17 exd4 Ba3 (Either the b or c Pawn must fall. Perhaps 17 cxd4 Rxc1 18 Qxc1 Qxb3 19 Bdl was better? I'm not sure) 18 Ra1 Bb2 19 Ra2 Nxc3 20 Bxc3 Bxc3 21 h4?.. (Again, immediately after minor losses, the human player thrashes out. Watch out for the number of second rate moves made once he's fallen behind) ..Be4 22 Kh1 Bxf3 23 Rxf3 Qxd4 24 Qf1 Qb4 25 Rg3? Bxe5 26 Rg4? Qxb3 27 Rd2 f5 and White resigned.

And here is the MEGA's top scalp..

Ingebar Larsson White (BCF equiv 196), Meph MEGA 4 Black

1 c4 e5 2 Nc3 Nf6 3 Nf3 Nc6 4 e3 Bb4 5 Qc2 Bxc3 6 Qxc3 Qe7 7 a3 d5 8 cxd5 Nxd5 9 Qc2 0-0 10 d3 Bg4 11 Be2 Rad8 12 0-0 Nf6 13 b4 a5 14 b5 Bxf3 15 Bxf3 Na7 16 a4 c5 17 bxc6 ep?.. (I think 17 Ba3 immediately was better as Black probably then has to reply with b6 leaving his a7/N out of play) ..Qc7! 18 Ba3 Rfe8 19 Rac1 Nxc6 20 Rfd1 Nd5 21 d4?.. (21 e4 looks more natural and is okay. 21 Qb3 may be still better) ..exd4 22 exd4 Nxd4! (Probably a surprise to White. Obviously he can't now play 23 Rxd4? Qxc2! and the Q can't be taken because of Re1 mate. But the move played next by White doesn't work either. Therefore I think he should go 23 Qxc7 though Nxc7 24 Bg4 Ne2+ 25 Bxe2 Rxe2 admittedly leaves Black a Pawn up with a Rook on the 7th) 23 Qd3 Nc3! 24 h3?.. (It's happened again. The human, suddenly finding himself behind, immediately compounds the error with an ineffective move) ..Nde2+ 25 Bxe2 Nxe2+ 26 Qxe2 Rxe2 27 Rxc7 Rxd1+ 28 Kh2 h5 29 Rxb7 Rxf2 30 RbB+ Kh7 31 Rb5 Ra2 32 Be7 Rxa4 and White rightly gave it up at move 40.

I'd intended to share one of Mike Basman's efforts with you from the aforementioned "Computer Chess News" - but space doesn't allow everything in and I thought Readers might prefer one from the MACH III 68000's success in the WORLD OPEN when it achieved a 2265 Grade and Official United States MASTER!

Thanks for this game to Fidelity in Miami who also provided notes by one Iouri Bondarenko. I have kept some of his and added some of my own... Editor's licence!

