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EDITORIAL

Two major events took place during Fall 1983 in the world of computer chess: The Budapest World Championship for chess microcomputers and the A.C.M. tournament in New York. Both events offered great interest from the social standpoint, since they provided a unique opportunity for people related to the development of chess programs to meet with each other and exchange findings and ideas. Nevertheless, we feel that we have to take issue here with one particular aspect of these tournaments: The specific way in which they award the title of World Champion to a given machine.

To proclaim a chess computer the strongest in the world after a 7 or 5 round Swiss tournament, where the luck factor is unquestionably important, does not seem realistic and is possibly not even serious, as the following facts show:

Elite A/S-B shares with Prestige -B the same program, the only difference being that Prestige runs at 4 Mhz as opposed to 3 Mhz for Elite A/S. Nevertheless, the latter won the Budapest tournament one and one half points ahead of Prestige. Immediately after, Fidelity Electronics had to decide which machine was to be entered at the A.C.M. tournament (only one computer was allowed per manufacturer). With good criteria, they discarded the new "World Champion" in order to compete with their strongest machine: the new Prestige, the same one that finished fifth at Budapest, well behind Elite A/S.

On the other hand, at the A.C.M. Mephisto X tied with Belle in the final score: three points each. Now, nobody in his right mind can really believe that Mephisto X Experimental, as good as it is, could even be considered close to Belle in strength. Then, what happened? A five round Swiss tournament.

I am well aware of the difficulties, maybe impossibilities, of organizing a tournament large enough to be capable of providing accurate rankings. Because of practical limitations, events such as the ones we are discussing can only give us an approximate idea about the strength of the different participants, but by no means can they provide an accurate ranking, let alone award the World Championship. After all, what would the international chess community think if FIDE did away with the zonals, interzonals, candidate matches and the world championship match, proclaiming World Champion the winner of a seven round robin Swiss tournament? It would be unthinkable and nobody would take that seriously. Neither should you.

Other than that, 1983 has not seen significantly stronger chess computers reach the market. Last years best, Prestige, is today second only to Prestige-B, and by the short margin of 30 points. What we have seen, instead, is a noticeably improved performance/price ratio offered by machines like Constellation, Sensory 9-B and even Elite A/S. I don't know if this is the result of a price war a la Commodore-Atari-Texas Instruments, but in the meantime the prospective buyer is in a better than ever position. Enjoy it.

THE TOURNAMENTS

Three computer tournaments, played at a time control of 40 moves in two hours, took place here during 1983. Selection and procedure remained the same as in 1982; the machines that finished in first and second place in the previous tournament played in the next one, along with new products received in the meantime. An exception had to be made in the Fall '83 tournament, because Prestige and Elite A/S, winners of the Summer '83, were going to be updated with a new program. Prestige -B, the same computer that participated in the Budapest World Championship, was received in time to play, while Elite A/S-B's production has been delayed, leaving Constellation as the highest ranked current-production chess computer from the previous tournament.

After all the matches played this year, some facts seem of special interest:

1. Individual matches between two chess computers are not necessarily indicative of their playing strength, ten games not being a sample big enough to be statistically accurate. For instance, while two computers (Elite A/S and Super 9) have the same programs, the one with the higher clock speed (Elite A/S) lost 4 to 6 to the slower and therefore weaker Super 9. More games are needed for an accurate ranking, which means that only global results in a given tournament should be considered as relevant.
2. If we take U.S.C.F. ratings given to chess computers after a significant number of games played against human opponents and we compare them to ratings given in computer against computer tournaments, two major conclusions emerge:
   A. Both rankings are the same, meaning that the winner in a computer tournament will do better than the others in a human tournament; the second one, better than its lower ranked electronic opponent, and so on.
   B. Ratings given after computer tournaments tend to magnify their relative differences in rated points, and tend to do so, roughly, by a factor of two. In other words: If, after a computer tournament, computer A is rated 200 points higher than computer B, this difference will be halved in U.S.C.F. ratings after computer against human tournaments. This phenomenon could be attributed to the fact that chess computers, as essentially tactical devices, tend to exaggerate, while playing one another, improvements in their tactical abilities, improvements that would prove less significant against the more balanced positional/tactical human players.

In conclusion, rankings after computer tournaments are entirely valid, but relative differences in rated points should be halved. Applying the straight ELO formula, ratings would be:

Prestige -B	2048
Prestige	1992
Elite A/S	1919
Constellation	1872
Sensory 9-B	1867
Elite	1844
Super 9	1816
Superstar	1781
Mephisto II	1744
Steinitz	1727
Sensory 9	1715
Mephisto III	1705
Conchess	1629
Philidor	1608
Champion	1509
Scisys MK V	1584
Master Trio	1546
Savant	1543

Assuming that the above ratings exaggerate relative differences by a factor of two, the corrected and accurate ones will be as follows:

Prestige -B	1904
Prestige	1875
Elite A/S	1839
Constellation	1816
Sensory 9 -B	1813
Elite	1801
Super 9	1788
Superstar	1770
Mephisto II	1751
Steinitz	1743
Sensory 9	1737
Mephisto III	1732
Conchess	1694
Philidor	1683
Champion	1674
Scisys MK V	1671
Master Trio	1653
Savant	1651

tournament Average

SPRING '83 (40/2)

	Prestige	Constellation	Steinitz	Sensory 9	Mephisto II	Philidor	Total	%
Prestige	-	6	9	9	7	10	41	82
Constellation	4	-	7	5	7½	8	31½	63
Steinitz	1	3	-	6½	6½	5	22	44
Sensory 9	1	5	3½	-	6	5½	21	42
Mephisto II	3	2½	3½	4	-	5	18	36
Philidor	0	2	5	4½	5	-	16½	33

SUMMER '83 (40/2)

	Prestige	Elite A/S	Constellation	Super 9	Total	%
Prestige	-	6	6	6½	18½	61.7
Elite A/S	4	-	8	4	16	53.3
Constellation	4	2	-	8½	14½	48.3
Super 9	3½	6	1½	-	11	36.7

SPEED SUMMER '83 (5")

	Constellation	Prestige	Elite A/S	Super 9	Total
Constellation	-	5	6	7	18
Prestige	5	-	5½	6½	17
Elite A/S	4	4½	-	6	14½
Super 9	3	3½	4	-	10½

FALL '83 (40/2)

	Prestige-B	Constellation	Sensory 9-B	Superstar	Mephisto III	Total	%
Prestige -B	-	9	6	7½	3½	26	76.5
Constellation	1	-	6	7	3½	17½	51.5
Sensory 9-B	4	4	-	6	2½	16½	48.5
Superstar	2½	3	4	-	2	11½	33.8
Mephisto III (1)	½	½	1½	2	-	4½	28.1

(1) Due to limitations in its provisional opening book, Mephisto III was able to play only 4 games matches.

Introducing Donald Michie

To anyone who followed developments in machine intelligence and computer chess over the past two decades Donald Michie needs no introduction. I am much honored to have been asked to introduce Professor Michie. I am fortunate to have met Professor Michie some ten years ago and to have been able to collaborate on research under him at the Machine Intelligence Research Unit at the University of Edinburgh, Scotland from 1976 to 1982.

Professor Michie's interest in the possibility of programming human knowledge into machines began at Bletchley Park, England, where he joined the code-breaking establishment. It was there that he met the mathematicians A.M. Turing and I.J. Good, and the chess masters C.H.O.D. Alexander and Harry Golembek. Since that time Michie has been intrigued by the problems of designing an intelligent chess machine and consequently I doubt that anyone has published more articles on the subject. He holds an MA, DPhil, and DSc from Oxford University in Biological Sciences. After the war Michie pursued a career in experimental genetics and immunology before returning to machine intelligence in the early 1960's.

In 1967 he was elected to a Personal Chair of Machine Intelligence in the University of Edinburgh where he has been a key motivating force towards the establishment of the University's worldwide reputation in this area. In 1968 Professor Michie made the famous bet with David Levy which spurred on research in computer chess in the 1970's. He is editor-in-chief of the 10-volume Machine Intelligence series, author of numerous books and adjunct Professor of Computer Science at the University of Illinois, Urbana-Champaign. Recently Professor Michie has established the A.M. Turing Institute, a center of research in Britain supported by government and industry.

I'm sure that you'll find what he has to say about computer chess both enlightening and entertaining.

Danny Kopec, November 1983

The interview with Donald Michie is one of a set of interviews which will be used in the research on the relations between Computer Chess, the World of Chess, and Artificial Intelligence. The research group consists of S.J. Doorman, A.D. de Groot, H.J. van den Herik, H.J. M. Lombaers and others. The interview was conducted by H.J. van den Herik after the 3rd Conference on Advances in Computer Chess, London, 10th April, 1981.

Computer Chess
Today and Tomorrow

interview with Donald Michie

About the author:

Date of birth:	: 11th November, 1923.
Education:	: Masters degree from Oxford University. : Doctor of Philosophy from Oxford University. : Doctor of Science from Oxford University. : Fellow of the London Zoological Society. : Fellow of the British Computer Society. : Fellow of the Royal Society of Edinburgh.
Profession	: Professor at the University of Edinburgh (Department of Machine Intelligence).
Working with chess programming	: From age of nineteen.
Familiarity with chess	: Plays chess, not well.
Strength of play	: Not rated, but around 1550 - 1600.

Why did you become interested in computer chess?

"When I was nineteen I was working at Bletchley Park, a code-breaking establishment during the war, and my close colleagues and friends included A.M. Turing, I.J. Good, Harry Golombek, Peter Hilton. Particularly Turing, Good and I had many discussions for several years on the design of chess machines."

The Future of Chess.

What do you think of the playing strength of the computer in the future?

"I think that we will have a world champion match with a computer program in 1990, plus or minus two years."

Do you think that the playing strength of the computer will still rise?

"Yes."

How far do you think it will rise?

"That is impossible to say, because we don't know how dense game-theoretical errors are in grandmaster play. They may be very dense. It is possible that every match between grandmasters contains at least ten losing moves; we don't know."

Do you think that the game can be solved, meaning that we can always tell whether it is a draw or a win for white?

"You mean not theoretically but with strong evidence? You can always argue about evidence; many people argue that the opening position is a draw simply because wins and loses are approximately equally balanced. That is just vague talk, there is nothing scientific about it."

Do you think the game of chess will ever be completely solved?

"I have no comment on that, simply because we don't know what the computational complexity of the game is. If we knew that we could make a sensible prediction, but we don't know it. It might be a technically "hard" problem, "hard" in the sense that however many resources we devoted to it, however fast computers become subject to the laws of physics, however clever people become the game will never be fully analyzed. It is perfectly possible that it is a hard problem in that technical sense. There are numerous combinatorial problems which have that property. Possibly chess is one of them."

So you don't think it will ever be solved perfectly?

"I didn't say that. I said there are two possibilities, and nobody is in a position to say whether the computational complexity of chess is above or below this particular threshold."

Do you think that after the computer has passed the grandmaster level, we will have difficulties in making clear statements about how strong the computer really is.

"You can extrapolate the ELO-system, up to ratings of 4000 if you like. That will probably happen."

What do you think of this development for the chess world?

"It is similar to the development of powerful computational meteorology for the world of professional meteorologists."

Do you think chess players will have respect for the chess computer?

"Great respect."

Do you have respect for its playing strength already now?

"Of course. My rating is only about 1600. I am obliged to have respect for a program which plays at 2200.

The Acceptance of Computer Chess.

How do you see the development of the chess computer in the chess world? How will the grandmasters react?

"With great interest, as they are already beginning to do. As the level of machine play improves, so the interest of the chess masters will increase."

What kind of role do you think the computers should be allowed to play in the chess world?

"The present convention whereby chess computers can be admitted to official chess tournaments is a good convention and everybody should live with that convention, until some very strong reason or feeling develops against it. Then I imagine, when computers are better than the world champion, two kinds of tournaments will develop; open and closed."

Should it be allowed for the computer to play in a normal invitational tournament?

"Yes, and it is allowed today. Recently Cray Blitz scored 5-0 in the Mississippi State Championship".

Also at top level?

"Yes, certainly."

Should they be allowed to play in national team championships?

"Certainly."

And in the Olympiads?

"No reason why not."

Should you be allowed to enter a program for the Zonal tournaments?

"Again; why not? It is a question of the feeling among the professionals. So long as the professionals have a welcoming attitude this will be permitted."

You don't think that the professionals would see this as a threat to their existence as professional chessplayers?

"Not for a long time, because one of the impacts will be to improve the standard of human chess. Only when the majority of prizes are being won by machines will the humans begin to feel that there should be some apartheid."

But if you say yes, then a weak country could come up with some chess-computers for the Olympiad.

"Yes, good idea. I hope that is allowed; it would be interesting."

Can you anticipate the point of view of FIDE in this question?

"As I have said I believe that all chess committees and organizations at every level will continue to be, on balance, welcoming until the machines begin to take a majority of prizes. Then people will feel that this is becoming boring for the humans and will separate them into human and machine tournaments."

Using Computers for Preparation Analysis and so on.

You could also use a computer for preparation analysis.

"Yes; in preparation analysis at present you are allowed to use books. You are also allowed to use grandmasters as sources. There seems no reason why you should not be allowed to use computers."

Then there is another point and that is during the adjournment of a game.

"The same principles hold and in fact a computer program has already been used during an adjournment, by Bronstein."

But Donskoy told me that the computer was never really used.

"There was an error in the data-base, but it put him on the right line. He had the sense not to follow the line through to disaster."

So, you would say that a computer could be used for theoretical reviews and theoretical articles?

"Yes; also you could have computers to generate compositions."

Could you also enter a computer for a problem-solving competition?

"I would expect people to prefer to exclude computers from those matches, since the whole spirit is a test of human power."

There are also these kinds of competition where you solve the problem at home and send in the solution.

"There you have no choice but to allow the computer to be used, because there is no way of preventing it."

What is your opinion about correspondence chess in this case?

"The same applies."

If we now summarize your opinions, in which fields would you say no against the computer?

"Probably they will be excluding computers in problem-solving competitions, but they will probably also invent a new class of tournament; namely man-machine consultation chess which is an interesting one. It is like motorcycle racing for example, where you have a man-machine combination. It is potentially a much better challenge to computer science and to Artificial Intelligence to build a good support-vehicle for the human master than the present type of computer chess. This, although it is entertaining, is largely a waste of good brain-power."

But this co-operation that you are talking about only lasts for a few years; when the machine outplays the human brain it has no use of co-operation.

"After the 1990's, yes that is true. It is possible that these combinations would be short-lived. But of course it is always possible to place restrictions and give a ration to the CPU-time of the machine partner in these consultation tournaments. This will probably be done, because it has good precedent in the case of motorcycle racing where you say only for 200 c.c. et cetera. There you put restrictions on the engine power of the vehicle in various man-machine combinations; or you may have hang-gliding competitions where nobody is allowed to have a two-stroke motor on his hang-glider."

Choice of Chess as a Profession.

Do you have any idea why a chessplayer chooses chess as his profession?

"For the same reason that a ballet-dancer chooses ballet-dancing as a profession."

But that is maybe not the same reason as why a waiter chooses his profession?

"No, of course not, that is a service profession, not a performance profession. There are professions which are for prima donnas."

And you consider chess as one of those?

"Of course, like all the best things in life, like art, like literature and poetry and boxing, there is no end to it."

If the chess computer becomes stronger, you think it will popularize chess? It won't make it disappear?

"No, certainly not disappear, it will enrich chess; it will greatly improve chess knowledge."

Do you think that the chess computer could attract more people to choose chess for a profession?

"Indirectly, because by stimulating increased public intrest in chess it will generate improved funding opportunities and prize money et cetera and increase the number of young people coming into the profession. So, the effect will be beneficial."

Possible Influence on the Chessplayer.

Do you think there will be co-operation between chessplayers and chess computers?

"Definitely, yes, self-training. Then we will see some really interesting chess programming which is aimed not at creating a free-standing program to play good chess, but at giving powerful tutorial support with a user-friendly interface to a chess master. That will make far more demand on Artificial Intelligence techniques than the present tournament programs do.

"Another challenge to machine intelligence work is the development of programs which are capable of making good and intelligent commentaries on games. That is a much more interesting challenge than that of developing a machine which plays good chess."

In that case, do you think the level of human chess play will rise?

"Very much so."

Do you think there will be a competition after 1990?

"No, I think that my prediction of 1990 is about right, but only if human rating stays the same, so that the world champion will then still be about 2750. But it is quite possible that the human ratings will begin to slide upwards from the competitions with the machine, and also from the source of tutorial instruction which will become possible from intelligent programs. So that by the time that the world championship is won by a machine it could be in the year 1994 and the human who is defeated might have a rating of 3000.

