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Computer Chess NEWS SHEET 25

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The purpose in publishing the "NEWS SHEET" is to provide a survey of the CHESS COMPUTER scene, with a special emphasis on realistic assessments of the PLAYING ABILITIES of the many Machines now available. My work at COUNTRYWIDE COMPUTERS is of special help in this as we handle there a very wide range of Computers and I enjoy a freedom to maintain personal opinions and preferences which I seek to share with Readers. Final Games and Articles selection for each Issue is done independently and solely by myself. The NEWS SHEET is also financed by myself and by NS Readers whose voluntary contributions are always welcome (please!); but folk who make little attempt to 'pay their way' will not remain on the Mailing List for ever. (Hint: £5 just covers my costs for 4 Issues; Foreign Readers £8 - I try to produce 5 Issues per year). Articles or Games sent in by Readers or others involved in Chess Computing will always receive fair consideration for publication.

Hello again, and welcome to another Issue - barely 5 or 6 weeks since NS24 as well! I wanted to get this to the printers early, mainly due to the fact that the Countrywide team will have the Chess Computer Stand at the World Championship Semi-Finals at Sadlers Wells involving Jon Speelman, Timman, Karpov and Yusupov. A probable 3-week gap in my NS input would mean a November release, and there are some important NEW machines and programmes which many of you will want updating on now rather than later, knowing you!

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News

The TAKE-OVER

The MEPHISTO (Hegener & Glaser) take-over of FIDELITY was completed in early September as expected. Readers will be pleased, I think, to learn that the two Companies will still be operating independently, certainly in the immediate future. So there will continue to be a full range of Fidelity machines at this time, produced in the USA, though Hegener & Glaser as owners may determine Fidelity's direction in certain areas in due course. Fidelity's work towards bringing out the MACH 3-3B-4-4B programme in ELITE Boards continue unaffected. Some Fidelity machines, such as the PHANTOM, may carry the Mephisto brand name for the European market at some time in the future.

The RENAISSANCE

The new Saitek/Kasparov RENAISSANCE was mentioned in NS24, with a guide to its likely Grading which remains largely unaltered. However I failed to make prop-

erly clear that the RENAISSANCE Board will be an improvement over the current GALILEO, in that it will have LEDs on every square instead of using the co-ordinate system. The 3-colour LED system, which enables the user to know exactly which mode the machine is in, will also operate on all squares, and the Board will continue to use the high-tech sensor system which is designed to detect moves played even at high-speed (i.e Blitz Chess). From the Kasparov Chess Computer PRESS RELEASE it seems that the use of the separate LCD board display introduced in the SIMULTANO (or the MARK 5 and EXECUTIVE Chess?) will also be in the RENAISSANCE units.

MAESTRO (non display "D" version) and ANALYST (display "D" version) modules can be used to increase playing strength. The speed range with the MAESTRO will be 4 - 10MHz, and with the ANALYST 4 - 8MHz. The valuable ability to connect to ChessBase, Personal Computers and their Printers remains.

There is a RENAISSANCE game from Sweden elsewhere in the NS. Here is an ultra-quickly from this years' U.S Open.

White **RENAISSANCE D/10**, Black **D. SIMONS** (2102 USCF)

1 e4 c6 2 d4 d5 3 Nd2 dxe 4 Nxc4 Nf6 5 Nxf6+ gxf6 6 Bf4 Qd5 7 Nf3 Bf5 8 Bd3 Bg4 9 c4 Qa5+ 10 Qd2 Qb6 11 Be4 e6 12 c5 Qd8 13 Qb4 b5 14 Bxb8 Bxf3 15 Bxf3 Qxb8 16 Bxc6+ Kd8 17 Qc3 a5 18 Qf3 and 1-0

MEPHISTO's new machines

Just out (29/9/1989) is the POLGAR, the sisters now being associated with Mephisto. This is an extension/upgrade of the very successful ACADEMY, but has been made available in MODULE format, so runs in Mephisto's MODULAR, EXCLUSIVE and MUNICH boards. It has only just arrived, so I cannot say how much stronger than the Academy it is likely to be, but I am told that all areas of its play have been improved, and it isn't just an update of the Opening Book. I also note that it is a 64K programme instead of 48. The main thing is that it has ALL of the Academy's excellent features for special and infinite level settings, full visual access to its Opening Book in both Tournament and Random mode, two line Graphic Display, save game, recall and UPDATE of evaluations whilst YOU are thinking as well as whilst the Computer is etc. Prices are:- Modular (Judit?) £449, Exclusive (Sofie?) £549 and Munich (Zsusa?) £689. Owners with earlier modules (MM2, Rebell, MM4 etc) can obviously upgrade to this.

The next programme to arrive from Mephisto will be Richard Lang's new blockbuster... the PORTOROSE. This is the upgrade for the ALMERIA, but it will be the best single step-forward yet achieved in the series since the arrival of the Amsterdam! Richard has obtained far more than his usual average of 50/60 Elo, because he has also managed to change the programme's "attitude". It is far more active in its style, in seeking the initiative and pursuing its advantages powerfully to maximise pressure. This has resulted in much more than a more pleasurable programme to use, it has radically affected its playing strength. Here are the early results from tests of the **16 BIT PORTOROSE:-**

MEPH PORTOROSE 16 Rating 2304 +/- 34 vs hums 0 in 0

v FID 68020 MACH 4	9.5	5.5	v MEPH MEGA 4+TURBO*	11	7
v FID 68000 MACH 3	32	8	v FID 68000 MACH 2C	33	10
v MEPH MEGA 4	17.5	4.5			

This means that the 16 bit PORTOROSE is somewhat stronger than the 32 bit ALMERIA! Indeed, the 32 bit PORTOROSE should be around 80 Elo better. To give an example of what this means, it should turn the above $9\frac{1}{2}$ - $5\frac{1}{2}$ score into one of 11-4! There is also a (very) expensive 36MHz 68030 version available. There is extensive discussion on the new playing strengths elsewhere in the NS, so I will close by adding that the opening book has been extended again, and there are 3 playing styles in the new programme:- "Solid" which relates to the Almeria and gives the more defensive style, "Normal/Active" which Richard tells me is clearly the strongest and represents much of his new work, and "Aggressive" which is a further extension of this work. The "Normal/Active" was in use for the testing and results shown above.

FIDELITY 68000 Elites

Fans of the MACHs 3 and 4 will be delighted to know that these programs are now becoming available in the well-known Elite boards. The original 2265 and 2325 programs have been updated and include a "self-correcter" which "puts itself right after it has made weak moves". Referred to as the MACH 3B or MACH 4B etc. it will be available in the Elite board with a choice of Processors and RAM/Hash Table hardware. For example, a twin 16MHz 68000 processor with low RAM will provide improved middle-game strength, whereas a single 16MHz 68000 processor with Fidelity's maximum 1024K RAM will show more effect in the end-game.