Fidelity 68000 MACH 3 White, Ortega (2159 USCF) Black

1 e4 c5 2 Nf3 d6 3 d4 cd4 4 Nd4 Nf6 5 Nc3 a6 6 Bg5 e6 7 f4 Be7 8 Qf3 Nbd7 9 0-0-0 Qc7 10 g4 h6 (I believe Mach 3 goes out of Book now) 11 Bf6 Bf6 (Aleksandria tried 11..gf6 vs Gaprindashvili and Geller shows 11..Nf6 12 h4 b5 13 g5 as giving White an advantage. So Bxf6 is the best way to recapture) 12 Kbi Be7 13 Bg2 b5 14 e5 d5 (For my Readers benefit, Mach 2 would have played h4 on both moves 12 and 13. Now, with 14..d5, Black has cut off the dangerous diagonal a8-h1 trying to make White play passively with the result that an attack against his King can be quite strong. Instead Mach 3 comes up with a block-buster!) 15 Nxd5!!.. (I loved the Bishop for 2 Pawns sacrifice covered in NS18. But this is better! A sacrifice with regain (or greater gain) of material within the Computer's horizon is no sacrifice at all, but a combination. But a sacrifice for a positional advantage is a different matter altogether - especially for 'materialistic' Computers. Here Mach 3 chooses to open up the centre for his R, Q and B, thus gaining the initiative and better long-term prospects. Mach 2 and other Computers I've tested choose 15 Nf5. Still a good move, of course for if 15..exf5 then 16 Nxd5 is certainly strong. So Black would respond 15..Bf8 then 16 Ne3 and a small +. My final comment at this point is to say that Mach 2 thinks little of 15 Nxd5; at this juncture it sees it simply as material lost with little compensation at all) ..exd5 16 Qd5 Nb6 (Now this is a critical moment, for Black here loses the exchange and we must ask if that is necessary for, if so, White's sacrifice was not a sacrifice at all. The alternative move, unanimously chosen by Mach 2, Mega 4 and Nov Super Expert, is 16..Ra7 preserving material advantage. I now played on with Mach 2 as White and Mega given 15 mins per move to find its best defence. Play went 17 e6 Nc5 18 exf+ Kf8 19 Qc6 Kxf7 20 Bd5+ Kf8 21 Qg6 Bh4 22 Nc6! Rb7. Only now do the possibilities for White become apparent to Mach 2 and Mega, and their evaluations start to swing in White's favour. 23 Qh5! Bf2 (Has g5 better?) 24 Ne5 Ab6 25 Rhf1 Be3 26 Rf3! Bg1 27 f5 Bxh2 28 Qxh2 Qe7 29 Ng6+ Rxxg6 30 fxxg6+ announcing Mate in 6. So there is inherent power in White's 15 Nxd5, and as a genuine sacrifice. Back to the game...!) 17 Qc6+ Qxc6 18 Bxc6+ Bd7 19 Bxa8 Na8 20 Nf5.. (Mach 2 reads +1.05 here) ..Bf5 21 g5 Bc5 22 Rhf1 Nb6 23 Rf3 Ke7? (Puts his K in a vulnerable position. I prefer 23..Rg8 or Nc4) 24 Rg3 Rh7 (This is a poor position for the Rook, but I doubt that there is anything better) 25 Rxxg7! Rh8 (Bondarenko says "if 25..Rxxg7 then 26 f6+ Kf8 27 fxxg7+ Kxxg7 28 f5". However I reckon that if 26..Kf8 then 27 Rd8 mate! So Black must go 26..Ke6 and lose the Rook. Black's 25th in the game therefore has to be best) 26 Rg3 Rc8 27 Rh3 Nc4 (Black needed to adopt a more materialistic view here even if it goes against the grain to admit the Computer is right. He should play 27..Rh8 even if the poor thing does look rather sorry for itself) 28 Rh6 Be3 29 Ra6 Nd2+ 30 Ka1 Rc2 31 f6+ Ke8 32 Ra8+ Kd7 33 e6+ fxe6 (If 33..Kxe6 34 Re8+ Kf6 35 Rxe3 wins) 34 f7 Bd4 (Last chance... perhaps Mach 3 won't see the Mate on b2) 35 Rd8+! Kxd8 36 f8=Q+ Kd7 37 Qb4 e5 38 fxe5 and Black resigned.

Larry Kaufman tells us that Mach 3 32 bit got 12½-9½ against USCF Masters (2200-2399); Mach 3 16 bit (the commercial version for Sept/Oct) got 7½-6½; and the Mega 4+Turbo got 9-1! at 3 mins per move and 9½-5½ in the Active Chess Tournament. Each Machine beat 2 players in the 2300's in the main Event!

## Ratings vs Humans

From my Mail I believe there is more and more interest and recognition that it is these figures primarily which give true indication of a Computer's playing strength. The problem of course is that some have never been entered against Humans at all, and many others have played so few such games that the accuracy of the resulting small sample is very unreliable. So a Rating List composed only of such Computers will leave some Machines out altogether and also be based on a somewhat insufficient no. of games for some of the others.

Another definite problem is the variation in Rating Levels between different Countries. There is no room to discuss that problem here, but long-standing readers of NEWS SHEET will know that I have addressed it carefully in the past and we know, for example, that USA and Canada levels (and thus their resulting ratings) are higher than ours whilst France, Sweden and Germany are below ours. I would certainly not claim that the adjustments I have learned to make are 100% correct - such may not even be possible. But I believe that they are pretty accurate and, in consequence, I am able to take a Computer vs Human result from nearly any Country and adjust it to a British Level of Rating for inclusion in my own 'System'. This obviously enables the 'small samples' to grow quite valuably and the vs Humans Rating List, adjusted to British Levels, has become reasonably substantial and effective.

The figures are always shown alongside each Machine in the main RATINGS LIST but (1) THAT List excludes Machines not generally Commercially available (marked with an '\*') and (2) the Computers are ordered as per their TOTAL Rating rather than their VS HUMAN Rating. A List such as the following will probably not appear in every Issue, but I trust its presence in this one is of help.