Possible Input of Chess-players into Computer Chess.

Do you think that young chess-players will get so interested in computer chess that they will try to learn more about program techniques or about evaluation functions et cetera?

"Computer chess is definitely playing an important role in popularising computer-science studies in the young. There is a useful contribution being made from each discipline in helping to attract talent into the other. It helps to make young people interested in computers. Computer chess is also helping in making them interested in playing chess."

Do you think that the programmer of a chess program has to be a chess-player himself?

"No, he has to have access to chess knowledge, but it doesn't have to be in the same head."

With access, do you mean that a book would be O.K. too?

"Yes, it would in theory be possible for a programmer knowing very little about chess to develop a good chess program if he developed a sufficiently good inductive learning algorithm."

I suppose you know the statement of Dreyfus on this question. Could you give an argument against him?

"He said that no computer could play even amateur chess. Then he played against a computer and he lost. So that seems to answer that particular silly remark. Perhaps you had some other silly remark in mind?

He has also said that a chess program could never be intelligent, because you could always discern a chess program by its play (Creative Computing, 1980).

"That is quite untrue. If a program had good query facilities you could also test its understanding of its own play by asking it questions. That is the normal method that we use to decide whether a source of knowledge possesses intelligence or not, whether we are questioning another human being or whether we are questioning an AI program. I do not see why this method should suddenly be suspended in the case of programs in which Dr. Dreyfus is interested."

Do you think a computer can pass a complete Turing test, with an unrestricted domain?

"Not now, obviously. All one can say is that the Turing test has already been passed by some programs in very small, restricted domains, that methods exist for extending the scope of such programs so that the distant possibility which you describe is one to which the technology each year becomes closer. Whether it will attain that final state of totally universal intelligence is a matter of speculation. One would have to start talking about time-scales. Are you saying "during the lifetime of the solar system"; are you saying "during the next five years"; are you saying "before the year 10,080"?

If we take the next 500 years?

"As far as the next five hundred years are concerned the important question is a quite different one. Since, among people, specialized assistants are the most useful assistants, where would the motivation ever come from to build such a universal intelligence? And if there is no motivation to construct an artefact then it will not be done. Not because of technological limitations; it has to do with social motivation. So, I do not expect it to be done, but I do expect it to become possible within that time-scale."

Which do you think will be the differences in chess thinking between man and machine, if we compare with the program which beat the world champion?

"That program will not resemble human thinking at all; it will be very much brute force. Perhaps not quite as much brute force as Belle, but something similar."

Could you give more differences between the thinking of that program and the thinking of man?

"There are salient differences in two respects. One is that it will be search-intensive, using very few and poorly developed descriptive concepts. I expect that the mainparadigm will still be the Turing-Shannon paradigm; brute force, alpha-beta search with an evaluation function with all sorts of special electronic circuitry to perform things in parallel. But nothing corresponding to the way a master thinks about chess."

Can you still see any similarities?

"There are similarities, but they are not very interesting similarities. Like the similarity between the human intellect and the hand-held calculating machine. You can point out

that they both do arithmetic and for some of the operations they do it in the same way, otherwise not. These are rather minor similarities, whereas the differences between a human being and a handheld calculator are huge. Just like the differences between a human being and this 1990 chess computer."

After this 1990, do you think the machines will change from brute-force to more human-like forms.

"Ultimately, but at present there is almost only one kind of computer chess program in the world apart from some end-game programs in research laboratories. But by 1990 there will be dozens of different types of chess programs. Only one type will be the tournament program. There will be chess learning and teaching programs. There will be various kinds of research programs. There will be chess commentary programs, composition solvers, retro-analysis programs etc. etc. And so the machine intelligent motivation will largely be focussed on introducing intelligence into these other kinds of programs and not into the pure tournament programs."

Earlier you have also spoken about a composition-making program. Would you call that a kind of creativity?

"A kind of creativity, yes."

Comparable to human creativity?

"Comparable to the creativity of people who compose studies. I think creativity is the least valuable of all human intellectual gifts, because creativity by itself is nothing but a nuisance. If you were offered the opportunity to employ somebody and the only thing that they had was creativity, but they had no common sense, they had no sense of proportion, no other intellectual gifts, you would pay a lot of money to avoid employing a creative person. And in general experienced administrators avoid employing creative people even if they have the other gifts.

"Creativity is a very marginal intellectual utility. It excites a kind of religious reverence in the hearts of people, but that is in a cultural context. If we are talking about something practical like intellectual problem-solving then it is like saccharine in a cup of coffee; almost the smaller the amount the better. It is very easy to have an overdose of creativity."

Does that hold for intuition as well?

"No; intuition is simply a name for rule-based behaviour where the rules are not accessible to consciousness."

In general, do you think the research work is predictable a priori?

"The outcome of technological development is what we are discussing here. Improving tournament programs is a typical example of technical development, like man-powered flight. It is not to be compared with science. The studies on chess end-games in the Artificial Intelligence laboratories are closer to science, but the Ken Thompson type of work is advanced technology. It is possible of course to predict technological progress to some degree over reasonably short time-scales. Big multi-national corporations are obliged to attempt this, because it affects their planning policy. If it were important, or even necessary, to have a machine defeat the world champion in order to harness plasma fusion for the world energy crisis then I am sure that fairly accurate predictions would be made."

Do you think that the expert test can be considered an extended Turing test, even measuring a more general intelligence at expert level?

"I have already said that I do not see any motivation for constructing general purpose intelligence. But there is very strong motivation for constructing experts; intelligent agents. If an intelligent agent is going to be useful then he should be very good at real estate or at company law or whatever is his agency for you. If also he is very talkative about favourite films or knows quite a lot about ornithology or oceanography then this makes him less valuable, not more valuable. It distracts him from doing what he is paid to do.

"An expert test is a Turing test performed in a very narrow domanin and I said before I don't see any motivation in developing a general purpose intelligence in machines. But I see very strong motivation for developing intelligent experts in machine form. Adding universal interest and knowledge to an intelligent agent will not necessary increase its value to the possessor."

Why do you think it is that human beings cannot advance deeper into chess than they already have?

"I think they will, with the help of the computers. But there will be a limit where their advances will cease, and the computers will continue to advance. Where that future limit is I don't know."

What is the reason for this?

"The depth into which you can penetrate into a combinatorial domain is defined by the computational complexity of the domain. That complexity cannot be specified without reference to a particular device. The brain is a different device with different information-processing parameters from those of a computer.

"Unlike computer technology which advances every year, the basic computational capabilities of the human brain remain constant. That sets a horizon or an upper bound to the degree of mastery that is possible for a large combinatorial domain like chess by a computing device which is as weak and limited as the human brain. That is the reason why I expect to see the advance into this complex domain halt at some stage, having reached the bounds of what the human brain can do. I don't personally expect the three-minute mile ever to be run, at any future time. For similar reasons there is going to be some rating above which it is not possible for a human to perform."

So, it has to do with the complexity of the game, but does it also have to do with theories of human thinking?

"No. The complexity of the game has a parameter and the parameter is a specification of the device which is to process problems in a domain. Once you have fed in the human specifications which are biological, that is one of the arguments of the complexity function. The chess domain is the other argument and the complexity function will deliver, given those two arguments, a result in the form of a bound to what one might call its "penetrability". There is no such thing as penetrability of a domain in general, but only relative to some specified device.

So, your theory of human thinking has nothing to do with the answer to that question?

"No, I don't think so. It is a question of the complexity of the domain relative to certain informational limits of any device that will process problems in that domain, whether that device is a computer or the brain. The brain is stuck; its information processing parameters are not going to change in the next few hundred generations. However the computer is not stuck and every few years the basic cycle time improves, and the size of random access memory."

When you talk about information-processing models, do you have in mind that of Simon or more like that of McCarthy?

"My knowledge of Simon's information-processing model is only as an implicit model behind his early work on the economic theory of the firm and his model was very underspecified. Essentially, its only feature was to point out that human calculating is resource-limited, that there are costs associated with human intellectual processes and that this inevitably will affect the nature of descriptive theories which are to be used by humans. I do not believe that he specified his information- processing model in any greater detail than that. But that was enough to kill stone dead a whole generation of supposedly mathematical economic theory.

What do you think about the applicability of the research done in computer chess?

"The applicability is I think enormous and quite critical. Scientific study of computer chess, which includes the technological work, but goes far beyond that, is the most important scientific study that is going on in the world at present. In the same sense, if I

were asked what was the most important study in process during the first world war, I would say the genetic breeding experiments on the drosophila fruitfly, by Morgan and his colleagues. The analogy is very good. The final impact of that early work in laying down the basic theoretical framework for the subject was just enormous, unimaginable. We see not the industrial take-off of genetical engineering, which is the delayed final outcome for human society of that fly-breeding work. The use of chess now as a preliminary to the knowledge engineering and cognitive engineering of the future is exactly similar, in my opinion, to the work on drosophila. It should be encouraged in a very intense way, for these reasons."

Can you give examples of applications?

"Under a contract from the European Economic Communities, we are looking at four selected examples where serious social dangers have occurred, owing to breakdown of the conceptual interface between complex computing problem solvers of non-AI design and the human operators who are supposed to monitor and control these computer-controlled processes.

"The four examples are:

(1) the Three Mile Island accident (the nuclear power station),

(2) the NORAD military computer network for giving warning of nuclear attack which has fairly frequently malfunctioned recently,

(3) the American air traffic control system which is designed on a stand-alone philosophy of eventually programming the human out of the loop (which in our view is very dangerous, it is better to keep him in the loop and to humanize the machine component),

and

(4) finally a breakdown of production at a steel rolling mill at Hoogovens where the introduction of a much more sophisticated and powerful automation system caused productivity to decrease instead of increase.

In all cases there was a fracture of the mental rapport between the machine system and the human operators. I am approaching those questions through computer chess."

How Chess Computers Are Rated

1. Why Rate a Chess Computer?

When a chess computer receives a rating, the potential buyer is the one who benefits. Being aware of the ratings given to the various chess computers allows the buyer to pick out the unit which will best satisfy his need for a challenging opponent. This is, after all, the buyer's number one priority—to find a chess computer that will challenge him and thus provide him with a formidable and exciting chess partner.

If a person buys a chess computer that has a lower rating than his own, he is apt to become bored with the machine very quickly. If he should buy a computer with a rating close to his own, he may eventually lose interest in it when he discovers certain machine weaknesses that enable him to win every time. The ideal solution, therefore, is for him to buy a machine that is 100-200 points above his own rating. This will provide him with a computer that will remain challenging long enough to justify the purchase price. Buying a computer that is more than 200 rating points higher is another option, since most machines can be set on levels lower than the tournament level—but the cost for such a machine may be much greater.

Thus, the rating of a chess computer becomes a valuable tool and an important guideline for the interested buyer. Studying and comparing the ratings and the features offered by various machines will enable the buyer to choose a chess computer that he will enjoy both in the first weeks of ownership and beyond.

2. How Are Chess Programs Currently Rated?

The current method of rating chess computers is haphazard at best. The rules require that a machine play about 20 games against humans in regular chess tournaments—the same manner in which a human obtains his rating. But is this adequate? To make this process the same for both human and machine hardly seems fair. When a human gets a rating, for example, chances are slim that he will merely play 20 games and then leave tournament chess forever. It is presumed that he will make steady progress and will go on to play in many more tournaments. He will gradually be able to find his true level by balancing out the bad results with the good. This is not the case, however, with computers. Since a machine cannot learn, its rating will not continue to climb. Therefore, unusually good or bad results will be unduly reflected in its rating.

By far the biggest problem with the current system is that so few chess computers are actually rated. Entering machines in human tournaments can require a massive commitment on the part of the manufacturer in terms of time, energy, and cost. Since the ratings should be obtained at major national tournaments, the manufacturer must contend with travel costs and entry fees, and must be able to spare employee time in order to obtain the rating. It is, therefore, not hard to understand why many machines have not yet been rated. If the process were a little less complicated, all of the computers on the market today might very well carry their own ratings.

3. What Is Being Done To Improve The System?

The United States Chess Federation is currently in the process of forming a Computer Chess Rating Agency. This agency is being spearheaded by the Computer Chess Committee under the energetic leadership of David Welsh.

The committee has formulated a new plan to obtain ratings for chess computers. To get a rating for a machine under this plan, the manufacturer would have to supply the rating agency with four to ten copies of the machine for testing purposes. A set of problems would then be used to profile the machine. The solutions to the problems and the time taken to solve them would be used, not to rate the machine, but to insure that later products to appear on the market were indeed the same machines that were assigned that particular rating. Periodically, random samples taken from the machines being sold would be tested for compliance with this regulation.

The actual rating for the machine would be obtained from its performance in two separate tournaments. The first tournament would consist of games played against humans with a broad spectrum of ratings, the purpose being to determine the approximate rating of the machine. Following that event, the machine would compete against humans within 200 points of its estimated rating in order to determine the computer's final rating. The first tournament would consist of 10 games, and 40 games would be played in the second tournament. The machine's actual rating, therefore, would be computed on the basis of a total of 50 games.

Personally, I feel that the rating agency is a very good idea. However, I tend to be a little apprehensive about it, for the following reasons:

1) The rating tournaments are to be held in a single location. But are the ratings which could be obtained in one location equivalent to those which could be obtained at another site? Wouldn't a machine playing solely against a group of people with much previous exposure to chess computers receive a lower rating than a machine playing against humans with little knowledge of computer chess? Wouldn't it be a more valid rating if the machine were exposed to all possible types of players, as in national tournaments?
2) Our experience has been that machines perform very well against opponents rated much lower than themselves (obviously) and (strangely) against players who are rated quite a bit higher; but computers often tend to do the poorest against players in their own rating category. We can only speculate as to why, but I would guess that it is because players at the machine's own level are most experienced at playing against the machines. As an example of this, the Fidelity Prestige Challenger was entered in two class sections at a recent tournament in France. In one section, it faced players with an average ELO rating of 2100, and in the other the opponents averaged 1900; yet the machine scored the same number of points in each event, four out of seven.

Kathe Spracklen

Report From the U.S. Open 1983

1983 was a significant year in the quest for a master rated micro-computer chess program. The first rated 2100 player to be defeated by a microcomputer in rated tournament play lost to the Novag Constellation 24k experimental program running on a 2mhz 6502. Five weeks later, at the U.S. Open, held in Pasadena, California, history was again written when the first rated master fell to the Novag Constellation 16k program running on a 3mhz 6502.

The Novag Constellation programs represent a significant evolutionary step in the development of microcomputer chess programs. These programs represent the first commercial implementation of the attack map/offset map move generating stratagy proposed by former World Chess Champion Mikhail Botvinnik and subsequently refined by myself for faster move generation as pieces come off the board.

A second departure from other commercial programs has been the simplification of the evaluation function as applied to the end nodes of the tree search. The programs instead rely heavily on specific chess knowledge which is concentrated into a special preprocessor which interfaces to the tree

search primarily through the scores associated with specific ply-one moves. This idea of a ply-one move pre-processor was originally implemented in the program TECH by James Gillogly in the late 1960's. Although TECH only achieved a high 1400 rating running on a large computer, the stratagy has certain appeal. First, chess tree searching has become very efficient, and second, the interaction problems associated with putting ever increasing amounts of chess knowledge in the tree become formidable. It has become apparent to me that this rather simple approach might contain the structure for a master level micro-computer program.

The 1981 performance rating achieved at the 1983 U.S. Open by the Novag Super Constellation 32k program running on a 3mhz 6502 supports my decision. Previous to the U.S. Open, the Novag Constellation 24k program running at just 2mhz had achieved an unbelievable performance rating of 2170 at the weekly 6 round Tal Open, scoring four and one-half to one and one-half.

Following are the 24 games from the U.S. Open played by the 3mhz Novag Constellation and the 3mhz Super Constellation programs. (The Super Constellation was an early version of the soon to be announced commercial product). Also at the U.S. Open, the current World Champion computer program Belle had an excellent result of 8½ points out of 12. The fourth computer program playing in the Open was Rapier which was having some memory problems.

The brief annotations of some of the games by chess Master Scott McDonald who works with me on the programs will perhaps provide some insights into the strengths and weaknesses of current micro-computer chess program. Two final games are the first 2100 player to fall to a micro and finally a game of which I am personally very proud. It is perhaps the first time a microcomputer program has beaten Belle at any kind of chess game. (Novag lost the first of the two game set with the black pieces).