A PC link-up should be available before Christmas which will benefit correspondence players and enable game-storage using ones' PC. As with Mephisto there are also (very) expensive 68030 and 68040 versions - see details in the "SPEED" article with my own projections of possible playing strength comparisons.

NOVAG Super B's

The evidence regarding CHOICE of SELECT is building up slowly but surely. The TOTAL figures thus far just favour Select 3, with Select 2 and Select 4 standing at -10 and -15 Elo respectively. One or two folk have still only sent me 'their best' results, steadfastly refusing to send in their poorer ones, otherwise the position might have been more certain.

A big surprise is that the Swedish raters have the "B" prog. ONLY 10 Elo above the original version! Larry Kaufman (probably correctly) points out that my Rating List tends to favour Novag machines slightly as I allow results at 1min and 2min per move, time controls which many feel give the Novags a small boost. Thus Sweden, with their consistent 40 in 2hrs, will always have them a little lower than I do. I note that their testing so far has all been done at Select 4, the Select actually favoured by Larry, though programmer Dave Kittinger still prefers Select 3! I think the Swedish figures will improve if they go to Select 3 which is 15 above 4 according to my tests. My own belief is that the "B" version is around 60 Elo above the original, so the Swedish figures are a surprise, whatever the explanation. So I think their rating for the SUPER B's will go up.... maybe mine will drop a little? We'll see.

AMSTRAD, ATARI & CO. My AMSTRAD 6128 is running dreadfully short of memory when compiling the Rating List. I don't WANT to change PC as that would mean a re-writing of my (c) BASIC prog. PLUS the frightening task of re-entering all of the substantial data. Does anyone know if ATARI, AMIGA or IBM BASIC is genuinely easy and "standard" - or particularly grotty. If I don't change, one or two older Computers will have to drop out - if I do change, it's a big expense, a one month program re-write in an already over-busy life, and a certain delay in the next NS. Anyone out there have some helpful advice?

WORLD MICRO CHAMPS.

Portoroz, Yugoslavia. October 1989

Mephisto Run Into Negative Resistance!

Yes, definitely not the sort of resistance they are more used to!!.... No-one wanted to play against them!

In fact, in the MANUFACTURERS DIVISION, MEPHISTO won the Title without any competition, and the Hegener & Glaser PRESS RELEASE which reads, "The expected superiority of the new Mephisto program made all potential challengers withdraw from the contest", is hard to dispute in the circumstances.

A quick look at the record of the top places in the World Micro Champs since Mephisto switched to the Richard Lang programs makes disheartening reading for the competition:-

1985	1986	1987	1988	
AMSTERDAM	8/8 DALLAS	6/7 ROMA	9/9 ALMERIA	19/32
AMSTERDAM	7 Fidelity	5 1/2 CXG Sphinx	0 Fidelity	13
AMSTERDAM	7 DALLAS	5 [only 2 entries.	[only 2 entries]	
Conchess	4 1/2 DALLAS	4 1/2 NB. not the same		
Novag	4 Fidelity	4 1/2 Sphinx as now		
Conchess	4	commercially available]		

So the MEPHISTO PORTOROSE won the 1989 Manufacturers Title unchallenged.

The Software Division

Gladly there was a CONTEST at Portoroze however, and 9 Programs contested the SOFTWARE Section. Unfortunately this Championship was clouded by a big scandal - which in no way concerned the result, nor affected it in the end... but more of that later.

The entries were MEPHISTO PORTOROSE (Britain, Richard Lang), MEPHISTO REBEL (Ed Schroeder with the POLGAR programme, an update of the Rebel, MM4, Mega4 and Academy series), ATARI KEMPELEN, PANDIX and AI CHESS (Hirsch, USA) which are regulars in the big Tournaments, plus QUICK STEP (an "unknown" from Germany), PAUL (not Cohen!), WHY NOT 89 and NIGHTMARE.

The scores after 6 rounds showed the way it was going :-

5 1/2	Mephisto Portoroze
5	Mephisto Rebel
4 1/2	AI Chess
4	Quick Step
3 1/2	Pandix
3	
2 1/2	Why Not 89
2	Paul
1 1/2	
1	
1/2	
0	Atari Kempelen, Nightmare

Portorose and Rebel had played each other - a VERY hard-fought draw! I will try to get a copy of this game for either this or the next NS, as I gather it was a real nail-biter. The watchers were completely unsure which way the game would swing in the midst of enormous complications. Rebel had already played and beaten AI Chess whereas Portorose still had to meet it. But Rebel had dropped a $1\frac{1}{2}$ to Why Not 89 which Portorose had beaten. Quick Step had lost to Portorose and AI Chess but won all its other games. Nightmare and Atari Kempelen were still to meet, so the "nightmare" would end for one of them at least!

At this stage an urgent inquiry occurred into the QUICK STEP "development Computer" entry as Ossi Weiner and Richard Lang had spotted moves being made by it which seemed amazingly familiar. Indeed it was found that Quick Step was actually a stolen Mephisto Almeria program!! Astonishing.

In one way it would have been quite interesting to let it complete the Tournament and see where it finished after its good start with 4/6. But now, the Portorose and AI Chess entries lost the points they had won against it, and the others cheerfully lost their zeros! But it made no difference at all in the end. Portorose won its 2 games against AI Chess and Paul whilst Rebel dropped a $1\frac{1}{2}$ to Pandix as the latter moved into 3rd place.

Final positions and scores were :-

6 $\frac{1}{2}$	Mephisto Portorose
6	
5 $\frac{1}{2}$	Mephisto Rebel
5	
4 $\frac{1}{2}$	Pandix, AI Chess
4	Why Not 89
3 $\frac{1}{2}$	
3	
2 $\frac{1}{2}$	
2	Paul
1 $\frac{1}{2}$	
1	Atari Kempelen
$\frac{1}{2}$	
0	(you guessed it...) Nightmare!

Let's be honest - this wasn't really the sort of Championship that you and I would have really wanted at all. It certainly doesn't compare with some of the past Events, and the classic head-to-head between Mephisto and Fidelity last year comes quickly to mind. That not only provided us with an excellent tussle, but also gave us a pretty good idea what to expect from the respective programmes at their launch time, after making allowances for the changes in hardware on the commercial versions.

This year, Mephisto has the Title again - and there can be no complaint about that. But the Championship itself tells us nothing about the real strength of either the Portorose - or any of the non-existent opposition.

One or two - I tell a porky - nine or ten Readers have asked if I am to do a World Micro Championship Booklet again this year... ("Please", they say!). You will appreciate that it just wouldn't be worthwhile in the circumstances, but I will try to make sure some of the best games of what was played do get into NS26 which I will be hoping to issue sometime in December if time allows.