NEWS SHEET RATINGS vs HUMANS, Aug/Sept 1988							
		Elo	Games				
BCF Computer				174	NOV SUPER EXPERT ORIG	1993	22
205 FID 68020 MACH 3*		2237	53	172	CONCHESS/4	1978	23
198 FID 68000 MACH 3*		2185	48	171	CONCHESS PLYMATE/6	1972	55
192 MEPH MMA+TURBO*		2138	30	171	MEPH REBELL	1971	35
191 MEPH MEGA 4+TURBO*		2129	48	171	KASP LEON ANALYST/8	1965	16
189 MEPH DALLAS 32		2116	186	170	FID PAR E/8*	1964	55
189 FID 68020 MASTER/LA*		2113	58	170	NOV FORTE A	1963	124
189 MEPH MEGA 4		2110	16	169	FID MASTER MACH 2A	1954	35
188 MEPH AMSTERDAM		2101	175	169	FID MASTER MACH 2B	1954	20
186 NOV EXPERT/5		2089	62	169	FID PAR E/ELITE 2100	1953	209
186 NOV EXPERT+TURBO*		2087	78	168	SCI TURBO KASP/6*	1946	12
186 LEON MAESTRO+TURBO*		2084	9	167	FID ELEGANCE	1936	22
185 MEPH MOND/DALLAS XL		2079	48	164	NOV SUPER CONST	1912	168
184 NOV SUP EXP-FORTE/6		2076	78	163	FID EXCELLENCE/3	1907	41
184 FID MASTER MACH 2C+		2075	66	163	NOV CONST/3.6	1904	17
184 CONCHESS PLYMATE/4		2073	6	163	SCI TURBOSTAR 432	1904	43
184 PSION ATARI/8		2071	19	163	FID ELITE C	1901	11
183 NOV EXPERT/6		2061	22	163	FID 68000 CLUB B	1900	7
182 MEPH MMA/5		2054	30	162	FID AVANT GARDE/5	1893	77
180 MEPH ROMA 32		2042	27	161	KASP LEON MAESTRO/6	1891	114
180 NOV SUP EXP-FORTE/5		2038	9	161	FID ELITE DLD	1886	5
180 NOV FORTE B		2038	130	159	CXG SPHINX	1872	18
179 MEPH DALLAS 16		2030	43	155	FID SENSORY 12	1840	7
178 MEPH SUPER MONDIAL		2020	6	154	CXG COMMANDER*	1832	9
178 KASP LEON MAESTRO/4		2020	6	153	MEPH ROMA 16	1820	16
177 NOV EXPERT/4		2014	43	153	CONCHESS/2	1820	11
175 MEPH EXCL S/12		1997	18	152	NOV CONST/2	1813	23
174 SCI TURBO KASP/4		1994	52	151	FID PRESTIGE	1805	43
				150	FID 68000 CLUB A*	1797	6
				144	MEPH 2	1756	25
				142	MEPH MM2	1732	7
				135	FID SENSORY 9	1681	59

RATING LIST. cont. from p. 16

166	SCI TURBO KASP/4	1927	21	485	33	1994	32
166	CONCHESS/6	1925	47	98	34	2224	1
165	KASP TURBO KING	1923	59	62	35		
165	CONCHESS FLYMATE/4	1922	24	362	36	2073	6
163	PSION 1/8	1904	54	75	37		
163	FID EXCELLENCE/3	1904	14	1146	38	1907	41
163	FID ELEGANCE	1903	19	612	39	1936	22
163	MEPH MN2	1903	20	519	40	1732	7
163	SCI TURBOSTAR 432	1902	14	1139	41	1904	43
161	FID ELITE C	1886	37	160	42	1901	11
159	CONCHESS/4	1872	21	504	43	1978	23
159	FID EXCEL DISPLAY/3	1872	41	131	44		
159	NOV SUPER CONST	1869	9	2596	45	1912	168
156	MEPH BLITZ	1850	29	256	46		
155	CXG SPHINX	1839	72	42	47	1872	18
153	FID ELITE A	1823	44	111	48		
151	MEPH EUROPA	1811	56	69	49		
151	FID PRESTIGE	1808	19	607	50	1805	43
151	SCI SUPERSTAR 36K	1804	18	693	51		
150	MEPH EXCL 5/12	1802	33	203	52	1997	18
150	NOV QUATTRO	1800	20	559	53		
150	FID SENSORY 12	1796	16	837	54	1840	7
149	NOV PRIMO/VIP	1793	30	234	55		
149	CHESSMASTER 2000	1792	37	156	56		
149	CONCHESS/2	1791	17	739	57	1820	11
149	PSION QL	1790	56	70	58		
148	NOV CONST/3.6	1781	17	785	59	1904	17
146	FID ELITE B	1768	63	54	60		
144	SARGON 4	1748	56	70	61		
143	SARGON 3	1747	69	46	62		
143	MEPH MONDIAL	1741	32	217	63		
142	COLOSSUS 4	1735	32	207	64	1640	2
141	FID ELITE OLD	1730	39	139	65	1886	5
139	NOV CONST/2	1715	14	1168	66	1813	23
138	SUPER ENT/ADV STAR	1705	17	726	67	1593	3
129	FID SENSORY 9	1635	16	869	68	1681	59
129	COLOSSUS 2	1630	79	35	69		
126	EGH + STEINITZ	1608	28	285	70		
126	CHESS 2001	1606	52	80	71		
124	MEPH 3	1589	20	552	72		
123	SUPERCHESS 3.5	1587	64	52	73		
123	SCI SUPERSTAR BAS	1587	30	242	74		
123	MEPH 2	1582	20	555	75	1756	25
123	KASP TURBO 16K	1581	45	106	76		
122	KASP TURBO 24K	1579	47	96	77		
122	GSM + MORPHY	1576	40	137	78	1579	19
120	CONCHESS AQ	1558	56	68	79		
116	SCI C/C MARK 5	1531	37	160	80	1593	22
116	CYRUS 2	1529	56	70	81		
116	PHILIDOR/COUNT GAMBIT	1527	57	66	82		
116	SCI C/C MARK 6	1524	85	30	83		
112	CYRUS I.S	1494	59	63	84	1586	2
112	WHITE KNIGHT 11	1493	67	48	85		
108	SUPERCHESS 3.0	1460	62	57	86		
106	MORPHY ENCORE	1447	52	81	87		
101	SPECTRUM 2	1409	88	28	88		