David Kittinger & Scott McDonald

1983 U.S. Open

Round 1

	White: SuperConstellation x		**Black: Bingaman 2278**	
1	c2c4	g8f6		
2	b1c3	g7g6		
3	e2e4	d7d6		
4	g1f3 (a)	c7c5!		
5	f1e2 (b)	f8g7		
6	e1g1	b8c6 (c)		
7	d1a4?	e8g8		
8	d2d3	a7a6		
9	c1g5	h7h6		
10	g5d2	c8d7		
11	a4c2 (d)	g8h7		
12	a2a4?!! (e)	a8c8		
13	C3d5	f6d5		
14	c4d5	c6d4?! (f)		
15	f3d4	g7d4		
16	d2c3	e7e5		
17	d5e6ep	d7e6?!		
18	c3d4	c5d4		
19	c2d2	d8b6		
20	e2f3?! (g)	e6b3		
21	a4a5	b6b5		
22	a1c1	h7g7		
23	f3g4	b3e6		
24	g4e6	f7e6		
25	f2f4 (h)	c8c6		
26	c1c6	b7c6		
27	b2b4	f8b8		
28	d2c2	c6c5		
29	b4b5	b5c5		
30	c2a2	d6d5		
31	e4d5	c5d5		
32	a2d5 (i)	e6d5		
33	f1ci	b8b5		
34	c1c7 +	g7f8		
35	c7c6 (j)	b5a5		
36	c6g6	h6h5		
37	g6h6	a5a1 +		
38	g1f2	a1a2 +		
39	f2f1	a2a1 +		
40	f1e2	a1a2 +		
41	e2f3	a2a3		
42	h6h5	a3d3 ±		
43	f3e2	d3e3 +		
44	e2f2	e3e4		
45	f2f3	e4e3 +		
46	f3f2	e3e4		
47	g2g3! (k)	a6a5		
48	h5h8 + (1)	f8e7		
49	h8h7 + ??	e7d6		
50	h7a7	d4d3		
51	a7a6 + ??	d6c5		
52	a6a5 + (m)	c5c4		
53	a5a4 +	c4b3		
54	a7a7	d3d2		
55	a7a1	b3b2		
56	a1g1	b2c2		
57	h2h4	d2d1Q		
58	g1d1	c2d1		
59	h4h5	d5d4		
60	f2f3	e4e3 +		

1 - 0 (n)

a) Through an oversight on our part, the opening book failed to pick up this transposition to the King's Indian defense. The computer would rather complete it's kingside development than push the 'd' pawn.

b) Better was d2d4 but we don't play it for the same reason.

c) Black is discouraging d2d4.

d) After poor opening play, black has a fine game. A4c2 looks at first to be a blunder, but the move is not so bad. If c6b4 then c2c1 gains a tempo on the 'h' pawn and white can then play a2a3 when the black knight must retreat.

e) Creating a permanent hole on 'b4' but preventing black's queenside expansion with c6b4 and b7b5.

f) c6b8 with the idea of b7b5 looks better. The knight should stay on the board to exploit the holes in the white position.

g) White should try f2f4 instead. The bishop just gets in the way at 'f3'.

h) Finally! Black must now watch out for f4f5 to break up the kingside.

i) White trades queens simply to double and isolate the 'd' pawns. The human master may have misjudged the resulting rook and pawn endgame.

j) Black is starting to wonder if he made the right decision to enter this ending.

l) The computer didn't want to capture the weak, isolated 'd' pawn but instead goes after the 'a' pawn. However, 48 h5d5 a5a4 49 d5a5 d4d3 50 a5d5 e4e2 + 51 f2f3 e2h2 52 d5d3 is winning or 51...e2d2 52 f3e3 wins.

m) White managed to win the 'a' pawn with check, but in the process has driven the black king where it wanted to go. Black is now winning.

n) A heart breaking loss to the 1983 Pennsylvania State Champion.

Round 2

	White: Mike Owen (1460)		Black: Super Constellation x	
1	g1f3	g8f6	28 a1a7	f5f4 +
2	b2b3	g7g6	29 g3f4	g5f4 +
3	c1b2	d7d5	30 e3f3	h7h5
4	c2c4	f8g7	31 a7b7	d8d6
5	g2g3	d5c4	32 e2e3	h3g4 +
6	b3c4	b8c6	33 f3f2	f4e3 +
7	f1g2	c8e6	34 f2e3	g4d7
8	d2d3	e8g8	35 e3e4	d7e6
9	e1g1	d8d7	36 d5e6	f6e6
10	f1e1	e6h3	37 b7h7	d6d4 +
11	g2h1	a8d8	38 e4e3	d7h4
12	b1d2	b7b6	39 h7h6 +	e6f5
13	f3e5	c6e5	40 h6b6	h4h3 +
14	b2e5	c7c5	41 e3d2	e5e4
15	d2e4	f6e4	42 d3e4 +	f5e4
16	e5g7	e4f2	43 b6d6	h3h2 +
17	g1f2	g8g7	44 d2c3	h5h4
18	d1d2	d7d4 +	45 d6d5	h2h3 +
19	d2e3	d4e3 +	46 c3d2	h3g3
20	f2e3	f7f6	47 d5c5	h4h3
21	a2a4	e7e5	48 c5h5	g3g2 +
22	a4a5	f6f5	49 d2e1	h3h2
23	a5b6	a7b6	50 h5h4 +	e4e3
24	a1a7 +	f8f7	51 h4h3 +	e3e4
25	a7f7 +	g7f7	52 h3h4 +	e4e5
26	h1d5 +	f7f6	53 h4h5 +	e5f6
27	e1a1	g6g5	0 - 1	

Round 3

The player of the black pieces, just prior to the Open, had won the expert prize at the Pacific Southwest tournament held in Los Angeles.

	White: Super Constellation x		Black: Wayne Gordon 2059	
1	c2c4	e7e5	18 c3d5 (d)	h6g5
2	b1c3	b8c6	19 d5c7	g4e3
3	g1f3	g8f6	20 c7e8 (e)	e3g2
4	g2g3	g7g6	21 e1c3!	f7f6
5	f1g2	f8g7	22 d1d8	g8f7
6	e1g1	e8g8	23 g3g4	e6g4
7	d2d4	e5d4	24 h3g4	e5g4
8	f3d4	c6e5	25 e8d6 +	f7e7
9	b2b3	d7d6	26 d8e8 +	e7d7
10	c1b2	f8e8	27 c3g3	g2f4? (f)
11	d1d2	f6g4	28 b2c1	f4h3 +
12	a1d1	g7h6	29 g1g2	hef2
13	d2e1 (a)	d8g5	30 e8b8 (g)	g5h4
14	h2h3	c7c5?!	31 b8b7 +	d7e6
15	d4b5	g5h5	32 d6c8 (h)	h4g3
16	b5d6! (b)	c8e6 (c)	33 b7e7 +	
17	d6e8	a8e8	1 - 0	

a) The position is fairly even with Black having the initiative. (Initative is a concept which is very difficult for computers to understand). Qe1 is the best move here, strange as it looks. If White were to play e2e3 then Black could play 13...g4e3! 14 f2e3! e5c4! then if b3c4 h6e3 wins the queen and three pawns for three minor pieces.

b) The computer disdains the win of the exchange (b5c7) for the win of a center pawn.

c) Had Black played e8f8? then c3d5 was very strong.

d) Of course the knight at 'g4' is immune from capture because the knight at 'e5' would take its place and mate would soon follow. This is within the search depth of the computer. Now, after Nd5, White is threatening to take the knight and trade off the replacement by Nf6 + .

e) The consequences of f2e3 are not easy to calculate for the computer. With all of the possible captures on the board, the depth of search is less. The computer captures the piece of the higher value.

f) g5f4! provides Black with good drawing chances.

g) Now it is the computer's turn to play for mate.

h) The Super Constellation announces mate in four to follow.

Round 4

	White: Amenevs (2063)		Black: Super Constellation x	
1	e2e3	c7c5	12 b2a3	b8c6
2	c2c3	d7d5	13 c4f7 +	e8e7?
3	e4d5	d8d5	14 a1e1	e4f4
4	g1f3	e7e5	15 d4e5	c6e5
5	b1a3	c8d7	16 b3d5!	d7c6
6	f1c4	d5e44 +	17 d5e5 +	e7f8
7	e1f1	g8h6	18 f3e5	f6e5
8	d1b3!	f7f6	19 e1e5	c6g2 + ?
9	d2d4!	c5d4	20 f1g2	f8g7
10	c1h6	g7h6	1 - 0	
11	c3d4	f8a3		

Round 5

	White: J.White (1998)		Black: Super Constellation x	
1	d2d4	g8f6	18 e4f5	e8f6
2	c2c4	e7e6	19 f2f3	f8f7
3	b1c3	f8b4	20 c2f2	a8f8
4	a2a3	b4c3 +	21 f2d2	a7a6
5	b2c3	d7d6	22 h2g4	g8h8
6	d1c2	e8g8	23 a4a5	b6a5
7	e2e4	b8d7!	24 a1a5	e7d8
8	g1f3?!	b7b6	25 a5a1	d8b6
9	f1d3	c8b7	26 e1b1	b6c7
10	e1g1	e6e5	27 d2b2	f8b8
11	f1e1	f6g4?	28 b2d2	b8f8
12	h2h3	g4f6	29 d2b2	f8b8
13	a3a4	c7c5!?	30 b2f2	b8f8
14	c1g5	h7h6	31 f2h4	f8b8
15	g5e3	d8e7	32 h4f2	b8f8
16	d4d5?!	f6e8	33 f2d2	f8b8
17	f3h2	f7f5?!	34 d2f2	b8f8
			½ - ½	

Round 6

White: Super Constellation x		Black: Strayer 2138	
1	d2d4	g8f6	
2	c2c4	c7c5	
3	d4d5	e7e6	
4	b1c3	e6d5	
5	c4d5	d7d6	
6	g1f3	g7g6	
7	c1g5	h7h6	
8	g5h4	g6g5	
9	h4g3	f6h5	
10	e2e4	h5g3	
11	f1b5+ (a)	c8d7	
12	b5d7+	b8d7	
13	h2g3	f8g7	
14	d1b3	b7b6	
15	e1c1?! (b)	e8g8	
16	f3d2	a7a6	
17	f2f4	b6b5	
18	d1f1	c5c4	
19	b3c2	a8c8	
20	f4g5?!! (c)	d8g5	
21	c1b1	b5b4	
22	d2f3	g5d8	
23	c3e2	b4b3!	
24	c2d2	b3a2+	
25	b1a2	c4c3!	
26	e2c3	d8a5+	
27	a2b1	c8c3!	
28	b2c3	f8b8+?! (d)	
29	b1c2	a5a2+	
30	c2d3	b8b2	
31	d2e1	g7c3?! (e)	
32	e1c3	b2b3	
33	c3b3	a2b3+	
34	d3e2	d7c5(f)	
35	f3d2	b3d3+	
36	e2e1	d3g3+ (g)	
37	e1d1	g3g4+	
38	f1f3	c5d3?!	
39	h1h6!	d3e5	
40	h6d6	e5f3	
41	d6d8+	g8g7	
42	g2f3	g4g1	
43	d1c2	g1c5+	
44	c2d3	a6a5	
45	d8a8	c5a3+	
46	d3e2	a5a4	
47	d5d6!	a3b4 (h)	
48	a8a7	g7f6?	
49	f3f4	a4a3	
50	e4e5+	f6g6	
51	d6d7	b4b8?	
52	a7a3	g6f5	
53	a3d3	b8d8	
54	d2b3	f5f4	
55	e5e6!	f7e6	
56	b3c5	f4f5	
57	c5b7		

1 - 0

a) The computer wants to rid White of his 'good' bishop.

b) Due tohe absence of an 'h' pawn, the computer didn't want to castle short and so castled queenside where it has little chance for survival.

c) Getting some very weak pawns but opening some lines to Black's king.

d) Black is too quick with the rook check. Stronger is d7c5 cutting off some escape squares for the king.

e) Too materialistic. Much stronger wad d7c5+ 32 d3e3 g7c3 then 33 e1c3 leads to mate after 33...b2e2+ followed by e2e4 etc.

f) The knight finally comes to the right square, but it is not nearly as strong as it was three or six moves ago.

g) Better was c5e4.

h) Black doesn't want a draw which would probably occur after a3d6 48 a8a4.

Round 7

White: Juan Fong (2063)		Black: Super Constellation x	
1	b2b4	d7d5	
2	c1b2	g8f6	
3	a2a3	e7e6	
4	g1f3	f8d6	
5	e2e3	e8g8	
6	f1e2	a7a5!?	
7	b4a5?! (a)	c8d7 (b)	
8	e1g1	a8a5	
9	c2c4	d7a4	
10	d1e1	b8d7	
11	d2d4?!	a5a8	
12	b1c3	a4b3	
13	f3d2	b3c2	
14	c4d5	e6d5 (c)	
15	e1c1	c2g6	
16	c3b5	d7b6	
17	b5d6	d8d6	
18	b2c3 (d)	f8e8	
19	c3b4	d6d8	
20	d2f3	c7c6	
21	f3e5	g6f5	
22	c1b2?	b6a4	
23	b2b3	f6d7	
24	e5d7	d8d7	
25	f1c1	b7b6?!!	
26	e2f3	a8a7	
27	a1a2	h7h6	
28	a2d2	b6b5?!!	
29	d2a2	a7a6	
30	b4c5 (f)	a4c5	
31	c1c5	f5e6?!	
32	f3d1	e8b8	
33	d1c2	b8a8	
34	h2h3	d7d6	
35	b3b4	d6d8	
36	b4c3	d8g5	
37	g1h2	g5d8	
38	c3b4 (g)	d8h4	
39	h2g1	h4g5	
40	g1f1	g5h4	
41	b4c3	e6d7	
42	c3d3	f7f5 (h)	
43	c2b3?	h4e4! (i)	
44	d3c3	e4b1+	
45	f1e2	b1g1	
46	e2f3?!	g1h2	
47	b3c2	a8f8	
48	c3d2	d7e8!	
49	f3e2	h2g2	
50	e2d3	g2h3	
51	a3a4	b5a4	
52	c2a4	h3f3	
53	d3c3	f8f7	
54	a4b3	a6a2	
55	d2a2	f3h1!	
56	a2a8	h1e1+	
57	c3d3	e1f1+	
58	d3c3	f7f8	
59	f2f4 (j)		

0 - 1

a) Better was b4b5.

b) The 'a' pawn won't run away, so the computer finishes its development.

c) The computer has a very nice position. It's pieces are well placed and it will have lasting pressure on the 'a' file. The White bishop at "b2' is a prisoner of it's own pawns.

d) White is playing for the cheap threat of c3b4 winning the exchange. Computer's (almost) never fall for 'cheapos', unless they are deep moves. One or two movers are easily detected by the computer.

d) This move creates holes in the black queenside. It also makes it very difficult for White to ever advance his 'a' pawn. 'C4' now becomes a nice outpost for the knight.

f) Otherwise the knight goes to 'b6' and then 'c4'.

g) The computer, most likely by accident, set a very nice trap. Many people would have played 38 c5c6 and lost a piece for some pawns after b5b4! 39 c3c5 b4b3! with the idea of checking on 'b8' and picking up the bishop at 'b3'.

h) The bishop is looking worse all the time but this move prevents White from playing e3e4.

i) Now if White trades queens he loses his 'a' pawn.

j) After f1e2 White loses yet another pawn and so resigned before Black's reply.