SPEEDS, PROCESSORS, AND RATINGS

It came as something of a surprise to realise that it was as long ago as NEWS SHEET 13 that we last discussed this important subject. Well, if you never saw it, I shouldn't worry as it's rather out-of-date now! At the time I had assumed that a maximum speed of some 50-60MHz would last us nicely into the 1990's. Also it really applied to the 6301 and 6502 processors, or 68000 versions without hash tables - which was all we had then!

Some Background For Newcomers To The Subject

It has always been clear that, by INCREASING A COMPUTER'S CALCULATING SPEED, we can enable it to ANALYSE DEEPER and thus improve its PERFORMANCE and Rating. Many calculations were done, by Ken Thomson (the programmer of Belle, "6* Speed = 250 Elo" and "1.8* Speed = 75 Elo"), David Levy (in his *Computer Chess Handbook*, "2* Speed = 100 Elo"), as well as by myself. The resulting Tables which I printed showed how this worked out in practice (i.e. with machines then up to around 6MHz) and how much we could expect the Computers to improve in terms of playing strength as processing speeds continued to be increased. It was all intended to whet our appetites for future possibilities! However, Fidelity and Mephisto have "spoiled it" by already passing those expectations!

The above figures mean that, in simple terms, if a Computer's Search within a given Time Limit can be advanced from "x" ply to "x+1" ply, then its Grading should improve by 250 Elo. A conversion of Ply into Time was based on the fact that computers on 6301 and 6502 processors take 6* as long in Thinking Time to get through each subsequent ply. Thus:-

if 2 ply takes 1sec
 then 3 ply takes 6sec, and goes +250 Elo over 2 ply search
 4 ply takes 36sec, and goes +500 Elo over 2 ply search
 5 ply takes 3min 36sec, and goes +750 Elo over 2 ply search
 and if a 1MHz processor reaches 2 ply in 6sec
 then a 6MHz processor would reach 3 ply in 6sec, and again gain 250 Elo.

Of course the AMOUNT of improvement in advancing a Search from 2 ply to 3 ply is somewhat more than when advancing its Search from, say, 6 ply to 7 ply where the situations being examined are less influential - at least until they appear on the board! So an extra formula was developed showing a slowing down effect the further into the Plys the programme reached.

All these facts and figures also HELD TRUE FOR 68000 processors AS LONG AS THEY DIDN'T USE HASH TABLES! Which of course some now do!

Thanks For The Memory!

Hash Tables are better thought of (in my way of thinking) as RAM, which is RANDOM ACCESS MEMORY. The word MEMORY is the KEY - it tells us that the computer is storing in its memory the analysis and conclusions which it has reached from its searching at each stage. Thus, instead of having to go back to "ply 1", [a] at the end of each ply of search and, [b] after making each move, (did you all realise that that's what the 6301 and 6502 chaps have to do?), it goes straight into the next ply drawing from its MEMORY the conclusions reached thus far. Just like a human... well, some anyway!

However, since the arrival of RAM/Hash Tables, some computers (to be specific the Fidelitys from Mach 2 onwards and the Mephistos from the Almeria onwards) use LESS than 6* Time to search successive plys. The Fidelity machines, with less than 128K in their basic 68000/12 and 16MHz versions, are tending to take around $5\frac{1}{2}$ times as long through successive plys instead of 6*. The Mephistos, by providing 40K Memory per effective MHz are only taking 3-4 times instead of 6*, though this is partly due to the Selective Search method which usually reduces what I call "PlyTime" by 1 anyway! The newer "bigger-memory" Fidelity machines are also now using just less than 5*.

So, now, let's have a look at THREE TABLES, each showing THE EFFECT OF SPEED INCREASES. Incidentally, they are calculated on a basis of ONE PLY ADVANCE = 240 Elo GAIN, instead of 250 Elo. This is to ensure, as far as possible, that OVER-EXAGGERATION does not occur, of which there is much-too-much. Now that the leading computers have broken into the ranks of Master Standard (and one or two are within at least striking distance of International Master) it is VITAL that assessments are made CAREFULLY to retain INTEGRITY and DIGNITY in our business. Truth certainly matters to me - as a Christian in the first place, but if my beliefs do not overflow into my private and commercial life, then they aren't worth much. Thus we will strive after accuracy even if it means "penalising" my natural optimism to maximise it.

The first is for 6301 and 6502 processors, or 68000 versions with no hash table Memory, and Full Width programmes. These continue to take 6* as long for going through successive plys. This Table equates to the one in the aforesaid NS13.

PlyTime = 6									
MHz	Elo+	MHz	Elo+	MHz	Elo+	MHz	Elo+	MHz	Elo+
1	0	2	76	3	118	4	147	5	170
6	188	7	203	8	216	9	228	10	238
12	256	14	272	16	285	18	296	20	306
22	315	24	324	26	332	28	339	30	345
32	352	34	357	36	363	38	368	40	373
45	384	50	394	55	403	60	412	65	419
70	426	75	433	80	439	85	445	90	450
100	460	110	469	120	477	130	485	140	491

The next is our 5* Table! This is for 68000 version processors which have close to 40K Memory per MHz of effective Speed. (Effective Speed will also be discussed soon). It also applies to Computers using a Selective Search system.

PlyTime = 5									
MHz	Elo+	MHz	Elo+	MHz	Elo+	MHz	Elo+	MHz	Elo+
1	0	2	85	3	131	4	164	5	188
6	209	7	225	8	240	9	253	10	264
12	284	14	300	16	315	18	327	20	338
22	348	24	357	26	366	28	374	30	381
32	387	34	394	36	400	38	405	40	411
45	423	50	434	55	444	60	453	65	461
70	468	75	475	80	482	85	488	90	494
100	505	110	515	120	523	130	531	140	539

Finally we have our 4* Table which is for Selective Search programmes using 68000 version processors with close to 40K Memory per MHz of Effective Speed. Around 40K per MHz appears to me to obtain the maximum benefit for all Time Controls up to 3/4mins per move.

PlyTime = 4									
MHz	Elo+	MHz	Elo+	MHz	Elo+	MHz	Elo+	MHz	Elo+
1	0	2	99	3	153	4	190	5	218
6	241	7	260	8	277	9	291	10	304
12	326	14	345	16	361	18	375	20	388
22	399	24	409	26	419	28	427	30	435
32	443	34	450	36	457	38	463	40	469
45	482	50	494	55	505	60	515	65	524
70	533	75	541	80	548	85	555	90	561
100	573	110	584	120	593	130	602	140	611

Processor Survey And Effective Speeds

Yes, there's one more thing you need to know before we can see how this works in practice! Sorry.