## Rating List

The RATING LIST is an extended one this time, by 'popular demand'. The Back Page of NS, the Rating List's regular spot, is only big enough to take the top 56 Computers and many 'old' favourites now get missed off altogether. So that Readers can make comparisons (which certainly helps emphasise the progress made) I have therefore extended the List onto the inside Back Cover so that more Machines get included, but I won't be doing this every Issue so make sure to keep at least the Back Cover if you might want it for reference.

### For newcomers to NEWS SHEET:-

/5 after a Machine indicates its Speed to distinguish between results where the particular Computer is/has been available running at different speeds. - i.e /5 = 5MHz.

+/- column shows maximum deviation likely. When a Machine has many games, e.g. the Meun Amsterdam with 2041, likely deviation is very small (10 in this case). A less thoroughly tested Machine will have a wider deviation possibility. E.g. Mega 4 at 2084 +/- 31 could yet be as high as 2115, but could also be as low as 2053 (unlikely as that would be below MM4).

Human/Games are totalised Results from Tournys against Humans. They are used to both adjust the Rating LEVEL to a British standard (BCF) and also affect the individual Machines' own Rating in proportion to the no. of games played.

### RATING LIST NS19 - Aug/Sept 1988

BCF	Computer	Elo	+/-	Games	Pos	Human/Games
200	MEPH ROMA 32	2196	23	425	1	2042 27
197	MEPH DALLAS 32	2173	15	915	2	2116 186
192	MEPH ROMA 16	2139	17	757	3	1820 16
192	MEPH DALLAS 16	2138	13	1211	4	2030 43
189	FID MASTER MACH 2C+	2113	15	962	5	2075 66
188	MEPH MOND/DALLAS XL	2107	43	116	6	2079 48
186	MEPH AMSTERDAM	2090	10	2041	7	2101 175
186	MEPH MEGA 4	2084	31	226	8	2110 16
184	FID MASTER MACH 2B	2072	28	282	9	1954 20
183	MEPH MM4/5	2064	13	1219	10	2054 30
181	KASP LEON ANALYST/8	2048	43	119	11	1965 16
181	NOV SUP EXP-FORTE/6	2047	31	230	12	2076 78
181	MEPH MONTE CARLO	2045	40	132	13	
180	PSION ATARI/8	2042	16	849	14	2071 19
177	NOV SUP EXP-FORTE/5	2019	19	619	15	2038 9
177	FID MASTER MACH 2A	2012	26	325	16	1954 35
175	FID 68000 CLUB 8	2002	15	972	17	1900 7
175	NOV EXPERT/5	1998	32	214	18	2089 62
174	NOV EXPERT/6	1994	31	222	19	2061 22
172	FID AVANT GARDE/5	1978	12	1404	20	1893 77
172	NOV FORTE B	1978	12	1496	21	2038 130
172	KASP STRATOS	1978	19	595	22	
172	FID FAR E/ELITE 2100	1974	11	1956	23	1953 209
171	MEPH REBELL	1971	13	1306	24	1971 35
170	NOV SUPER EXPERT ORIG	1963	25	338	25	1995 22
170	NOV FORTE A	1961	11	1936	26	1963 124
169	CONCHESS PLYMATE/6	1953	13	1325	27	1972 55
169	KASP LEON MAESTRO/6	1949	15	923	28	1891 114
168	MEPH SUPER MONDIAL	1946	17	767	29	2020 6
168	KASP LEON MAESTRO/4	1941	84	31	30	2020 6
167	FID EXCELLENCE/4	1933	14	1141	31	
166	NOV EXPERT/4	1931	17	767	32	2014 43

cont p.15