Round 8

White: Super Constellation x		Black: Craig Jones (2136)	
1	e2e4	c7c5	
2	g1f3	b8c6	
3	d2d4	c5d4	
4	f3d4	d8b6	
5	d4b5	a7a6	
6	b5c3	e7e6	
7	f1e2	g8f6	
8	e1g1	f8e7	
9	e2c4	b6c7	
10	c1e3	e8g8	
11	b1d2	b7b5	
12	c4b3	c8b7	
13	a2a3	c6a5	
14	f2f3	d7d5	
15	g1h1	f8d8	
16	e4d5	e6d5	
17	e3d4	a5c4	
18	f1e1	f6h5	
19	d2c4?	d5c4	
20	b3a3	e7f6	
21	c3e2	h5f4	
22	c2c3	f4d3	
23	e1d1	d3b2	
24	d1c2	f6d4	

25	c3d4?	b2d3
26	c2d2	d8d6
27	a1d1	d6h6
28	h2h3?!	b7c8
29	e2c3	c8h3
30	g2h3	c7g3
31	d2g2	h6h3 +
32	h1g1	g3h4
33	c3e2	a8e8
34	d1d2	d3e1
35	g2h3	h4h3
36	f1e1	h3f3
37	e1d1	

0 - 1

Round 9

White: Super Constellation x **Black: Scheid (2068)**

1	e2e4	d7d6
2	d2d4	g8f6
3	b1c3	g7g6
4	f2f4	f8g7
5	g1f3	e8g8
6	f1d3	b8c6
7	e1g1	e7e5
8	d4e5	d6e5
9	d3b5 (a)	e5f4!? (b)
10	b5c6	b7c6
11	c1f4 (c)	d8e7
12	d1e2?!	a7a5! (d)
13	f1e1	c8a6
14	e2d2	a8d8
15	d2f2? (e)	f6g4
16	f2a7	d8a8
17	a7c7	e7c5 + (f)
18	f4e3	g4e3 (g)
19	c3a4	c5c2
20	e1e3	c2a4
21	b2b3	a4b5
22	a1e1	f8e8
23	g1h1	g7e5
24	f3e5	b5e5
25	c7c6	a6b5
26	c6c2	a8c8
27	c2d2	b5c6
28	e1e2	c8d8
29	d2c1	c6b7
30	h2h3	d8d4
31	e2f2	d4e4
32	e3e4	e5e4

0-1

a) The computer finally gets to play it's first move out of book and decides to double the 'c' pawns if Black doesn't move the knight.

b) Black decides that the open lines and the bishop pair are fully compensating for his busted queenside.

c) White should have traded queens first and then recaptured the 'f' pawn. Black would then have some real problems defending his weakened queenside pawns.

d) Causing real problems for White due to the open lines and Black's bishops.

e) The only move was d2c1. The computer is not aware of Black's threatened Philidor's Legacy. The computer can only see the win of the pawn on 'c7'. The longer range threat is beyond the search depth of any computer.

f) Only now does the computer realize that the intended move g1h1 would lead to mate in four.

g) The game is of no further interest. The reason the game continued can be found in the old saying, 'Hope springs eternal'.

Round 10

White: Graszek 1981 **Black: Super Constellation x**

1	d2d4	g8f6
2	g1f3	d7d5
3	e2e3	e7e6
4	f1d3	c7c5
5	c2c3	f8d6
6	b1d2	b8c6
7	e1g1	e8g8
8	d4c5?! (a)	d6c5
9	e3e4	e6e5
10	e4d5	f6d5
11	d2e4	c5e7
12	d3c4	d5b6
13	c4b3	d8c7 (b)
14	d1e2	c6a5
15	b3c2	f7f5
16	e4g3	e5e4
17	f3d4	a5c4 (c)
18	g3h5	c8d7

19	h5f4	e7d6! (d)
20	g2g3?	f8f6
21	f4h5	f6f7? (e)
22	c2b3	a8f8?
23	h5f4	c7c7
24	a2a4	g7g5?! (f)
25	a4a5	g5f4
26	a5b6	c4b6
27	c1f4	d6f4
28	g3f4	a7a6
29	g1h1	g8h8
30	b3f7	f8f7
31	e2h5	f7f6
32	f1g1	b6d5 (g)
33	h5h4	c8c7
34	g1g3? (h)	c7f4
35	a1g1	f6f8
36	h4f4	d5f4
37	g3g7	d7c8
38	g7c7	f4d5
39	c7c5	d5f4
40	c5c7	f4d5
41	c7g7	d5f4
42	g7c7	f4d5

½ - ½

a) Not usually played in the Colle system. Better was f1e1 or d1e2.

b) Black has come out of the opening very well.

c) Black should play either a7a6 or g8h8 to get off the weakened diagonal.

d) A nice bluff! Black appears to be able to defend his exchange through a combination. However, there is a hole in it. If 20 d4e6 d7e6 21 f4e6 d6h2 + 22 g1h1 c7e7 23 e6f8 e7h4 looks decisive but 24 c1g5! and White wins the exchange after all for a pawn. The computer wasn't bluffing of course, but just didn't see far enough ahead and neither did the opponent.

e) The computer doesn't forsee the possible danger awaiting his rook along the same diagonal as his king.

f) a7a5 was necessary.

g) Black will get some play against the weak pawn on 'f4'.

h) An inaccurate move. g1g5! is winning. If 34...c7f4 the 35 a1g1 f6f8 36 h4h6! threatens mate on f8 and g7.

Round 11

White: Super Constellation x **Black: Ray Wong (1961)**

1	e2e4	e7e6
2	d2d4	d7d5
3	b1c3	f8b4
4	e4e5	c7c5
5	c1d2	c5d4
6	c3b5	b4d2 +
7	d1d2	b8c6
8	g1f3	f7f6
9	e5f6	g8f6
10	b5d4	e8g8
11	f1e2	f6e4
12	d46	b7c6
13	d2b4	c6c5
14	b4b3	d8c7
15	e1g1	a8b8
16	b3a3	f8f6
17	a1d1	c5c4
18	f3d2	f6h6
19	h2h3	e4g5
20	d2f3	g5h3 +
21	g2h3	h6h3
22	b2b3	c7f4
23	d1d4	f4h6
24	g1g2	e6e5
25	a3e7	c8e6
26	d4d1	e5e4
27	f1e1	e4f3 +
28	e2f3	h6g6 +
29	g2f1	b8e8
30	e7e8 +	g6e8
31	e1e6	e8e6
32	f3d5	g8f7
33	f1g2	h3c3
34	d5e6 +	f7e6
35	d1d2	a7a5

½ - ½

Round 12

White: Super Constellation x **Black: Roa (1969)**

1	e2e4	g7g6
2	d2d4	f8g7
3	b1c3	d7d6
4	f2f4	g8f6
5	g1f3	e8g8
6	f1d3	b8c6

7	e1g1	c6b4
8	d3e2	c7c5
9	d4d5	b7b6
10	g1h1	b4a6
11	e4e5!	d6e5
12	f4e5	f6g4
13	c1f4	a6c7
14	h2h3	g4h6
15	d1d2	h6f5
16	g2g4!??	f5d4
17	f3d4	c5d4
18	d2d4	c7e6
19	d4e4	e6f4
20	f1f4	d8c7
21	d5d6	e7d6
22	c3b5	c7b7
23	b5d6	b7e4 +
24	f4e4	c8d7
25	h1g1	d7c6
26	e4e3	a8d8
27	a1f1??	d8d6!
28	e5d6	g7d4
29	e2f3	d4e3 +
30	g1g2	c6f3 +
31	g2f3	e3c5
32	d6d7	f8d8
33	f1d1	g8f8
34	c2c4	f8e7
35	a2a3	d8d7

0 - 1

Round 1

Another historic game. The first time a micro-computer chess program has ever beaten a rated MASTER under tournament conditions.

	White: Constellation x		Black: Jerry Simon 2207	
1	c3c4	e7e5		
2	b1c3	b8c6		
3	g1f3	g8f6		
4	g2g3	d7d6 (a)		
5	f1g4	c8e6		
6	d2d3	f8e7		
7	e1g1	d8c8		
8	d1b3 (b)	e8g8		
9	c3d5	e7d8		
10	c1g5 (c)	a8b8		
11	d5f6 +	g7f6		
12	g5h6	f8e8		
13	b3c3	e6h3		
14	a2c1	h3g2		
15	g1g2	c8g4		
16	h6d2	f6f5		
17	h2h3	g4h5		
18	e2e3	e8e6		
19	d3d4! (d)	e5e4		
20	f3g1	e6g6		
21	f2f3 (e)	d8h4		
22	g1e2	h4g5		
23	e2f4! (f)	g5f4		
24	e3f4	b8e8		
25	f3e4	e8e4 (g)		
26	c1e1 (h)	e4e2 +		
27	f1f2	e2f2 +		
28	g2f2	h5h3 (i)		
29			e1e8 +	g8g7
30			d4d5 +	g7h6
31			d5c6	h3h2 +
32			f2f1	g6g3
33			d2e3! (j)	h2h1 +
34			f1e2	h1h5 +
35			e2d3	b7c6
36			c3f6 +	h5g6
37			f6h4 + ! (k)	h6g7
38			h4d8	g7h6
39			d8c7	d6d5
40			c7a7	d5c4 +
41			d3c4	g3g2
42			a7d4	g2c2 +
43			c4b3	c6c5
44			d4d5	c2h2
45			d5c5	h2h3
46			b3c2	h3h2 +
47			e3d2	g6g2
48			c5f8 +	h6h5
49			f8f7 +	h5h4
50			f7e7 + (1)	h4h5
51			e7h7 +	h5g4
52			h7g7 +	g4f3
53			g7c3 +	f3f2
54			c3e3 +	f2f1
55			e3e1 + mate	

1 - 0

a) A solid but passive move which took the computer out of it's book. Usually Bb4 or d7d5 are played here.

b) An interesting move by the computer. The move prevents Black from the immediate trade of light squared bishops due to the attack on the 'b' pawn.

c) A nice move which threatens to break up the black kingside. The computer will inflict doubled pawns on it's opponent whenever possible. In this case, the pawns will not be very weak after black pushes one to 'f5'.

d) After long preparation the computer gets in d3d4.

e) The computer senses no danger and weakens the kingside some more.

f) Forces the exchange of the Black bishop for the knight. The now unguarded dark squares will cause Black some real problems.

g) Black doesn't want to recapture with the pawn as his attack would soon come to a standstill, therefore he accepts very weak 'f' pawns.

h) The only move. Obviously 26...rxp(dr) would be a mistake due to 29 e1e8 + g8g7 28 d2e3 etc.

i) Giving up a piece for an attack. In any case, White threatened to play d4d5 attacking the knight and threatening back rank mate with the rook.

j) The only move to hold the game. Note that qxr qxq 34 c6b7 fails to g3f3 + and f3b7.

Round 2

	White: Hoss 2097		Black: Constellation x	
1	c2c4	c7c5		
2	b1c3	b8c6		
3	g2g3	g7g6		
4	f1g2	f8g7		
5	e2e4	g8f6		
6	g1e2	e8g8		
7	e1g1	d7d6		
8	d2d3	c6d4		
9	e2d4	c5d4		
10	c3e2	d8b6		
11	a1b1	c8d7		
12	b2b4	a8c8		
13	c1g5	e7e6		
14	a2a4	e6e6		
15	a4a5	b6c7		
16	d1d2	d7e6		
17	f2f4!?	f6g4		
18	f4f5!	g6f5?		
19	e4f5	f7f6		
20	f5e6	f6g5		
21	f1f8 +	c8f8		
22	d2g5	g4e3		
23	e6e7	f8e8		
24	e2c3!	c7d7?		
25	c3d5	e3d5		
26	g2d5 +	g8h8		
27			b1f1	d7e7
28			g5h5	e8f8
29			f1f8 +	g7f8
30			h5f5	b7b6
31			a5b6	a7b6
32			f5c8	e7f6
33			c8b8	f6h6!
34			b8e8	h6e3 +
35			g1g2	e3e2 +
36			g2h3	e2f1 +
37			h3g4	f1f6
38			e8f7	f6f7
39			d5f7	d6d5?
40			f7d5	f8b4
41			g4f5	b4d6?
42			f5e6	d6b8
43			e6d7	h8g7
44			d7c6	b6b5
45			c4b5	g7f6
46			b5b6	h7h5
47			c6b7	b8d6
48			d5e4	f6g5
49			h2h3	h5h4
50			g3h4 +	g5h4
51			b7c8	h4h3

1 - 0

Round 3

	White: Constellation x		Black: Al Goncer 2037	
1	c2c4	g8f6	a4c3	b5b4
2	d2d4	g7g6	c3e2	c8a6 (g)
3	b1c3	f8g7	a2a3	f7f6?
4	e2e4	d7d6	a3b4	b8b4
5	f2f3	e8g8	b3c2	d8b6
6	g1e2 (a)	b8c6	d1b1	b4b3
7	d4d5?!	c6e5	f1d1	d7e5
8	e2f4	c7c6	e2c1	h6c1
9	c1e3 (b)	f6d7	g3e5!	c1e3 (h)
10	f1e2	d7b6	e5c3	g7g8
11	d1b3	g8h8	g2g3	g8b8
12	e1g1	c6c5	d1e1	e3d4
13	g1h1	f8g8	b1c1	b8b7? (i)
14	e3f2	g7h6	c2d2? (j)	b7b8
15	f2g3	d8e8?	c1c2	d4e5
16	c3b5	e8d8	e1c1	b6b7
17	a1d1	a7a6	f3g2	b7d7
18	b5c3 (c)	g6g5	c3e5?! (k)	f6e5
19	f4h5	b6d7	c1a1	d7b7
20	f3f4	g5f4	a1a2	b3d3
21	h5f4	d7f6	d2c1	d3d4?
22	f4d3 (d)	e5d3	c2f2!	b7b3??
23	d1d3	g8g7?	a2a1	a6d3
24	e2f3? (e)	f6d7 (f)	c1h6! (1)	b8g8
25	c3a4?!	a8b8	f2f7	d3e4
26	d3d1	b7b5	g2e4	d4d1+
27	c4b5	a6b5	h1g2	d1d2+

1 - 0

a) The first move out of book. The program prefers to develope it's king knight before the queen bishop (Be3 is book).

b) The computer finds the right place for the bishop by itself.

c) A better idea is b5a3 to defend the 'c' pawn followed by nd3 with an eventual f3f4 push. Computer's aren't yet at the stage of making such plans, so the knight settles on c3 rather than the edge of the board.

d) At last! White is finally able to get rid of the strongly posted knight on e5.

e) Now was White's chance to push e4e5 and eliminate the hole on e5 forever.

f) Black now has the right idea and doesn't give the computer a second chance.

g) Black clearly has the edge.

h) The bishop should have been removed, then the ending would be better for Black. Now White can defend the weak pawn at 'b2'.

i) Why not trade bishops and take the seventh rank?

j) c3d4 was very strong. If c5d4 then c2c8+ followed by c8g4+ is good for at least a draw. If 41...b3f3 then 42 d4c3 and White has possible attacking chances due to the opposite colored bishop.

k) Exchanging now only weakens the 'b' pawn even more.

l) Black's weakened kingside and back rank prove decisive. Computers usually find the tactical shots.

Round 4

	White: Powell (2052)		Black: Constellation x	
1	e2e4	e7e5	f1b5	a7a6
2	g1f3	b8c6	b5c6	d7c6

5	d2d4	e5d4
6	d1d4	d8d4
7	f3d4	g8f6
8	f2f3	f8d6
9	c1e3	e8g8
10	e1f2	f8d8
11	b1d2	c6c5
12	d4e2	c8e6
13	e2f4	e6d7
14	d2c4	d7b5?!
15	b2b3?	b5c4
16	b3c4	b7b6
17	f4d5	f6d7!
18	a1b1	d7e5
19	e3f4	e5c4
20	f4d6	d8d6
21	d5c7	d6d2+
22	f2g3	a8a7
23	c7d5	d2c2
24	h1d1	g8f8
25	d5b6	c4b6
26	b1b6	c2a2
27	b6c6	a7b7?
28	c6c5	b7b2
29	c5c7!	b2g2+
30	g3f4	g7g5+?