The following Table shows a Multiplication Factor to apply to the quoted MHz to find out what the REAL calculating or EFFECTIVE SPEED of each C computer is! That's right - a 6301 does NOT work anything like as well as a 6502, which does not work as well as a 68000, which works only half the speed of a 68020 etc.

Proc Multiplier Hash Tables

6301 $\frac{1}{4}$ * MHz can't use them. So, PlyTime = 6, or 5 for Sel. Search
 6502 1* MHz can't use them. PlyTime = 6, or 5 for Sel. Search
 68000 1* MHz 0 = PlyTime 6; 40K per Eff MHz = PlyTime 5. -1 for Selective
 68020 2* MHz 0 = PlyTime 6; 40K per Eff MHz = PlyTime 5. -1 for Selective
 68030 $2\frac{1}{2}$ * MHz 0 = PlyTime 6; 40K per Eff MHz = PlyTime 5. -1 for Selective
 68040 4-5* MHz 0 = PlyTime 6; 40K per Eff MHz = PlyTime 5. -1 for Selective

Let's have some quick practice at using these.

1) cp. the Novag Super Forte A at 5MHz and 6MHz on Full Width. The Processor is 6502, so 5MHz * 1 = 5, and 6MHz * 1 = 6. (That wasn't too hard, was it?).

Use the Table for PlyTime 6 for 6301 and 6502 Processors, or 5 if Selective.

5MHz = 170, 6MHz = 188. Mathematical Improvement for 5MHz to 6MHz = 18 Elo.

2) cp. the Mephisto Roma 16 (68000 @ 12MHz) and 32 (68020 @ 12MHz). Processors are: 68000 is 12MHz * 1 = 12; 68020 is 12MHz * 2 = 24MHz (Effective Speed!).

Table for PlyTime 5 in use., no Hash Tables in Roma but Selective Search.

12MHz = 284, 24MHz = 357. Mathematical Improvement for 12MHz to 24MHz = 73 Elo.

3) cp. Fidelity Mach 3 (68000 @ 16MHz) and Mach 4 (68020 @ 20MHz). Processors are: 68000 is 16MHz * 1 = 16; 68020 is 20MHz * 2 = 40MHz.

Use Table for PlyTime 5! Hash Tables are less than 20K per Effective MHz, so $5\frac{1}{2}$ may be slightly more accurate, but difference is minimal.

16MHz = 315; 40MHz = 411. Mathematical Improvement for Mach 3 to Mach 4 = 96.

4) cp. Mephisto Almeria 16 (68000 @ 12MHz) with Almeria 32 (68020 @ 12MHz)

Processors are: 68000 is 12MHz * 1 = 12MHz; 68020 is 12MHz * 2 = 24MHz.

Use Table for PlyTime 4. Hash Tables exceed 40K per Eff MHz & Selective Search!

12MHz = 326; 24MHz = 409. Mathematical Improvement for Almeria 16 to 32 = 83.

A quick check of the above "Mathematical Improvement" figures with the actual Rating List shows that we are very definitely on the right track!

Relating what we've learned to the new FIDELITY and MEPHISTO Computers

"At last" did someone say? Well, I hope you found the above discussion-cum-explanation of interest and value as it is. Nevertheless the main reason for publishing the revised Tables and new details at this time are so that we can make a serious attempt at evaluating the new HIGH-POWER machines just becoming available from FIDELITY and MEPHISTO.

As soon as you see some of the PRICES - and perhaps now would be a good time to sit yourself down in your favourite armchair in readiness - you will most probably conclude, with me, that there will be a limited number of folk actually owning these machines, at least those in the £2000-£6000 bracket. And those who do will probably only own ONE!! This means that there aren't going to be as many RESULTS as usual for some of the models and that RATINGS on the basis of Results will not be so easily come by. It would be terrific to have the result of a 30 game Match between the Fidelity 68040 and the Mephisto 68030! But who is going to buy them both to play it for us! What a shame that Fidelity were not willing to meet Mephisto's 68030 at the Portoruz World Championship! It seems clear that no-one else would have had a chance, but a Mephisto-Fidelity head-to-head, as in 1988 when Mephisto won 18-12, would have given us some vital information. Perhaps they'd had enough with 1985/6/7/8? Here is a SUMMARY of the new Computers:-

FIDELITY: the MACH 3 and 4 are the same machines as currently available, for comparison. The expression "E" shows that an IMPROVED programme is incorporated, and ALL these have EXACTLY the same programme, "only" the HARDWARE is different. MACH 3/3B's use one or more 68000 Processors; the MACH 4/4B's use a 68020 or above. Prospective purchasers should check carefully what they want before they buy!. Note the [numbers] in brackets... these will be re-used later to help identify the machines now being listed when they appear in my ESTIMATED RATINGS Section. Please ignore the order, and the fact that some numbers are missing - the numbers shown here relate to those being used by Fidelity..... maybe the gaps are to be filled later?

MACH 3 (current 2265 machine) 68000 @ 16MHz, 64K RAM. Plastic board £399.
 MACH 3B [2], 68000 @ 16MHz, 128K RAM. Elite board £799.
 MACH 3B [5], twin 68000 processors = 24MHz, 192K RAM. Elite board £1099.
 MACH 4, (current 2325 machine) 68020 @ 20MHz, 512K RAM. Plastic board £1299.
 MACH 4B [4], 68000 processor @ 16MHz, 1024K RAM. Elite board £1499.
 MACH 4B [7], 68020 @ 20MHz, 1024K RAM. Elite board £1999.
 MACH 4B [9], 68030 @ 32MHz, 1024K RAM. Elite board £3499.
 MACH 4B [10] 68040 @ 25MHz, 1024K RAM. Elite board £5999.

And here are the MEPHISTO's: the PORTOROSE is the fifth in Richard Lang's World Championship winning series, and is probably his biggest single step-forward yet, according to earliest Test Results (see elsewhere in NS).

PORTOROSE 16, 68000 @ 12MHz, 512K RAM. Exclusive board £1095.
 PORTOROSE 32, 68020 @ 12MHz, 1024K RAM. Exclusive board £1445.
 PORTOROSE SPECIAL, 68030 @ 36MHz, 2048K RAM. Munchen board £5850.