Round 5

	White: Constellation x		Black: Poehlmann (1963)	
1	e2e4	e7e5	d5c6	d7c6
2	g1f3	b8c6	b5b3	b8e8
3	f1c4	f8c5	b3c3	c6a4
4	c2c3	g8f6	c3e3	f7f5
5	d2d4	e5d4	e4c3	e8e3
6	c3d4	c5b4+	g3e3	a4d7
7	c1d2	b4d2+	e3e6+	d7e6
8	b1d2	d7d5	e1e6	f8d8
9	e4d5	f6d5	e6c6	d8d2
10	e1g1	e8g8	c6c8+	g6f8
11	a1c1	d5b6	c8c7	d2d7
12	d2b3	b6c4	c7d7	f8d7
13	c1c4	c8g4	c3b5	a7a6
14	f1e1	d8f6	b5c7	a6a5
15	c4c3	a8d8	g1f1	g8f7
16	h2h3	g4h5	f1e2	f7f6
17	d1d2	h5f3	e2d3	f6e5
18	c3f3	f6d6	d3c4	d7c5
19	f3c3	d6d5	c4b5	c5d3!
20	c3c5	d5d6	b2b3?	d3f2
21	d4d5	c6e7	b5b6	f2h3!
22	c5a5	d8a8	g2h3??	f5f4
23	a5b5	a8b8	c7a6	f4f3
24	b3c5	b7b6	a6c5	e5d4
25	c5e4	d6d7	c5e6+	d4e3
26	d2d3	c7c6	e6g7	f3f2
27	d3g3!	e7g6	g7f5+	e3f4
31	f4f5	a2f2		
32	d1d3	g2h2		
33	f5f6	h2h6+		
34	f6g5	h6h2		
35	c7a7	h2g2+		
36	g5f4	g2a6		
37	e4e5	h7h5		
38	d3d7	f8g8		
39	d7f7	f2c2		
40	f7d7	c2c8		
41	f4f5	g6g3		
42	f3f4	c8f8+		
43	f5e4	g3g1		
44	a7a6	g1e1+		
45	e4d5	e1d1+		
46	d5e6	d1d7		
47	e6d7	f8f4		
48	e5e6	f4d4+		
49	a6d6	d4e4		
50	d6d5	g8f8		
51	d5f5+	f8g7		
52	f5h5	g7f6		
53	h5h6+	f6g7		
54	h6h2	e4d4+		
55	d7e7	d4d1		

1 - 0

0 - 1

Round 6

White: D'arcy (997)		Black: Constellation x	
1	e2e4		c7c5
2	c2c3		d7d5
3	d2d4		d5e4
4	c1e3		g8f6
5	b1d2		c5d4
6	c3d4		b8c6
7	d2b3		e7e5
8	d4e5		f8b4 +
9	b3d2		f6g5
10	g1e2		g5e3
11	f2e3		c8g4
12	d1c2		b4d2 +
13	c2d2		d8d2 +
14	e1d2		a8d8 +
15	d2e1		c6e5
16	e2d4		e8g8
17	f1e2		g4e2
18	e1e2		d8c8
19	h1f1		f7f6
20	a1c1		c8c1
21	f1c1		f8d8
22	d8d7		c1c7
23	c7d7		e5d7
24	b2b4		d7b6
25	d4b5		b6c8
26	e2d2		f6f5
27	h2h4		g8f6
28	d2c3		f7g6
29	c3d4		g6h5
30	g2g3		h5g4
31	d4e5		g7g6
32	b5d4		c8b6
33	d4e2		b6c4 +
34	e5d4		c4d2
35	d4c3		d2f1
36	e2g3		g4g3
37	e2g3		g4g3

0 -1

Round 7

White: Constellation x		Black: Nakamura (1990)	
1	e2e4		g7g6
2	d2d4		f8g7
3	b1c3		c7c6
4	d1c4		d7d5
5	e4d5		b7b5
6	c4b3		b5b4
7	c3e2		c6d5
8	f1f3		b8c6
9	c2c4		b4c3ep
10	b2c3		e7e6
11	e1g1		g8e7
12	c1f4		e8g8
13	f1e1		e7f5
14	a1b1		f5h4
15	f3e5		c6e5
16	f4e5		g7e5
17	d4e5		d8g5
18	e2g3		c8a6
19	d1d4		h4f5
20	g3f5		g5f5
21	c3c4		a6c4
22	b3c4		d5c4
23	d4c4		a8c8
24	c4d4		c8c2
25	d4a7		c2e2
26	f2f4		e2d2
27	b1d1		f8d8
28	d1d2		d8d2
29	a7a8 +		g8g7
30	e1f1		f5c3
31	a2a4		c2c5 +
32	g1h1		c5c4
33	a8f3		d2a2
34	f3d1		c4e4
35	d1g		a2a4
36	g4h4		e4f5
37	h4f2		g6g5
38	g2g3		g5g4
39	f1d1		a4c4
40	f2e3		c4e4
41	e3d2		e4c4
42	d2e1		c4c2
43	d1d4		c2a2
44	d4e4		a2a1
45	e1a1		f5e4 +
46	h1g1		e4e3 +
47	g1f1		e3f3 +
48	f1g1		f3e3 +
49	g1g2		e3fe +
50	g2g1		

½ - ½

Round 8

White: Ray Wong 1961		Black: Constellation x	
1	d2d4		d7d5
2	c2c4		d5c4
3	g1f3		g8f6
4	e2e3		e7e6
5	f1c4		c7c5
6	e1g1		a7a6
7	a2a4		f8e7
8	b1c3		e8g8
9	d1c2 (a)		b8c6
10	f1d1		c5d4
11	e3d4		c6b4
12	c2e2		c8d7?! (b)
13	f3e5		f6d5 (c)
14	c4d5		e6d5
15	c1f4		e7f6
16	a1c1		a8c8
17	e2f3		d7f5 (d)
18	d1d2?!		f5e4
19	f3d1		e4f5
20	d1f3		d8b6
21	f4g3?!		f6g5
22	g3f4		f5e4
23	f3g4		g5f4
24	g4f4		b6e6
25	f2f3?!		e4f5
26	f4g3		f7f6!
27	e5g4		f5g4
28	f3g4		f8e8
29	d2e2? (e)		c8c3!
30	e2e6		c3c1 +
31	g1f2		e8e6
32	g3b8 +		g8f7
33	b8b7 +		f7g6
34	b7b4 (f)		c1c2 +
35	f2f3		e6e2
36	b4b3		e2f2 +
37	f3g3		f2g2 +
38	g3f3		g2f2 +
39	f3g3		f2g2 +
40	g3f3		c2f2 +
41	f3e3		f2b2
42	b3d5		g2g4
43	d5e6		g4h4
44	d4d5		b2b3 +
45	e3f2		h4h2 +
46	f2g1		h2d2? (g)
47	e6g4 +		g6f7
48	g4d7 +		

½ - ½

a) The queen would be more secure at 'e2'. Here it is open to attack from a knight at 'b4' or a rook, on the 'c' file.

b) Black should blockade the isolated 'd' pawn immediately. The computer, not understanding the importance of blockading the 'd' completes it's development.

c) This move is not as strong as it was a move earlier. Now, after White exchanges at 'd5', Black will end up with an isolated pawn also.

d) White should have captured this bishop when he had the chance. Now it becomes very active in the absence of the White counterpart.

e) Allowing the computer a little combination.

f) The computer didn't see this far into the position when it played c8c3. However, with the two rooks against the queen and the exposed position of the White king, Black has at least a draw. Black even has winning chances but must be careful of the exposed nature of his own king.

g) Did Black overlook the perpetual check by the queen? Or did it see how strong the passed 'd' pawn was becoming? h2h4 with the idea of doubling rooks on the 'd' file should win. What the computer most likely saw was the queen winning the 'a' pawn if h2h4 and so attacked the 'd' pawn which allowed the draw.

Round 9

White: Bass (1957)		Black: Constellation x	
1	e2e4		e7e5
2	g1f3		b8c6
3	f1b5		a7a6
4	b5c6		d7c6
5	e1g1		f7f6
6	d2d4		c8g4
7	d4e5		d8d1
8	f1d1		f6e5
9	h2h3?		g4f3
10	g2f3		f8d6
11	c1g5?		g8f6?!
12	b1d2		e8g8
13	d2c4		f6e8
14	g1g2		f8f7

15	d1d3	b7b5
16	c4a5	c6c5
17	a2a4	c5c4
18	d3d5?!	h7h6
19	g5h4?	g7g5
20	h4g3	e8f6
21	d5d1	f7d7?
22	a5c6	a8e8
23	a4b5	a6b5
24	a1a5	d6f8
25	d1d7	f6d7
26	a5b5	f8d6
27	g2f1	g8f7
28	f1e2	h6h5?
29	h3h4	g5h4
30	g3h4	e8h8
31	c6a5	d7b6
32	a5b7	b6d7
33	b7d6 +	c7d6
34	b5b4	h8c8
35	e2e3	f7e6
36	f3f4	e5f4 +
37	e3f4	d7e5
38	f4e3	c4c3?!!
39	b2b3	c8f8
40	f2f4	e5g4 +
41	e3f3	g4e5 +
42	f3g3	f8g8 +
43	h4g5	e5f7

1 - 0 (66 moves)

Round 10

White: Constellation x **Black: Khan (1366)**

1	e2e4	c7c5	18	a1d1	e6e5
2	g1f3	d7d6	19	h4f4!!	e5f4
3	d2d4	c5d4	20	d1d4 +	d7e6
4	f3d4	b8c6	21	b5c6	b8b2
5	f1b5	c8d7	22	c6a8	b2c3
6	e1g1	g8f6	23	a8d5 +	e6e5
7	b1c3	e7e6	24	d4c4	c3a5
8	c1g5	f8e7	25	d5f7	a5d2
9	d4e2	f6e4	26	c2c3	e5f6
10	c3e4	e7g5	27	f7g8	h7h5
11	e4d6 +	e8e7	28	f1b1	h5h4
12	d6b7	d8b8	29	c4c6 +	f6e7
13	b7c5!	h8d8	30	g8e6	f4f3
14	e2c3	g5f4	31	b1b7 +	e7f6
15	c5d7	d8d7	32	e6f7 +	
16	d1g4	d7d4			
17	g4h4 +	e7d7?			

1 - 0

Round 11

White: Eckhardt (1911) **Black: Constellation x**

1	e2e4	d7d5	13	c4b3	e8g8
2	e4d5	d8d5	14	f3e5	b7g2
3	b1c3	d5a5	15	d1f3	g2f3
4	f1c4	g8f6	16	e5f3	f8e8
5	g1f3	b8c6	17	f3g5	f5g6
6	d2d3	c8f5?	18	e1d2	h7h6
7	c1d2	e7e5?	19	g5f3	g6h5
8	c3d5	f8b4	20	f3d4	a7a6
9	d5b4	c6b4	21	d4f5	a7a6
10	a2a3	b7b5	22	a1e1	a6a5
11	a3b4	a5b6	23	e3c5	
12	d2e3	b6b7			

1 - 0

Round 12

White: Constellation x **Black: Tubbs (1760)**

1	e2e4	e7e6	26	e1e2	d2d1 +
2	d2d4	d7d5	27	e2e1	d1e1 +
3	b1d2	d5e4	28	f1e1	g8g7
4	d2e4	b7b6	29	e1d2	g7g6
5	g1f3	c8b7	30	g2g4	h6h5
6	f1d3	b8d7	31	d2c3	h5g4
7	e1g1	g8f6	32	h3g4	f7f5
8	c1g5	f8e7	33	f2f3	f5f4
9	d1e2	b7e4	34	a3a4	g6f7
10	d3e4	f6e4	35	c3b4	a7a6
11	e2e4	e7g5	36	a4a5	f7e7
12	f3g5	h7h6	37	a5b6??	c7b6
13	g5f3	e8g8	38	c2c4	e7d7
14	f3e5?!	d7e5	39	c4c5	d7c6
15	d4e5	d8d5	40	c5b6	c6b6
16	e4e2	a8d8	41	b4c4	a6a5
17	f1d1	d5c5	42	b2b4?	a5a4
18	h2h3	d8d5	43	c4d4	a4a3
19	d1d5	c5d5	44	d4c3	a3a2
20	a2a3	f8d8	45	c3b2	b6b5
21	e2e3?!	d5d2	46	b2a2	b5b4
22	e3e4	d2d4	46	b2a2	b5b4
23	e4d4	d8d4			
24	g1f1	g7g5			
25	a2e1	d4d2			

0 - 1

Round 2 (Tal Open)

Time control 40 moves in 100 minutes

Wing gambit declined

This game is historic because it was the first win for a micro computer against a human rated over 2100 under tournament time controls.

White: John Williams (2140) **Black: Constellation x**

1	e2e4	c7c5
2	b2b4	b7b6
3	f2f4?! (a)	c5b4 (b)
4	c2c4	c8b7
5	d2d3	e7e6
6	g1f3	b8c6
7	c1b2	g8f6
8	b1d2	f8e7
9	d3d4	d7d5! (c)
10	f1d3	d5e4
11	d2e4	e8g8 (d)
12	e4f6 +	e7f6
13	d3c2	d8d6
14	e1g1? (e)	a8d8
15	d1d3	g7g6
16	a1d1	d6f4

17	b2c1?	f6d4 +
18	g1h1	f4c7 (f)
19	f3g5	d4g7
20	d3h3	h7h6
21	c2g6 (g)	f7g6
22	h3e6 +	g8h8
23	d1d8	c7d8
24	g5f7 +	h8h7!
25	f1e1	d8c7
26	f7d6	c6d4

0 - 1 time

a) Very ambitious but dubious. Better was 3 b4c5 b6c5 4 c2c3 preparing to play d2d4.
b) Computers love to grab pawns.
c) A good move. It restricts the White center.
d) Black has a solid position and a pawn.
e) A case of human error. f3e5 was best.
f) The computer's pawn grabbing has worked out very well. Not it's time to consolidate the position.
g) A desperate piece sacrifice. The human, now short of time, overlooks the computer's tactical resources.

Five minute game

This is a very significant game. A micro computer beats the strongest chess computer in the world.

	White: Super Constellation x		Black: Belle	
1	e2e4	e7e5		
2	g1f3	b8c6		
3	f1c4	g8f6		
4	d2d4	e5d4		
5	e1g1	f6e4		
6	f1e1	d7d5		
7	c4d5	d8d5		
8	b1c3	d5a5		
9	c3e4	c8e6		
10	e4g5	e8c8		
11	g5e6	f7e6		
12	e1e6	f8d6		
13	c1d2 (a)	a5b6		
14	d2g5	d8e8		
15	d1e2	e8e6		
16	e2e6 +	c8b8		
17	a1e1	b8a8? (b)		
18	b2b3	b6a5		
19	a2a4	h8f8		
20	g5d2	a5c5		
21	e6e4	g7g6		
22	h2h3	f8d8		
23	b3b4 (c)	c6b4		
24	f3d4	d8c8		
25			d4e6	c5b6
26			e6c7 + (d)	b6c7
27			d2b4	d6b4
28			e4b4	c7c2
29			e1e7!	b7b6
30			e7h7	c2c4! (e)
31			b4c4	c8c4
32			h7h8 + ? (f)	a8b7
33			h7h7 +	b7a8? (g)
34			h7g7	c4a4
35			g7g8 + ?	a8b7
36			g8g7 +	b7a8?
37			g7g6	b6b5
38			g1f1! (h)	b5b4
39			f1e1	b4b3
40			g6g8 + ?	a8b7
41			g8g7 +	b7c6
42			g7g6 +	c6c7?
43			g6g7 +	c7c6
44			g7g6 +	c6c7?
45			e1d2	b3b2
46			d2c2	a4b4
47			c2b1	a7a5
48			g6g4!	b4b5

49	g4c4 +	c7d6
50	c4c2	a5a4
51	c2b2	b5d5
52	g2g3	d6d5
53	h3h4	d4b4 +
54	h3h4	d4b4 +
55	b1c1	b4c4 +
56	c1b2	d5e4
57	b2a3	e4f3!
58	h4h5	c4c5
59	h5h6	c5h5
60	a3a4	h5h6
61	a4b4	h6c6! (j)
62	b4b3	c6c1
63	b3b4? (k)	c1c6
64	b4b5?	c6c1
65	b5b6?	c1f1? (1)
66	b6c7	f1c1 +
67	c7d7	c1f1
68	d7e7	f1e1 +
69	e7f6	e1h1
70	f6g5	h1f1
71	a2c2	f1f2?? (m)

1 - 0

a) The first move out of ECO and an interesting one. Usually, c1g5 is played when the Black queen goes to 'f5'. With this in between move, Black must decide where to place the queen and puts it on 'b6' where it no l onger can get to the kingside. The move a5b6 is typical for chess computers as it attacks the pawn at 'b1'.
b) Better was a7a6 making luft for the king. Belle probably gets no bonus to make luft on the queenside and regards the move a7a6 as weakening the pawns.
c) This move gives White some weak pawns (the 'a' and 'c' pawns) but trades the 'b' pawn for Black's cramping center pawn at d4.
d) Outcombining Belle!?
e) A good move which forces the Queens off the board.
f) A silly check which only helps drive the Black king to a more active post.
g) A silly response which can only be explained by the fact that Black, being one pawn behind, would love to repeat the position for a draw.
h) The king marches to the queenside to stop the Black pawns!
i) b2b4 with the idea of marching the king to 'a3' is better.
j) Cuts off the White king.
k) a2c2 is best. White can use the rook as a bridge to walk over to the kingside where it can help advance the 'g' pawn.
l) Black thinks he can win the 'f' pawn, but after White moves the queening of the 'g' pawn comes withins Belle's search depth.
m) Belle thinks it can now safely win the 'f' pawn. The White king is in front of the 'g' pawn which pushes it's promotion over Belle's search horizon.

Scott McDonald

Report From Budapest

The Third World Micro Computer Chess Championship was a real heartbreaker for the Novag team. Due to incorrect scoring for the opponent repeating a position three times, Novag threw away two clear wins against the Elite A/S. In the game Elite A/S vs. Novag Super Constellation the Super Constellation was up three pawns when the Elite was allowed to repeat three times, and again in the game Elite A/S vs. Novag X, the Novag X had played a very good game finally arriving at a clear winning position when the Elite was allowed to draw by three repetitions. This problem caused Novag to finish in third and fourth place instead of first and second.

The general consensus of spectators at the tournament was that the top programs were all about equal in strength. An interesting observation however, was the importance of large opening books.

The Fidelity experimental entries, Prestige and Elite A/S, had very large opening books specially prepared for the tournament with a view towards taking their competitors out of book as soon as possible. When some opponents, notably Mephisto and Chess 2001X played without their opening books, they generally achieved good positions against the Fidelity programs. The Novag solution to large, specially prepared opening books has been to concentrate on more randomized, very wide opening books. Note the game Prestige vs. Novag Super Constellation which is virtually a book win for Prestige and Novag X vs. Prestige wherein, Novag X plays differently at the second move and went on to win the game.

Regrettably, some of the competitors seemed to be more concerned with the importance to sales and promotions of their tournament results than the tournament itself.

An example was the awarding of a commercial prize. Almost all the participants, remembering the experiences of Travelmeunde two years before, decided against a commercial prize because of the insurmountable problems of definition and verification of commercial entries. However, Fidelity insisted that they should get the commerical prize. At first it looked like there would be only a single entry in the commercial class, Fidelity, until the late arriving East Germans put their entry 'Chess Master' into the commercial class also. The winning commercial entry, Sensory 9, was admitted to be both a different program and using a different speed computer chip than the product of the same name which is currently available in stores. This is reminiscent of two years ago when Fidelity linked their 5mhz 'World Champion' Experimental machine at Travelmeunde with the commercial 2mhz CSC. It is my hope that the public will not be again mislead as this hurts the entire computer chess marketplace.

Another example was the actions by the Mephisto team to deviate from being passive operators and the even worse response by the Fidelity representative making threats of bodily harm. It was quite correct for the technical committee to censure both parties for conduct that has no place in such a competition.

Finally, the accusations in the final round made by the same Fidelity representative against the operator of Superstar appeared to be based more on the operator's publishing of favorable results for one of Fidelity's competitors than any facts.

In spite of some of the problems which plagued the tournament, the tournament proved to be an educational step toward the emergence of a master level program in computer chess.

David Kittinger

For the third time since 1980, a World Micro Computer Championship was held under the auspices of FIDE and the I.C.C.A. This year it was held in Budapest, Hungary, October 13 -19, 1983. The organizers, The Scientific Society for Telecommunication and the Hungarian Chess Federation, and specifically the organizing committee, Dr. Laszlo Lindner, president, are to be commended for their excellent attempt at covering all the needs and requirements of the entrants.

There were 18 entrants from 8 countries: 3 from the East block Rumania, East Germany, and Hungary; and 5 from the West; United Kingdom, West Germany, Hong Kong, and Denmark, and Fidelity Electronics representing the United States.

Six commercial companies represented 14 of the 18 entries. Obviously, there was much more at stake than merely the tournament prize of a handpainted vase for the World Championship and a beautiful brass chess set for the "Best Commercial Entry". Each company presented its best program, from 16 bit processors by "Mephisto" to the fastest processors available in 8 bit from "Novag".

Fidelity decided to enter with 3 commercially available units: the Prestige, the Elite A/S and the Sensory 9. All 3 had new programs that had been purposely kept from the marketplace pending this tournament. In past tournaments when Fidelity had entered programs that had been in the marketplace for some time, competitors' units seemed to be programmed to specifically beat a Fidelity unit. Therefore, because of this tournament, Fidelity began shipping the SC9 on 1st October 1983 utilizing an improved program running at 2 mghz. This program is in ROM, so it had to be released for production at least four months prior to October 1st. Both the Elite A/S and the Prestige were scheduled for release to the public the week after the tournament. In fact, the Elite A/S was actually presented to the Hungarian Chess Federation and the Prestige was delivered to Enrique Irazoqui at the conclusion of the New York World Computer Tournament.

The tournament was 7 game Swiss tournament, wherein each of the top 5 players played each other, unless they were units from the same company. Each company, and in fact each entrant, can be proud of its program, since they were certainly improved over the programs entered in the last world championship in 1981.

Fidelity was most proud to win the title "World Champion" for the third consecutive time, and "Best Commercial Entry" for the SC9, which was in the marketplace prior to the tournament. The big surprise was that only one other company entered a commercial unit. It appears that the other commercial companies were only interested in the top title, and entered souped-up experimental models, or perhaps they felt there would be no real contest if Fidelity entered either the Prestige or Elite as commercial units.

Fidelity, with its Elite A/S World Champion, which was the only undefeated entrant in the tournament, looks forward to these tournaments where all claims by manufacturers are justified by the final results. See you all next year in Scotland.

Sidney Semole, President
Fidelity Electronics

BUDAPEST 1983

	MACHINE PROGRAM	FIRM	COUNTRY
1	LABIRINT 64		ROM
2	ELITE A/S	FIDELITY	USA
3	65 CYRUS X	INTELLIGENT SOFTWARE	GB
4	CHESS 2001 X	INTELLIGENT SOFTWARE	GB
5	SUPER CONSTELLATION	NOVAS	HONG-KONG
6	NOVAG X	NOVAG	HONG-KONG
7	CHESS 2001	INTELLIGENT SOFTWARE	GB
8	SUPERSTAR X	SCISYS	HONG-KONG
9	CONSTELLATION	NOVAG	HONG-KONG
10	MEPHISTO X	HEGENER & GLASER	BRD
11	MEPHISTO Y	HEGENER & GLASER	BRD
12	MICROMURKS	UNIVERSITY OF HAMBURG	BRD
13	CHESSMASTER	MIKROELERTRONIK ERFURT	DDR
14	SENSORY 9	FIDELITY	USA
15	PRESTIGE	FIDELITY	USA
16	LOGICHESS 2,2	UNIVERSITY OF COPENHAGEN	DEN
17	MEPHISTO EXCALIBUR	HEBENER & GLASER	BRD
18	GEDEON X	VAR	HUN

1 ST ROUND
ELITE A/S - MEPHISTO EXCALIBUR

1. e4 e5 2. Nc3 Nf6 3. f4 d5 4. fxe5 Nxe4 5. Nf3 Be7 6. d4 0-0 7. Bd3 Bh4+ 8. g3 Nxc3 9. bxc3 Be7 10. Be3 Bh3 11. Ng5 Bg2 12. Bxh7+ Kh8 13. Qh5 Bxg5 14. Be4+ Bh6 15. Bxg2 Kg8 16. Bxh6 gxh6 17. Qxh6 Nc6 18. Rabl Na5 19.Qh5 Qd7 20. Qg5+ Kh8 21. Qh6+ Kg8 22. 0-0 Rac8 23. Qg5+ Kh8 24. Rf4 f6 25. Rh4+ Qh7 26. Rxh7+ Kxh7 27. exf6 /1:0/

65CYRUS X - LOGICHESS 2,2

1. d4 Nf6 2. c4 e6 3. Nc3 d5 4. e3 Nc6 5. Be2 Ne4 6. Nxe4 dxe4 7. c5 Qg5 8. g3 Qf5 9. Bg4 Qd5 10. Bd2 h5 11. Be2 e5 12. Bc3 h4 13. Bb5 hxg3 14. Bxc6+ Qxc6 15. fxg3 Be6 16. h4 b6 17. cxb6 axb6 18. a4 exd4 19. Qx d4 f6 20. Qdl Bc5 21. Ne2 Bxe3 22. Nd4 Qd6 23. Ne2 Qxdl+ 24. Kx dl Rxa4 25. Kc2 b5 26. Rxa4 bxa4 27. Bd4 Bh6 28. Nc3 Bb3+ 29. Kbl f5 30. g4 fxg4 31. Nxe4 0-0 32. Rel Rf3 33. Ng5 Bxg5 34. hxg5 Rd3 35. g6 Rdl+ 36. Rxdl Bxdl 37. Kcl Bf3 38. Kd2 Be4 39. Ke3 Bxg6 40. Be5 c5 41. Kf4 Bh5 42. Kg5 g6 43. Kf6 c4 44. Ke6 c3 45. bxc3 a3 46. c4 a2 47. c5 g3 48. c6 g2 49. Bd4 glQ 50. Bxgl alQ 51. Bc5 Bg4+ 52. Kd6 Bf3 53. Bf2 Qdl+ 54. Kc7 Qcl 55. Bg3 Qxc6+ 56. Kd8 Bg4 57. Ke7 Qe6+ 58. Kd8 Qd7+ /0:1/

CHESS 2001 - MIKROMURKS

1. e4 e5 2. Nf3 f5 3. Nxe5 Qf6 4. d4 d6 5. Nc4 fxe4 6. Be2 Nc6 7. d5 Ne5 8. Nc3 Nxc4 9. Bxc4 Qg6 10. 0-0 Bh3 11. g3 Bxfl 12. Qxfl a6 13. Be3 Nf6 14. Qh3 Ng4 15. Rel Ne5 16. Be2 Be7 17. Bh5 Qxh5 18. Qxh5+ g6 19. Qh3 Nf3+ 20. Kfl Nxel 21. Kxel 0-0 22. Qe6+ Rf7 23. Nxe4 Rd8 24. Bg5 Kf8 25. Bh 6+ Kg8 26. Kfl a5 27. Ng5 Bxg5 28. Bxg5 Rdf8 29. Bf6 a4 30. Kg2 Ra8 31. g4 a3 32. b4Kf8 33. g5 b6 34. Qe2 Ra7 35. B5 Ra8 36. Qe3 Kg8 37. Kgl Ra4 38. Qe8+ Rf8 39. Qe6+ Rf7 40. Qc8+ Rf8 41. Qxc7 Rf7 42. Qxb6 Rd7 43. Qe3 Kf8 44. Qe6 Raa7 45. b6 Rb7 46. c4 h5 47. gxh6 Rh7 48. Qc8+ Kf7 49. Qxb7+ /1:0/

SUPER CONSTELLATION - SENSORY 9

1. e4 c5 2. Nf3 d6 3. d4 cxd4 4. Nxd4 Nf6 5. Nc3 a6 6. f4 e5 7. Nf3 Qc7 8. a4 b6 9. Bd3 Nbd7 10. 0-0 Bb7 11. Khl Be7 12. h3 Nh5 13. Ne2 Nc5 14. fxe5 dxe5 15. a5 bxa5 16. Bd2 Nxe4 17. Bxe4 Bxe4 18. Bxa5 Qb7 19. Bc3 Rd8 20. Qel 0-0 21. Bxe5 Bxc2 22. Rcl Rc8 23. Ned4 Bd3 24. Rf2 Qe4 25. Qxe4 Rxcl+ 26. Qel Rfc8 27. Kh2 Rxel 28. Nxel Bc4 29. Rc2 Rc5 30. Nef3 Bd5 31. Rxc5 Bxc5 32. g4 Nf6 33. Bxf6 gxf6 34. Kg3 Bd6+ 35. Kf2 Kf8 36. Ke3 Ke7 37. Nf5+ Ke6 38. Nel Be5 39. Nd3 Bg2 40. h4 Bfl 41. b3 a5 42. Nc5+ Kd5 43. Na4 Bb5 44. Ne7+ Ke6 45. Nf5 Bxa4 46. bxa4 Kd5 47. Nh6 Bg3 48. Nf5 Bel 49. Ke2 Bb4 50. Nh5 Ke6 51. Kf3 Bf8 52. Nf5 Ke5 53. Ne3 Kd4 54. Ke2 Ke4 55. Nc4 Kf4 56. Nx5 Kxg4 57. Nb7 f5 58. a5 Bg7 59. a6 Bd4 60. Nd6 f4 61. Kd3 Bgl 62. Ke2 f5 63. Ne8 f3+ 64. Kfl Bd4 65. Nf6+ Kxh4 66. Nxh7 Kg3 67. Nf6 f2 68. Nd5 /½:½/

NOVAG X - CHESSMASTER

1. e4 Nf6 2. e5 Nd5 3. d4 d6 4. c4 Nb6 5. f4 dxe5 6. fxe5 Nc6 7. Be3 Bf5 8. Nc3 e6 9. Nf3 Be7 10. d5 exd5 11. cxd5 Nb4 12. Nd4 Qd7 13. d3 Bg4 14. e6 Bh4+ 15. g3 Bxg3+ 16. hxg3 fxe6 17. Qxg4 N4xd5 18. Bd2 Nxc3 19. Bxc3 0-0 20. Bd3 e5 21. Bxh7+ Kf7 22. 0-0+ Ke8 23. Bg6+ Ke7 24. Bb4+ c5 25. Bxc5+ Kd8 26. Rxf8+ Kc7 27. Bxb6+ axb6 28. Rcl+ Kd6 29. Nf5+ Qxf5 30. Rdl+ Qd3 31. Rxd3+ Kc5 32. Qb4+ Kc6 33. Qc4+ /1:0/

CHESS 2001 x - PRESTIGE

1. e3 e5 2. Nc3 d5 3. Qh5 Nc6 4. Bb5 Qd6 5. Bxc6+ bxc6 6. d4 e4 7. Ne2 Be7 8. 0-0 Nf6 9. Qg5 Ng4 10. Qf4 Qd8 11. Nxe4 dxe4 12. Qxe4 Qd6 13. Ng3 0-0 14. c4 Be6 15. c5 Qd5 16. Bd2 Qxe4 17. Nxe4 f5 18. Ng3 Bc4 19. Rfcl Bd5 20. h3 Nh6 21. Ba5 Rac8 22. Ne2 Bh4 23. Nf4 R f7 24. b3 Bf6 25. Rc2 Rfl 26. Nxd5 cxd5 27. Rdl c6 28. a4 Bh4 29. g3 Bd8 30. Bxd8 Rxd8 31. Kg2 Rb7 32. Rd3 g6 33. Rdc3 Rdb8 34. Rb2 Rb4 35. a5 Rhb5 36. a6 Ra5 37. b4 Rxa6 38. Kf3 Nf7 39. h4 Ra5 40. Kf4 Kf8 41. f3 h5 42. bxa5 Rxb2 43. Ra3 Nd8 44. g4 fxg4 45. fxg4 Rg2 46. gxh5 gxh5 47. Kf3 Rg4 48. Rb3 Rxh4 49. Rb8 Ke8 50. Ra8 Rh3+ 51. Ke2 a6 52. Rxa6 h4 53. Kf2 Rh2+ 54. Kf3 h3 55. Ra7 Ne6 56. Ra6 Kd7 57. Ra7+ Nc7 58. Kg3 Re2 59. Kxh3 Rxe3+ 60. Kg2 Rb3 61. a6 Ra3 62. Rb7 /0:1/

SCISYS SUPERSTAR X - MEPHISTO Y

1. d4 d5 2. c4 dxc4 3. Nf3 a6 4. e4 b5 5. a4 B67 6. axb5 axb5 7. Rxa8 Bxa8 8. Nc3 c6 9. Be2 e6 10. 0-0 Nf6 11. Bg5 Be7 12. Qc2 0-0 13. Ral Nbd7 14. Ra7 h6 15. Bh4 Re8 16. h3 Qb8 17. Ra6 b4 18. Na4 Bb7 19. Bg3 b3 20. Qbl Bxa6 21. Bxb8 Rxb8 22. Nc3 Bb4 23. Qfl Bxc3 24. Qal Bxb2 25. Qxa6 Bc3 26. Qxc4 b2 27. Bd3 blQ+ 28. Bxbl Rxbl+ 29. Kh2 Nxe4 30. Qxc6 Ndf6 31. Qc8+ Kh7 32. Qc7 Rfl 33. Qxf7 Rxf2 34. Qxe6 Re2 35. Qc4 Rb2 36. Qc8 Rf2 37. d5 Bb4 38. Qa6 Nxd5 39. Qa8 Ndc3 40. Ne5 Bd6 41. Qe8 Nf6 42. Qg6+ Kg8 43. Kgl Ra2 44. Kgl Ra2 44. Qf7+ Kh8 45. Ng6+ Kh7 46. Nf8+ Bxf8 47. Qxf8 Ne2+ 48. Kfl Ng3+ 49. Kel Nfe4 50. Qf3 Ral4 51. Qdl Rxdl+ 52. Kdl /0:1/