Thanks now to our earlier preparation, we should be able to make a good attempt at "estimating" by mathematical means the PROBABLE Grading for each of the above. PLEASE NOTE that both Manufacturers are saying that they believe their

machine is THE top machine (surely the Title WORLD CHAMPION entitles only one to do that?). My figures are... MINE and no-one else's. I will revise them in future NSHEETS, especially as results for the "base" machines come in, plus any other concrete evidence. I do expect there will be a good number of purchasers of the 68000 and 68020 versions (and lucky Mephisto owners with one of Richard Lang's pre-decessors — only need to upgrade, of course). So this will certainly get some models onto the Official Rating List which will give us a clearer idea of the potential of the "Specials". Until then, at least you'll know I've tried my best to fairly guide prospective purchasers who have a Bank Manager in the closet, or a bigger Access limit than mine! (it's o.k - I'm only jealous!). And if it transpires that I have strayed from reasonable accuracy, then I will of course stand in the corner for a couple of days.

NB 1. The PLYTIME TABLES used earlier are perfectly sound, but I needed a more detailed method to obtain accurate figures for such a wide variation of Hash/RAM usage. Thus the PlyTimes shown below are MACHINE SPECIFIC rather than using a "rounded-up/down" of 6*, 5*, 4* etc. They also allow for Selective Search.

NB 2. The figures do assume a 50-55 Elo improvement between the MACH "basic" and "B". I don't have evidence for this, but respect Dan and Kathe Spracklen's programming powers, and anticipate that it is perfectly likely.

Forecast of 1990 Rating Positions at 3mins per move!

	Maths Rating	Current NS Rating
Meph PORTOROSE SPECIAL. 36MHz on 68030 with 2048K RAM....	2506	
Adj.Speed 90MHz + RAM = 122. PlyTime 4.2. Elo 576 - 370 base		
Fid MACH 4B [10]. 25MHz on 68040 with 1024K RAM.....	2378/2403	
Adj.Speed 125MHz + RAM = 155. PlyTime 5.5. Elo 521 - 318 base		
Meph PORTOROSE 32. 12MHz on 68020 with 1024K RAM.....	2383	
Adj Speed 24MHz + RAM = 34. PlyTime 4. Elo 451 - 370 base		
Fid MACH 4B [9]. 32MHz on 68030 with 1024K RAM.....	2344/2369	
Adj Speed 80MHz + RAM = 103. PlyTime 5.4. Elo 487 - 318 base		
Fid MACH 4B [7]. 20MHz on 68020 with 1024K RAM.....	2281/2316	
Adj Speed 40MHz + RAM = 55. PlyTime 5.2. Elo 434 - 318 base		
Meph PORTOROSE 16. 12MHz on 68000 with 512K RAM.....	2300	2305
Adj Speed 12MHz + RAM = 17. PlyTime 4. Elo 370:Portorose base		
Fid MACH 3B [4]. 16MHz on 68000 with 1024K RAM.....	2221/2246	
Effective Speed 16MHz + RAM = 24. PlyTime 4.8. Elo 364 - 318 base		
Fid MACH 3B [5]. 16MHz on 2* 68000 with 192K RAM.	2216/2241	
Adj Speed 24MHz + RAM = 30. PlyTime 5.6. Elo 359 - 318 base		
Meph ALMERIA 32. 12MHz on 68020 with 1024K RAM.....	2239	2240
Adj Speed 24MHz + RAM = 34. PlyTime 4. Elo 451 - 370 base		
Fid MACH 4. 20MHz on 68020 with 512K RAM.....	2231	2227
Adj Speed 40MHz + RAM = 52. PlyTime 5.4. Elo 419 - 312 base		
Fid MACH 3B [2]. 16MHz on 68000 with 128K RAM.....	2175/2200	
Adj Speed 16MHz + RAM = 20. PlyTime 5.6. Elo +318:"B" base		
Meph ALMERIA 16. 12MHz on 68000 with 512K RAM.....	2158	2158
Adj Speed 12MHz + RAM = 17. PlyTime 4. Elo +370:Almeria base		
Fid MACH 3. 16MHz on 68000 with 64K RAM.....	2124	2124
Adj Speed 16MHz + RAM = 19. PlyTime 5.7. Elo +312:Mach 3/4 base		

If the maths is right (and it should be), then we will see, as in the 1988 versions, that SPEED adds real POWER to all Computers, but WONT always make up for inherent strength gaps between different programmes. Will either of the TOP TWO get an I.M. norm? There will be some very happy owners of these anyway!

Mephisto Academy at the British Champs

Following on from the Report in NS24, here are two more games from the Event, in which the ACADEMY was entered in the Major Open.

The first is the "loss on time" to which I referred in the last Issue. It does show one of the problems which must be faced when entering Computers in Tournaments... i.e. deciding what Time Control to use with the machine. Readers will appreciate I'm sure that there is a continual and unavoidable loss of time TWICE for each move.

[1] After the Computer has chosen its move, ITS internal clock will stop, but there will be a few seconds inevitably taken by the operator in transferring the Computer's move onto the main board before the clock can be "hit".

[2] Comes after the player's move - he will hit the clock as soon as he has made the move on the main board, but it will be still another second or two before the move will have been made on the Computer's board by its operator.

We reckon around 10secs per move are "lost" each move and, to be on the safe side, usually set the Computer's Time Control for 40 moves in 1hour 45. Even this loss of 15mins Computer thinking time per 40 moves can be "dodgy" when we are using different operators each day - apart from Alastair Cargill (hi Alastair!... and thanks for all your hard work!) and myself, the other operators were continually changing every day, and newcomers sometimes ran short of time even allowing 15mins for transfer of moves. Naturally ("Murphy's Law", is what Mike Healey and I call it... sorry Gerald!) this HAD to be the situation on this game when the Computer decided to take 5mins over its 40th when it only had 4mins left! The reason... it was doing extra checking to make sure its Mate in 5 announcement was right! The extra point would have placed it 5= with 7½ from 11 in the Major Open, an amazing result.

White Mephisto ACADEMY
Black M. TAHER

1	e2-e4	c7-c5
2	Ng1-f3	e7-e6
3	d2-d4	c5xd4
4	Nf3xd4	Ng8-f6
5	Nb1-c3	d7-d6
6	Bc1-g5	Bf8-e7
7	Bf1-b5+	Bc8-d7
8	O-O	Bd7xb5
9	Nd4xb5	O-O
10	Bg5xf6	Be7xf6
11	Qd1xd6	Qd8xd6
12	Nb5xd6	Bf6xc3
13	b2xc3	b7-b6
14	f2-f4	e6-e5
15	g2-g3	Nb8-c6
16	Kg1-g2	Ra8-d8
17	Ra1-d1	Rd8-d7
18	Rd1-d3	Rf8-d8
19	Rf1-d1	Kg8-f8
20	Nd6-c4	Kf8-e7
21	f4xe5	b6-b5
22	Rd3xd7+	Rd8xd7
23	Rd1xd7+	Ke7xd7
24	Nc4-d6	b5-b4
25	c3xb4	Nc6xb4
26	Nd6xf7	Nb4xa2
27	Kg2-f3	Na2-b4
28	c2-c3	a7-a5
29	c3xb4	a5-a4
30	Nf7-d6	a4-a3
31	Nd6-b7	a3-a2
32	Nb7-c5+	Kd7-c6
33	Nc5-b3	Kc6-b5
34	e5-e6	Kb5xb4
35	Nb3-a1	Kb4-c3
36	e6-e7	Kc3-b2
37	e7-e8Q	Kb2xa1
38	Qe8-b8	g7-g5
39	g3-g4	h7-h5
40		

8	.	Q	.	.	.	.	.	.	.
7	.	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.	.
5	.	.	.	.	.	p	p	.	.
4	.	.	.	.	P	.	P	.	.
3	.	.	.	.	K	.	.	.	.
2	p	.	.	.	.	.	P	.	.
1	k	.	.	.	.	.	.	.	.
	a	b	c	d	e	f	g	h	

The second game is included as it was the ACADEMY's quickest win in the Tournament. (An oddity: 4 wins were recorded with resignations coming exactly after move 34!).