CONSTELLATION - MEPHISTO X

1. e4 c5 2. c3 e6 3. Bb5 Nf6 4. e5Nd5 5. Nf3 Be7 6. 0-0 0-0 7. d4 Nc6 8. Bxc6 exc6 9. Qb3 cxd4 10. cxd4 Qb6 11. Qxb6 axb6 12. Nc3 f6 13. Rdl Bd7 14. Ne4 Rfd8 15. exf6 Nxf6 16. Bg5 Ra4 17. b3 Ra3 18. Ne5 Be8 19. Nc4 Ra6 20. Ne3 Bg6 21. f3 Rd7 22. Nxf6+ Bxf6 23. Bxf6 gxf6 24. a4 Kf7 25. g4 b5 26. a5 Ra8 27. h4 h5 28. gxh5 Bxh5 29. Kf2 Rad8 30. Kg3 Rxd4 31. Rxd4 Rxd4 32. Rbl e5 33. b4 Rf4 34. Ng4 Bxg4 35. fxg4 Kg6 36. Rb2 Rc4 37. Kf3 Rc3+ 38. Kg2 Re3 /Time, 0:1/

2ND ROUND

LOGICHESS 2,2 - ELITE A/S

1. d4 d5 2. c4 dxc4 3. Nf3 Nf6 4. e3 e6 5. Bxc4 c5 6. 0-0 a6 7. Nc3 b5 8. Bd3 Bb7 9. Bc2 Ndb7 10. Ng5 Bd6 11. f4 0-0 12. dxc5 Bxc5 13. Be4 Qc7 14. Bxb7 Qxb7 15. Qd3 b4 16. Nce4 h6 17. Nxf6+ Nxf6 18. Nf3 Rfd8 19. Qc4 Qb6 20. Rel Ng4 21. Qb3 Qc7 22. h3 a5 23. hg4 a4 24. Qdl Rxdl 25. Rxdl Qxf4 26. Kf2 Qxg4 27. Rd7 Qc4 28. Ne5 Qb5 29. Rdl Bxe3+ 30. Bxe3 Qxe5 31. Rd4 Rc8 32. Radl Rc2+ 33. Rld2 Qxd4 34. Rxc2 Qd5 35. Bf4 Qf5 36. Rc4 e5 37. g3 g5 38. Rxb4 exf4 39. Kg2 Qd5+ /0:1/ 1,51-1,39

MEPHISTO X - CHESS 2001

1. e4 c5 2. Nf3 d6 3. Bc4 Nf6 4. c3 Nc6 5. d3 e6 6. 0-0 Be7 7. Bf4 0-0 8. a4 d5 9. exd5 exd5 10. Bb3 Qd7 11. h3 Bd6 12. Bg5 Be7 13. d4 c4 14. Bc2 Ne4 15. Bxe4 dxe4 16. Bxe7 Qxe7 17. Nfd2 e3 18. Rel exf2+ 19. Kxf2 Qf6+ 20. Qf3 Qxf3+ 21. Nxf3 Be6 22. Na3 Rac8 23. Nadl Rfd8 24. Ne5 Nxe5 25. Rxe5 Rd5 26. Rdel R5d8 27. Nb5 a6 28. Na3 Rd6 29. g4 Rb6 30. Rle2 Rd6 31. Kf3 Rcc6 32. Nc2 f6 33. R5e3 Rb6 34. Na3 Bd5+ 35. Kg3 Re6 36. Rxe6 Rxe6 37. Rxe6 Bxe6 38. Kf3 Bd5+ 39. Kg3 Kf7 40. Nc2 Ke6 41. Ne3 b5 42. Nf5 g6 43. Ne3 bxa4 44. Kf4 g5+ 45. Kg3 a5 46. h4 Kd6 47. h5 Kc6 48. Kf2 Kd6 49. Nf5+ Kc7 50. Ng7 Kd7 51. Ke3 Kd6 52. Nf5+ Ke6 53. Ke2 Kd7 54. Ne3 Kd6 55. Hxd5 Kxd5 56. Kf3 h6 57. Ke3 a3 58. bxa3 a4 59. Kf3 Ke6 60. Ke4 Kd6 61. Kf5 Kd5 62. Kxf6 Ke4 63. Ke6 Kf4 64. d5 Kxg4 65. d6 Kxh5 66. d7 Kg4 67. d8 Qh5 68. Qd5 Kf4 69. Qxc4+ Ke3 70. Qd4+ Kf3 71. c4 /1:0/ 2,15-1,58

CHESSMASTER - CHESS 2001 X

1. e4 Nf6 2. e5 Nd5 3. d4 e6 4. Nf3 Bb4+ 5. c3 Be7 6. Bd3 Nc6 7. Qc2 h6 8. 0-0 d6 9. Na3 dxe5 10. Nxe5 Nxe5 11. dxe5 0-0 12. Bh7+ Kh8 13. Bd2 g6 14. Bxh6 Kxh7 15. Bxf8 Qxf8 16. Nb5 Bd7 17. Qd3 Bxb5 18. Qxb5 b6 19. Qc4 Rh8 20. Radl Kg8 21. Rfel b5 22. Qe4 Qh6 23. Qd4 c5 24. Qg4 c4 25. Qd4 Rb7 26. b3 Rc7 27. b4 a5 28. bxa5 Bc5 29. Qg4 Nxc3 30. Rd8+ Kh7 31. a6 Nxa2 32. Qf3 Nb4 33. Qf6 Bf8 34. Qf3 Nd3 35. Re3 Bg7 36. Qe2 Qg5 37. Rb8 Bxe5 38. Rf8 Bd4 39. Rf3 Nf4 40. Qfl Rd7 41. Rc8 Qe5 42. g3 Ne2+ 43. Kg2 Qe4 44. Rb8 Ba7 45. Rxb5 Nd4 46. Qdl Qxf3+ 47. Qxf3 Nxf3 48. Kxf3 c3 49. Rb7 Rxb7 50. axb7 c2 51. Kg4 clQ 52. h4 Qb2 53. f3 Qxb7 54. Kf4 Qd5 55. g4 Bf2 56. h5 g5+ /mate/ /0:1/ 2,27-2,16

MEPHISTO Y - NOVAG X

1. e4 c5 2. Nf3 d6 3. Bc4 e5 4. 0-0 Nf6 5. Ng5 d5 6. exd5 Bf5 7. Nc3 Bd6 8. Bb5+ Nbd7 9. d3 0-0 10. f4 exf4 11. Bxf4 Bxf4 12. Rxf4 Bg6 13. Nge4 Qb6 14. Nxf6+ Nxf6 15. Rbl a6 16. Bc4 Qd6 17. Qf3 b5 18. Bb3 Rad8 19. Rel h6 20. a3 Nh5 21. Rh4 Qb6 22. Qe3 Nf6 23. Ne4 Rf8 24. Nxf6+ Qxf6 25. Qxe8+ Rxe8 28. Rxe8+ Kh7 27. Rh3 Qd4+ 28. Rhe3 Qxb2 29. Ra8 Qcl+ 30. Kf2 Qd2+ 31. Re2 Qf4+ 32. Kgl /½:½/ 1,15-1,01

PRESTIGE - SUPER CONSTELLATION

1. e4 e5 2. Nc3 Nf6 3. f4 d5 4. fxe5 Nxe4 5. Nf3 Be7 6. d4 Nxc3 7. bxc3 Be6 8. Rbl b6 9. Bd3 0-0 10. 0-0 Nd7 11. Qel c5 12. Qg3 Kh8 13. Ng5 h6 14. Nxe6 fxe6 15. Bf4 c4 16. Be2 Ba3 17. Bg4 Qe7 18. Qh3 Rae8 19. Bg3 Rxfl+ 20. Rxfl b5 21. Bh4 g5 22. Bg3 Kg7 23. Rf6 Nxf6 24. exf6+ Qxf6 25. Be5 Qxe5 26. dxe5 Bc5+ 27. Khl Rf8 29. g3 d4 29. Bxe6 dxc3 30. Bd5 Bd4 31. Qe6 Rfl+ 32. Kg2 Rf2+ 33. Kh3 h5 34. Qg8+ Kh6 35. Qh8+ Kg6 36. Be4+ Kf7 37. Qxh5+ Ke7 38. Qxg5+ Ke7 38. Qxg5+ Ke6 39. Qd8 Bxe5 40. Qe8+ Kd6 41. Qc6+ Ke7 42. Qc5+ Ke6 43. Qxf2 b4 44. Qf5+ Kd6 45. Qf8+ Ke6 46. Qxb4 Kf6 47. Qxc4 Ke7 48. Qc5+ Ke6 49. Qd5+ /1:0/ 2,05-2,03

SENSORY 9 - CONSTELLATION

1. c4 c5 2. Nc3 Nc6 3. g3 g6 4. Bg2 Bg7 5. Nf3 Nf6 6. 0-0 0-0 7. d4 axd4 8. Nxd4 Nxd4 9. Qxd4 d6 10. Qd3 Nd7 11. Bg5 h6 12. Bf4 Nc5 13. Qd2 g5 14. Be3 Nd7 15. Radl Ne5 16. b3 Nc6 17. Nb5 a6 18. Nd4 Bd7 19. c5 Na5 20. cxd6 exd6 21. Qd3 Re8 22. b4 Nc6 23. Nxc6 Bxc6 24. Bxc6 bxc6 25. Qxd6 Qxd6 26. Rxd6 a5 27. a3 axb4 28. axb4 Ra2 29. Rxc6 Rb2 30. Rfcl Rx64 31. Bc5 Rb2 32. e3 Rd8 33. e4 Re8 34. Rc4 Rd8 35. Rb4 Rxb4 36. Bxb4 Rd4 37. Bd6 Rxe4 38. Rc7 Re2 39. Kfl Ra2 40. h3 Bd4 41. f4 gxf4 42. Bxf4 Kg7 43. Rd7 Bc3 44. Be3 Rh2 45. h4 Rb2 46. h5 Bf6 47. Rd5 Rc2 48. Rf5 Bb2 49. Rf2 Rxf2+ 50. Kxf2 f5 51. Bf4 Ba3 52. Ke2 Be7 53. Kd3 Bg5 54. Bc7 Kf6 55. Bd8+ Kf7 56. Bxg5 hxg5 57. Ke3 Kg7 58. Kd4 Kh6 59. Ke5 f4 60. gxf4 g4 61. Kd4 g3 62. Ke3 g2 63. Kf2 Kxh5 64. Kxg2 Kg4 /½:½/ 2,50-2,46

MEPHISTO EXCALIBUR - 65 CYRUS X

1. Nf3 d5 2. d4 Nf6 3. c4 Bf5 4. Qb3 b6 5. Nc3 e6 6. Bg5 c6 7. cxd5 exd5 8. Nh4 Be6 9. e3 h6 10. Bf4 g5 11. Bxb8 Qxb8 12. Nf3 Bd6 13. h3 Bf5 14. Qa4 b5 15. Qdl b4 16. Na4 a5 17. Rcl Qcl 18. Bb5 Bd7 19. Bd3 0-0 Ne4 21. Bxe4 dxe4 22. Ne5 Bxe5 23. dxe5 Rfd8 24. Qd6 Qxd6 25. exd6 Be6 26. Rfdl Bxa2 27. Rxc6 Bb3 28. Ral Bd5 29. Rb6 Rac8 30. Rdl Bb3 31. Ral Bc4 32. Rcl Kg7 33. g4 f6 34. Rb7+ Bf7 35. Nc5 Rxd6 36. Ne6+ Kg6 37. Rxc8 Rdl+ 38. Kg2 Bxe6 39. Rcc7 h5 40. Rg7+ Kh6 /1:0/ 1,46-1,52

MICROMURKS - SCISYS SUPERSTAR X

1. e4 c6 2. d4 d5 3. e5 Bf5 4. h4 Nd7 5. Nc3 e6 6. g4 Be4 7. f3 Bxc2 8. Qxc2 Qb6 9. Nge2 c5 10. Na4 Qc6 11. Be3 cxd4 12. Qxc6 bxc6 13. Bxd4 c5 14. Bc3 d4 15. Nxd4 cxd4 16. Bxd4 Rc8 17. Bb5 Bb4+ 18. Kfl Rc7 19. a3 Be7 20. Rdl h5 21. g5 f6 22. exf6 gxf6 23. Be3 fxg5 24. hxg5 e5 25. Rd5 h4 26. g6 e4 27. Bxd7+ Rxd7 28. fxe4 Rxd5 29. exd5 Nf6 30. Nc3 a6 31. Ke2 Rg8 32. Rgl Kd7 33. Kd3 Bd6 34. Bd4 Nh5 35. Ne2 h3 36. Rg5 Ng7 37. Ng3 Bxg3 38. Rxg3 Nh5 39. Rg4 Rxg6 40. Rh4 Nf6 41. Bxf6 Rxf6 42. Rxh3 Kd6 43. Rh5 Rg6 44. Kc4 Rg4+ 45. Kb3 a5 46. Kc3 Rg3+ 47. Kc4 Rg4+ 48. Kd3 Rg3+ 39. Kc2 Re3 51. Rxe5 Kxe5 52. Kb3 Kxd5 53. Kb3 Kxd5 53. Ka4 Kc4 54. Kxa5 55. b4+ Kd5 56. b5 Kd6 57. b6 Kd7 58. Ka6 Kc8 59. a4 Kb8 60. b7 Kc7 /1:0/ 2,04-2,58

3RD ROUND

ELITE A/S - MEPHISTO X

1. e4 c5 2. Nf3 e6 3. c3 d5 4. exd5 exd5 5. d4 Bg4 6. Bb5+ Bd7 7. Qe2+ Qe7 8. Be3 Bxb5 9. Qxb5+ Qd7 10. Na3 c4 11. Qxd7+ Nxd7 12. Nb5 Kd8 13. Bf4 Ndf6 14. Ne5 Ke7 15. Nd6 h6 16. Nexf7 Rh7 17. 0-0-0 g5 18. Rhel+ Ne4 19. f3 gxf4 20. fxe4 Kd7 21. e5 Ke6 22. Rfl Rxf7 23. Nxf7 Kxf7 24. g3 Ke6 25. gxf4 Ne7 26. Rd2 a5 27. f5+ Kf7 28. f6 Ng6 29. Rdf2 h5 30. Kc2 Bh6 31. Rf5 h4 32. Rh5 Rh8 33. Kbl b5 34. a3 Bd2 35. Rxh8 Nxh8 36. Rf2 Bh6 37. Rf5 Ng6 38. Rh5 Bf4 39. h3 Ke6 40. Kc2 b4 41. axb4 axb4 42. Kdl Be3 43. Rh7 bxc3 44. bxc3 bf2 45. Rg7 Nh8 46. Re7+ Kf5 47. Rd7 Ke6 48. Rd6+ Kf7 49. Rxd5 Ke6 50. Rd6+ Kf7 51. Rc6 Bg3 52. Rc7+ Ke6 53. Re7+ Kd5 5. f7 Nxf7 55. Rxf7 /1:0/ 2,10-2,28

NOVAG X - PRESTIGE

1. e4 c5 2. c3 d5 3. exd5 Qxd5 4. d4 e6 5. Bf4 Nc6 6. Nf3 Nf6 7. Be2 cxd4 8. cxd4 Bb4+ 9. Nc3 Qf5 10. Be5 Ne4 11. Rcl f6 12. Bc7 0-0 13. 0-0 Bxc3 14. bxc3 Rf7 15. Bg3 Nxg3 16. hxg3 Bd7 17. Bd3 Qh5 18. Rel Rxf8 19. Qb3 b6 20. Bc4 Rae8 21. Qb2 Na5 23. Be2 Qh6 23. Bb5 Nc6 24. Qa3 Rf7 25. Qd6 Rc8 26. Bc4 Nd8 27. Bb3 Qh5 28. Qf4 Qa5 29. Qd2 Qh5 30. Rbl Qf5 31. c4 Qh5 32. Re4 Qg6 33. Qe3 Nb7 34. Nh4 Qg5 35. Qxg5 fxg5 36. Nf3 Nd6 37. Re2 Nxc4 38. Nxg5 Rf6 39. Rbel Rf5 40. Nxe6 Rd5 41. Nc5 Bb5 42. a4 Rxd4 43. axb5 Rxc5 44. Re4 Rxe4 45. Rxe4 Kf7 46. f3 a5 47. bxa6 b5 48. a7 Rc8 49. Rxc4 bxc4 50. Bxc4+ Ke7 51. Bd5 Kd6 52. a8Q Rxa8 53. Bxa8 Kc5 54. Kf2 Kd4 55. f4 h6 56. Kf3 Kd3 57. Be4+ Kc4 58. Ke3 Kc5 59. g4 Kc4 60. g3 Kc5 61. f5 Kc4 62. Kf4 Kc5 63. g5 Kd6 64. gxh6 gxh6 65. g4 Ke7 66. Ke5 Kf7 67. f6 Kg8 68. Bd5+ Kf8 69. Ke6 Ke8 70. f7+ Kf8 71. Kf6 /1:0/ 2,47-3,01