In this game, I think ACADEMY's 11 Nd5! was perhaps the best single move it made during the 10 days... though 17 Ne7! would make a good "runner-up"!

I would also be interested to know where the player of Black, (Piotr Litwak, 172 BCF), got his opening, which doesn't exactly help his cause. Even so, some of Academy's moves must have come as a shock to both him and our operator!

White *Mephisto* ACADEMY
Black *A. Litwak*

1	e2-e4	e7-e5
2	Ng1-f3	Nb8-c6
3	Bf1-c4	Bf8-e7
4	d2-d4	e5xd4
5	Nf3xd4	Be7-f6
6	Nd4xc6	b7xc6
7	Qd1-h5	Qd8-e7
8	O-O	g7-g6
9	Qh5-a5	d7-d6
10	Nb1-c3	Bf6-d4
11	Nc3-d5	Bd4-b6
12	Nd5xe7	Bb6xa5
13	Ne7xc6	Ba5-b6
14	Bc1-d2	h7-h5
15	Bd2-c3	Rh8-h7
16	Bc4-d5	Bc8-e6
17	Nc6-e7	Be6xd5
18	Ne7xg8	O-O-O
19	Ng8-e7+	

```

8 . . k r . . . .
7 p . p . N p . r
6 . b . p . . p .
5 . . . b . . . p
4 . . . . P . . .
3 . . B . . . .
2 P P P . . P P P
1 R . . . . R K .
  a b c d e f g h

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Reader's CONTRIBUTIONS

Tim Craggs sent me a couple of games played by his Fidelity MACH 2C against his local (Portsmouth) Chess Columnist, name of John H. Jones (183 BCF).

Apparently said J.H.J has been known to make some rather ungenerous remarks about Chess Computers in the past, so Tim challenged him to a Match against one of the newer and stronger models.

Unfortunately J.H.J caught the Mach 2C in an opening trap in the first game and had won Queen for Rook by move 11! It appeared he was proving his point, but the MACH 2C played quite resourcefully after that, and lasted till move 54 to its credit.

The following week-end the two played a re-match, this time with the neighbourhood Chess Columnist as Black. "The game was on a knife-edge" (says Tim!) "for a long while, before John forced a slight advantage which he nursed through to victory. In fact, John was VERY impressed with the machine in this game and said it was about the toughest game he's had this year". (So much for chess in the Portsmouth area!... just joking, Eric). Actually J.H.J was a 220 BCF player at his best, and feels he is playing in the mid 190's at the present time. Incidentally, the annotations which follow are also by John.. thanks!

White *Fidelity* MACH 2C
Black *J H JONES* (183-195 BCF!)

1	e4	d5
2	exd5	Nf6
3	d4	Nxd5
4	c4	Nb6

[4 - Nf6 is considered safer but, in my opinion, White gets a space advantage which Black has more difficulty in overcoming]

5	Nf3	g6
6	Bd3?	-

[6 h3!, 6 Nc3, or 6 Be2 are all superior moves. At d3 the bishop masks

43 a4 Bh4
 44 Rc7+ Kg6
 45 Rc6+ Kh5
 46 Rc7 h6!
 [Now find a check!]
 47 Rc4 Nf1+
 48 Kh1 Bg3
 [I have been aiming this for h2, and am nearly there!]
 49 Rc2 Nd2
 [But now I changed my mind. 49 - Bh2
 50 g4+ fxg3 51 Rg2 Ne3 52 Rxb2 gxb2
 seems slower]
 50 Rxd2 -
 [Necessary, or Black can choose from
 50 - Bf2, and 50 - Ne4]
 50 - Rxd2
 51 a5 Ra2
 52 a6 Rxa6
 53 h4 -
 [I suppose I might miss stalemate!]
 53 - Ra2
 54 Nf3 Ra1+
 55 Ng1 Bf2
 56 g4+ Kxg4
 57 Kg2 Bxg1
 58 h5 f3+
 59 Kh1 Be3+
 60 Kh2 Bf4 mate [0-1]

A BLAST from the PAST

Tony Leech has sent me the following game from a SIMULTANEOUS in 1982. The Computer was the GREAT GAMES MACHINE with the GRUENFELD & MORPHY cartridges, the Player was MILES COWLING (then 207 BCF).

White **Miles COWLING**
 Black **GREAT GAMES MACHINE + MODULES**

1 e4 Nf6 2 e5 Nd5 3 c4 Nb6 4 d4 d6
 5 f4 dxe 6 fxe Nc6 7 Be3 Bf5 8 Nc3
 e6 9 Nf3 Be7 10 Bd3 - [only now does
 Black go out of its Book and start to
 play some Chess of its own] - Bg4 11
 0-0 Nxd4 12 Bxd4 Bxf3 13 Qxf3 Qxd4+
 [Black wins a pawn, but soon succumbs
 to a King-side attack] 14 Kh1 0-0 15
 Rael Rad8 16 Bxh7+! Kxh7 17 Qh5+ Kg8
 18 Ne4 Qxb2? 19 Nf6+ gxf6 20 Qg4+ Kh8
 21 Re3 - and it's all over, so Tony
 resigned for the Computer.

Meph MM4 v MM2

Paul Shimmis sent me info. of his Match between the above - quite some time ago I must admit. The final score (at 1min per move) was 12 1/2 - 3 1/2 for the MM4, and the following was the shortest game. It involves an opening little-used by Chess Computers.

White **Mephisto MM4**
 Black **Mephisto MM2**

1 e4 Nc6 2 d4 d5 3 Nc3 dxe 4 d5 Nb8
 5 f3 exf 6 Qxf3 Nf6 7 Bf4 c6 8 Qdxc
 Nxc6 9 Bb5 Bd7 10 0-0-0 Qc8 11 Nd5
 Nxd5 12 Rxd5 Be6 13 Rc5 Kd7? 14 Nh3
 Bxh3 15 Rd1+ Ke8 16 Rxc6 and 1-0

Results from EXPOLARIS Open in Sweden

Goran Brottling kindly sent me the final Results from another important Tournament involving Computers against Humans. After the Mephisto ALMERIA coming out on top in the previous Swedish (Championship) Event with 2281, this time it was the Fidelity MACH 4's turn, which also just enables it to get back to the top of the vs. Human list! These two keep swapping places there, and are both well ahead of anything else with the exception of one or two turbo-boosted units (and the very latest Mephisto and Fidelity machines which are still to be entered under Tournament conditions, but which are sure to score higher - see NS info elsewhere).

The Computer results were:-

Fidelity 68020 MACH 4	6/11 = 2252
Mephisto ACADEMY	5 1/2 = 2120
Mephisto ALMERIA 32	5 = 1978
Kasparov RENAISSANCE D/10 3 1/2	= 1686

The Swedish workers are now comparing the Results from various Countries over the last 2 years and expect to re-issue their Rating List at a Level based only on these. It is likely to mean a drop of 75 Elo points or thereabouts. Goran

comments that, "there is a 'time-effect' with people more used to play against Computers now making it much harder for them to get a high rating". This echoes comments made in recent Issues of the NEWS SHEET, but Readers will know that my system involves one or two techniques so that these adjustments tend to take care of themselves from Issue to Issue. Even so, it is important that I keep on top of this situation and I shall certainly take a close look at the Swedish findings in case further adjustments do prove to be needed. My Ratings are already lower than those shown by ALL British Distributors - considerably lower than some!

There is only room for a few games, so I have simply selected the QUICKEST or BEST WINS by each machine!

White *Fidelity NACH 4*
Black *Hakan Winfridsson* [1809]

1 d4 d5 2 c4 dxc4 3 Nf3 Nf6 4 e3 e6
5 Bxc4 c5 6 O-O a6 7 Qe2 b5 8 Bb3
Bb7 9 Rd1 Nbd7 10 e4 cxd4 11 e5 Nd5
12 Rxd4 Bc5 13 Rg4 g6 14 Bh6 Qc7 15
Nbd2 Rc8 16 Rd1 Be7 17 Rd4 Bc5 18
Ne4 Qa5 19 Bxd5 Bxd5 20 Nxc5 Nxc5 21
b4 and 1-0

White *Frantisek BLATNY* [2290]
Black *Fidelity NACH 4*

1 e4 e5 2 Nf3 Nc6 3 Bb5 a6 4 Ba4 Nf6
5 Qe2 Be7 6 c3 d6 7 O-O O-O 8 d4 Bd7
9 d5 Na7 10 Bc2 c6 11 c4 cxd5 12
cxd5 Nb5 13 a4 Nd4 14 Nxd4 exd4 15
Nd2 Qb6 16 Bd3 Qc5 17 b3 Qc3 18 Ba3
Nh5 19 g3 Bg4 20 f3 Bh3 21 Rfc1 Qa5
22 Nc4 Qd8 23 a5 Rc8 24 Qf2 f5 25
Qxd4 fxe4 26 Qxe4 g6 27 Nb6 Rxc1+ 28
Rxc1 Bg5 29 Re1 Bd2 30 Nc4 Bxe1 31
Qxe1 Rxf3 32 Be2 Qe8 33 Qd1 Rf8 34
Bxd6 Qe4 and 0-1

White *Sten Sjodahl* [1896]
Black *Nephisto ALMERIA 32*

1 e4 c6 2 d4 d5 3 Nc3 dxe4 4 f3 exf3
5 Nxf3 e6 6 Bc4 Bb4 7 O-O Bxc3 8

bxc3 Nd7 9 Qe2 Ngf6 10 Bg5 h6 11 Bh4
Qa5 12 Rael O-O 13 Qd3 Nd5 14 Bxd5
cxd5 15 Nd2 Nb6 16 Re3 Qxa2 17 Rg3
f5 18 Nb3 g5 19 Qe2 Kf7 20 Bxg5 hxg5
21 Rxg5 Rh8 22 Qe5 Rg8 23 Rh5 Qxc2
24 Rh7+ Ke8 25 g3 f4 26 Rh6 Qf5 27
Qd6 f3 28 Nc5 Nc4 29 Qc7 Ne3 30 Rh7
f2+ 31 Rxf2 Qb1+ and 0-1

White *Johan KRETZ* [2201]
Black *Nephisto ACADEMY*

The tale of two knights!

1 d4 d5 2 c4 dxc4 3 Nf3 Nf6 4 Nc3 a6
5 a4 Nc6 6 e4 Bg4 7 e5 Bxf3 8 gxf3
Nd5 9 Be3 Na5 10 Qc2 e6 11 Bg2 Nb4
12 Qe2 Nd3+ 13 Kf1 Nb3 14 Rd1 Nxd4
15 Bxd4 Qxd4 16 f4 Qb6 17 Be4 Rd8 18
a5 Qb3 19 Qf3 c6 20 Bxc6+ bxc6 21
Qxc6+ Rd7 22 Qc8+ Ke7 23 f5 exf5 24
Rd2 Qb7 25 Qxc4 Qxh1+ 26 Ke2 Qe1+ and
0-1

White *Nephisto ACADEMY*
Black *Bertil WESTIN* [2176]

1 c4 e5 2 Nc3 Nc6 3 Nf3 f5 4 d4 e4
5 Nd2 Nf6 6 e3 Be7 7 b3 O-O 8 Bb2 d6
9 Be2 Kh8 10 O-O Qe8 11 Nb5 Bd8 12
d5 Ne5 13 a3 a6 14 Nc3 c6 15 b4 cxd5
16 Nxd5 Nxd5 17 cxd5 b5 18 Rc1 Bb7
19 Qb3 Qf7 20 a4 Bxd5 21 Qc2 bxa4 22
Qxa4 Bf6 23 Bxe5 Bxe5 24 Bxa6 f4 25
Qb5 Rfb8 26 Qa5 Bb7 27 Rc7 Qg6 28
Rxb7 Rxb7 29 Bxb7 Rxa5 30 bxa5 Qf7
31 a6 d5 32 Rb1 Bb8 33 Rc1 g5 34
Rc8+ Kg7 35 Rxb8 fxe3 36 fxe3 Qc7 37
a7 Qb6 38 a8=Q Qxe3+ 39 Kf1 Qd3+ 40
Ke1 Qe3+ 41 Kd1 Qg1+ 42 Ke2 Qxg2+ 43
Ke1 e3 44 Rg8+ Kh6 45 Qf8+ Kh5 46
Qf7+ and 1-0

White *A Asmundsson* [1544]
Black *Kasparov RENAISSANCE D/10*

1 e4 e6 2 d4 d5 3 Nc3 Bb4 4 e5 Qd7
5 Bd2 Ne7 6 a3 Ba5 7 Bd3 c5 8 dxc5
Nbc6 9 f4 Bg6 10 Nb5 Nxf4 11 Nd6+
Kf8 12 Bxa5 Nxa5 13 Qd2 Nxd3+ 14
cxd3 Nb3 15 Qd1 Nxa1 16 Qxa1 Qa4 17
Nf3 Qc2 18 O-O Qxc5+ 19 d4 Qb6 20 b4
Bd7 21 Ng5 f5 22 Rf4 h6 23 Rh4 Rg8
24 Ngf7 Be8 25 Nxh6 gxh6 26 Rxh6 Bg6
27 g4 Ke7 28 Qc1 Qxd4+ and 0-1

RATING LIST (c) NEWS SHEET 25									
BCF	Computer	Elo	October	1989	Games	Pos	Human	Games	
213	MEPH PORTOROSE 16	2304	34	138	1	2188	152		
205	MEPH ALMERIA 32	2237	14	772	2	2200	117		
203	FID 68020 MACH 4	2221	17	529	3	2031	57		
195	MEPH ROMA 32	2156	14	848	4	2135	26		
195	MEPH ALMERIA 16	2156	15	707	5	2080	197		
191	MEPH DALLAS 32	2128	13	987	6	2114	193		
191	FID 68000 MACH 3	2125	10	1757	7	2000	50		
187	MEPH DALLAS 16	2092	11	1382	8	1974	26		
185	NOV SUPER FORTE-EXP B/6	2082	29	188	9	2060	77		
185	MEPH MONDIAL 68000 XL	2080	19	443	10	1975	54		
185	MEPH ROMA 16	2078	11	1431	11	2068	74		
184	MEPH ACADEMY	2073	15	718	12	1939	39		
184	KASP RENAISSANCE D/B	2069	31	162	13	2074	8		
184	MEPH COLLEGE-SUPMOND 2	2069	37	119	14	2066	127		
181	FID 68000 MACH 20	2051	9	1926	15	2041	169		
181	MEPH MEGA 4	2047	10	1481	16	2068	182		
181	MEPH AMSTERDAM	2045	8	7247	17	1968	25		
178	FID 68000 MACH 28	2024	23	301	18	2020	82		
177	MEPH MMA/5	2017	9	1957	19	2040	176		
177	NOV SUPER FORTE-EXP A/6	2014	13	951	20	1848	8		
175	CONCH PLY-VICTORIA	1998	45	80	21	2046	10		
174	MEPH MONTE CARLO	1989	30	181	22	2033	25		
174	PSION ATARI/IBM	1988	12	1208	23	1918	35		
173	KASP GAL ANALYST/8	1984	24	276	24	1930	121		
171	FID 68000 MACH 24	1968	22	330	25	1836	29		
170	CXG SPHINX	1956	14	767	26	2036	22		
170	NOV SUP FORTE-EXP A/5	1956	11	1237	27	1870	7		
169	NOV EXPERT/6	1949	27	222	28	2052	62		
168	FID 68000 CLUB B	1947	11	1324	29	1862	80		
168	NOV EXPERT/5	1943	25	247	30				
166	FID AVANT GARDE/5	1930	10	1574	31				
166	KASP STRATUS/CORDNA	1929	11	1219	32				
166	NOV FORTE B	1929	9	1804	33				
166	FID PAR E/ELITE 2100	1927	9	2160	34				
166	MEPH REBEL	1925	10	1523	35				
165	NOV FORTE A	1916	9	2036	36				
163	KASP GAL MAESTRO/6	1905	13	934	37				
163	CONCH PLYMATE/5.5	1904	10	1502	38				
163	MEPH SUPER MONDIAL	1900	13	974	39				
162	KASP GAL MAESTRO/4	1898	72	31	40				

161	KASP TURBO KING	1899	35	132	41	1910	51
161	NOV EXPERT/4	1888	14	873	42	1975	43
160	FID EXCELLENCE/4	1892	11	1311	43		
160	CONCHESS/6	1882	40	98	44	2184	1
160	CONCHESS PLYMATE/4	1879	21	362	45	2027	6
160	SCI TURBO KASP/4	1877	18	508	46	1959	52
159	KASP SIMULTANO	1874	21	376	47	1742	21
158	MEPH MM2	1863	16	527	48	1776	8
158	FID ELEGANCE	1861	15	680	49	1872	40
157	SCI TURBOSTAR 432	1859	11	1294	50	1896	61
157	FID EXCELLENCE/3	1858	11	1337	51	1881	46
156	FID ELITE C	1844	32	160	52	1869	11
155	PSION 1/8	1840	35	133	53		
154	CONCHESS/4	1830	18	504	54	1937	23
153	NOV SUPER CONST	1826	7	2932	55	1858	264
153	FID EXCEL DISPLAY/3	1823	34	135	56		
152	MEPH BLITZ	1814	24	276	57	1962	6
148	FID ELITE A	1780	35	131	58	1779	20
147	MEPH EUROPA/MARCO POLO	1777	35	129	59		
146	MEPH EXCL 5/12	1768	27	212	60	1941	27
146	SCI SUPERSTAR 36K	1767	14	839	61		
146	FID PRESTIGE	1765	15	695	62	1758	131
145	FID SENSORY 12	1759	13	974	63	1805	7
144	NOV QUATRO	1750	17	585	64		
144	CONCHESS/2	1748	13	908	65	1786	11
143	NOV PRIMO/VIP	1744	25	254	66		
143	PSION EL	1744	48	70	67		
143	NOV CONST/3.6	1740	14	803	68	1861	17

TOP COMPUTER RATINGS VS HUMANS, NEWS SHEET 25

BCF	Computer	Elo	Games	Pos
200	FID 68020 MACH 4	2700	117	1
197	MEPH ALMERIA 32	2188	152	2
194	NOV SUPER EXP-FORTE/B*	2152	32	3
194	NOVAG SUPERS+TURBO*	2149	44	4
193	MEPH MEGA 4+TURBO*	2143	110	5
192	MEPH ALMERIA 16	2135	26	6
189	FID 68000 MACH 3	2114	193	7
189	MEPH MMA+TURBO*	2113	36	8
186	CXG SPHINX+TURBO*	2090	8	9
185	MEPH DALLAS 32	2080	197	10
184	MEPH COLLEGE-SUPMOND 2	2074	8	11
184	MEPH ACADEMY	2068	74	12
183	MEPH AMSTERDAM	2068	182	13

bye for now,
Eric