CHESS 2001 X - MEPHISTO Y

1. e4 c5 2. Nf3 e6 3. d4 cxd4 4. Nxd4 Nf6 5. Nc3 Nc6 6. Nxc6 bxc6 7. e5 Nd5 8. Nxd5 cxd5 9. Qd3 d6 10. Bf4 dxe5 11. Bxe5 f6 12. Bc3 Bd6 13. 0-0-0 0-0 14. Be2 Qb6 15. Bd4 Bf4+ 16. Kbl Qb8 17. Be5 Rd8 18. g3 Bd6 19. Qe3 Bxc5 20. Qxc5 Bd7 21. Bd3 Qb7 22. Rdel e5 23. F3 a5 24. h4 Rdc8 25. Qe3 Qb4 26. a3 Qb7 27. Ka2 Be6 28. Kbl Rab8 29. b3 a4 30. b4 Qc6 31. Rh2 Qc3 32. f4 e4 33. Bfl Bf7 34. g4 Qc6 35. Rdl Be6 36. f5 Qc7 37. Rf2 Bf7 38. Ba6 Re8 39. Be2 /time/ /1:0/ 1,30-2,01

CHESS 2001 - MEPHISTO E

1. Nf3 d5 2. c4 d4 3. e3 c5 4. exd4 cxd4 5. Bd3 Bg4 6. h3 Bh5 7. g4 Bg6 8. Bxg6 fxg6 9. d3 Nf6 10. g5 Nh5 11. Qb3 Qd7 12. Ne5 Qc7 13. Qa4+ Nc6 14. Nxc6 Qxc6 15. Qxc6+ bxc6 16. 0-0 e5 17. Rel Bd6 18. c5 Bc7 19. Na3 0-0 20. Nc4 Rae8 21. Kg2 Rf5 22. b4 Ref8 23. Kgl Rxf2 24. a3 Ng3 25. Na5 Bxa5 26. bxa5 Ne2+ 27. Rxe2 Rxe2 28. Rbl Rel+ 29. Kh2 Rf2 30. Kg3 Rc2 31. Rb8+ Kf7 32. Rb7+ Re6 33. Bf4 exf4+ 34. Kxf4 Rxc5 35. Rxa7 Rf5+ 36. Kg3 Re3+ 37. Kh2 Rb5 38. Kgl Rxh3 39. a4 Rxg5+ 40. Kf2 Rf5+ 41. Kg2 Rxd3 42. Rxg7 Ra3 43. Rb7 d3 44. Rxh7 Ral 45. a6 d2 46. a7 dlQ 47. Re7+ Kxe7 48. a8Q Qg4+ 49. Kh2 Rh5+ mate /0:1/ 1,55-2,25

MICROMURKS - SENSORY 9

1. e4 c5 2. b4 cxb4 3. Bb2 b6 4. Bc4 Bb7 5. Qf3 Nf6 6. Bxf6 exf6 7. Qb3 Qe7 8. Bd5 Bxd5 9. Qxd5 Nc6 10. Nf3 g6 11. 0-0 Bg7 12. d4 0-0 13. c4 Rae8 14. Nbd2 Bh6 15. Khl Bf4 16. g3 Bh6 17. Bfel Qe6

18. Radl a6 19. Kg2 f5 20. e5 f6 21. Nb3 Qxd5 22. cxd5 Ne7 23. d6 Nd5 24. Rd3 Rc8 25. e6 dxe6 26. Nal Kf7 27. Rb3 Rfd8 28. a3 a5 29. h4 Rxd6 30. axb4 Nxb4 31. R3bl Rdc6 32. Rb3 Rcl 33. Rbl Rxbl 34. Rxbl b5 35. Nb3 Nc6 36. Nc5 b4 37. Nb7 Ra8 /0:1/ 2,01-1,44

SUPER CONSTELLATION - LOGICHESS 2,2

1. d4 Nf6 2. c4 e6 3. Nc3 d5 4. Bg5 Nbd7 5. e3 Be7 6. Nf3 0-0 7. Bd3 dxc4 8. Bxc4 Nb6 9. Bb3 Nfd5 10. Bxe7 Qxe7 11. 0-0 Nxc3 12. bxc3 Bd7 13. Qc2 Bc6 14. Ne5 f5 15. Nxc6 bxc6 16. Rabl Rab8 17. Rfdl Qd6 19. h3 Kh8 19. e4 fxe4 20. Qxe4 Nd5 21. Bc2 g6 22. Qd3 Qf4 23. Rfl Rxbl 24. Bxbl e5 25. Qc4 exd4 26. cxd4 Qd2 27. Qc5 Kg8 28. a3 a5 29. Qxc6 Nc3 30. Qc4+ Rf7 31. Bd3 Kf8 32. Qa6 Kg7 33. Qc4 Re7 34. Qc5 Kf8 35. Bc4 Ne4 36. Qd5 Nf6 37. Qd8+ Ne8 38. Qd5 Nf6 39. Qc5 Ne4 40. Qa7 Nd6 41. Qb8+ Ne8 42. d5 Re4 43. Qb3 Nf6 44. Qb5 Qc3 45. Bb3 Ke7 46. Kh2 Qe5+ 47. Kgl Qc3 48. Qb7 Rd4 49. Rbl 50. d6+ Kxd6 51. Qa6+ Qc6 52. Qxc6+ Kxc6 53. Rdl Rxdl+ 54. Bxdl Kb5 55. Kh2 c5 56. Kgl c4 57. Kfl Ne4 58. Bc2 Nc5 59. Ke3 Nb3 60. Ke3 Nal 61. Bbl Nb3 62. f4 Nc5 63. f5 gxf5 64. Bxf5 h6 65. Kd4 Nb3+ 66. Kd5 Nd2 67. Bg6 Kb6 68. Kd4 Kb5 69. Ke3 Nfl 70. Be8+ Ka5 71. g4 Ne3 72. Bc6 Kb6 73. Bd7 Kc5 74. Bxa4 Nd5+ 75. Kb2 c3+ 76. Kb3 Kd4 77. Kb5 Ke3 78. Kc2 Kd4 79. a4 Nf4 80. a5 Nd5 81. a6 Nb4 82. Kb3 c2 83. Kb2 Ke3 84. Kcl Na2+ 85. Kxc2 Nb4+ 86. Kb3 Nxa6 87. Ba Kf3 88. Adj. /1:0/ 4,033,59

65 CYRUS X - CONSTELLATION

1. d4 d5 2. c4 e5 3. Nc3 exd4 4. Qxd4 dxc4 5. Qe4+ Ne7 6. Bf4 Nbc6 7. Nb5 Nf5 8. Qe3 Nb4 9. Nxc7+ Qxc7 10. Bxc7 Nc2+ 11. Kd2 Nxe3 12. fxe3 Nd5 13. Bf4 Bb4+ 14. Kcl c3 15. Be5 Nxe3 16. Nh3 0-0-0 17. Nf2 Rd2 18. g4 Rc2+ 19. Kbl Rxe2+ 20. gxf5 Rel+ /0:1/ 1,05-0,46

SUPERSTAR X - CHESSMASTER

1. e4 e5 2. Nf3 d6 3. d4 Nf6 4. dxe5 Nxe4 5. Bd3 d5 6. Qe2 Bf5 7. Nd4 Bg6 8. 0-0 Bc5 9. Nb3 Nd 10. Nxc5 Ndxc5 11. Bxe4 Bxe4 12. Nc3 f6 13. Qb5+ Nd7 14. e6 c6 15. Qxb7 Ne5 16. f4 Rb8 17. Qxa7 Ra8 18. Qxg7 Qb6+ 19. Rf2 Rf8 20. Nxe4 dex4 21. e7 Rf7 22. Qg8+ Kxe7 23. Qxa8 Nc4 24. b3 e3 25. Re2 Rf8 26. Qa4 Nd6 27. Bxe3 Qb5 28. Qa7+ Ke6 29. Rael Rf7 30. c4 Nxc4 31. bxc4 Qxc4 32. Qb6 Kd5 33. Bf2 Qc3 34. Rdl+ Kc4 35. Qc5+ mate /1:0/ 0,50-1,35

LABIRINT 64 - GEDEON X

1. e4 e5 2. Nf3 Nc6 3. d3 Nf6 4. Bg5 Bb4+ 5. Nc3 0-0 6. Bxf6 Bxc3+ 7. xc3 Qxf6 8. Q3 d6 9. Bg2 Bg4 10. h3 Bxf3 11. Bxf3 Rab8 12. h4 a5 13. 0-0 Na7 14. a4 Qe6 15. Bh5 Nc6 16. f4 exf4 17. Rxf4 Qe5 18. d4 Qe6 19. d5 Qh3 20. Qg4 Qxg4 21. Rxg4 Ne5 22. Rf4 b5 23. axb5 Rxb5 24. Re2 Rb2 25. Bh5 Rxc2 26. Ra3 Nc4 27. Ra4 Rcl+ 28. Kf2 Nb2 29. Rxa5 Nd3+ 30. Kg2 Nd3+ 31. Kg2 Nxf4+ 32. gxf4 Rc2+ 33. Kg3 Rxc3+ 34. Kg2 Rc4 35. f5 Rxe4 36. Ra7 Rxh4 37. Bdl Rf4 38. Kg3 Rxf5 39. Kg4 Rxd5 40. Bb3 Rd4+ 41. Kf5 Re8 42. Ra5 h6 43. Ba2 g6+ 44. Kf6 Rf4+ /0:1/ 1,06-1,50

LOGICHESS 2,2 - MICROMURKS

1. d4 d5 2. c4 e5 3. dxe5 d4 4. Nf3 Nc6 5. Bf4 Nge7 6. e3 Ng6 7. Qd3 Bc5 8. Qe4 Nxf4 9. exf4 Bb4+ 10. Nbd2 0-0 11. a3 Bxd2+ 12. Nxd2 g6 13. Rcl Bf5 14. Qd5 Qc8 15. Ne4 Rd8 16. Nf6+ Kg7 17. Qc5 d3 18. Nd5 Nb8 19. Qd4 d2+ 20. Kxd2 c5 21. Qe3 Be6 22. Rc3 Nd4 24. Qd3 Nb5 25. Rcl Nc7 26. Qe3 b6 27. Bd3 Nxd5 28. cxd5 Bxd5 29. f3 c4 30. Kel Qc6 31. b3 c3 32. Be4 Rac8 33. Bxd5 Qxd5 34. Rbl Qa5 35. Ral Rd2 36. b4 Qa4 37. Rgl Qb3 38. Rcl Qxa3 39. Rxc3 Qal+ 40. Kxd2 Qb2+ 41. Kdl Rxc3 42. Qd2 Qbl+ 43. Ke2 Qxgl 44. Qxc3 Qxg2+ 45. Ke3 Qgl+ 46. Ke4 Qxh2 47. e6+ Kf8 48. Qc8+ Kg7 49. Qc3+ Kf8 50. Qc8+Kg7 51. Qc3+ /½:½/ 2,30-1,59

MEPHISTO X - CHESS 2001 X

1. e4 d5 2. exd5 Qxd5 3. Nc3 Qd8 4. d4 g6 5. Bb5+ c6 6.Bc4 Bg7 7. Nf3 b5 8. Be2 b4 9. Na4 Bg4 10. Be3 Nf6 11. a3 a5 12. 0-0 Nd5 13. Bg5 h6 14. Bh4 g5 15. Bg3 e6 16. h3 Bxf3 17. Bxf3 Na6 18. ax64 ax64 19. Qd3 Nac7 20. Qc4 0-0 21. c3 bxc3 22. bxc3 Qd7 23. Nc5 Qe7 24. Ne4 Qd7 25. Rfbl Rfb8 26. Rxb8+ Rxb8 27. Nc5 Qe7 28. Bxc7 Nxc7 29. Bxc6 Qd6 30. Be4 Nd5 31. Ra6 Qf4 32. Ral Qd6 33. Ra7 Qf4 34. Ra2 Bf8 35. Ral Nxc3 36. Qxc3 Bxc5 37. dxc5 Qxe4 38. Rdl Rbl 39. Rxbl Qxbl+ 40. Kh2 Qf5 41. c6 Of4+ 42. Qg3 Qd4 43. Qb8+ Kg7 44. f3 Qc5 45. c7 Qd6+ 46. g3 Qd2+ 47. Kgl Qel+ 48. Kg2 Qe2+ Khl Qfl+ 50. Kh2 Qf2+ 51. Khl Qxfe+ 52. Kh2 Qe2+ 53. in b7 /½:½/ 1,58-2,54

GEDEON X - CHESS 2001

1. e4 e5 2. Nf3 Nf6 3. Nxe5 d6 4. Nf3 Nxe4 5. d4 d5 6. Bd3 Bb4+ 7. Nbd2 Qe7 8. 0-0 Bg4 9. Rel Bxd2 10. Bxd2 0-0 11. c4 Qd6 12. Bxe4 dxe4 13. Rxe3 Be6 14. d5-Bf5 15. Re5 g6 16. Qel Na6 17. Re7 Nc5 18. Qe5 Qxe5 19. Nxe5 Rfe8 20. Rxe8+ 21. Rel Ne4 22. Nf3 Bd7 23. Bf4 c5 24. Ne5 Nf6 25. d6 Ng4 26. Kfl Nxe5 27. Bxe5 28. Re3 f6 29. Bf4 g5 30. Bg3 Rxe3 31. fxe3 Kf7 32. e4 Bc6 33. e5 fxe5 34. Bxe5Ke6 35. Bg3 h5 36. h3 Be4 37. Kf2 Bbl 38. a3 Ba2 39. Ke3 Bxc4 40. Bh2 a5 41. g4 h4 42. Kf2 Bd5 43. Kfl a4 44. Kgl b5 45. Kfl b4 46. ax64 cxb4 47. Kgl a3 48. bxa3 bxa3 49. d7 a2 50. d8Q alQ+ 51. Kf2 Qd4+ 52. Kel Qe3+ 53. Kfl Bc4+ 54. Kg2 Qxh3+ 55. Khl Qf3+ 56. Kgl Qfl+ Mate /0:1/ 2,16-1,39

MEPHISTO Y - SUPER CONSTELLATION

1. e4 c5 2. Nf3 d6 3. Bc4 e5 4. 0-0 Nf6 5. Ng5 d5 6. exd5 Bf5 7. Nc3 Bd6 8. Bb5+ Nbd7 9. d3 0-0 10. f4 exf4 11. Bxf4 Bxf4 12. Rxf4 Bg6 13. Nge4 Qb6 14. Nxf6+ Nxf6 15. Rbl a6 16. Bc4 Qd6 17. Qf3 b5 18. Bf3 Rad8 19. Rel h6 20. a3 Nh5 21. Rh4 Qb6 22. Qe3 Nf6 23. Ne4 Bfe8 24. Nxf6+ Qxf6 25. Qxe8+ Rxe8 26. Rxe8+ Kh7 27. Rh3 Qxb2 28. Rhe3 a5 29. d6 Qal+ 30. Kf2 Qf6+ 31. Rf3 Qd4+ 32. Kfl c4 33. axc4 bxc4 34. Ba4 Qxd6 35. h3 c3 36. Bb3 Qxa3 37. Kel Qcl+ 38. Kf2 Bxc2 39. Bxf7 Qd2+ 40. Kgl Ba4 41. Bg8+ Kh8 42. Rc8 Bd7 43. Rcf8 2d4+ 44. Rf2 h5 45. Bb3+ Kh4 46. Bc2+ Kh6 47. Kfl Qe3 48. Re2 Bb5 49. Rh8+ Kg5 50. h4+ Kxh4 /0:1/ 2,07-1,50

SENSORY 9 - MEPHISTO EXCALIBUR

1. d4 d5 2. c4 dxc4 3. Nf3 a6 4. e3 b5 5. Be2 e6 6. 0-0 Bb7 7. Nc3 Nf6 8. Ne5 Be7 9. a4 c6 10. axb5 cxb5 11. Bf3 Qb6 12. e4 Nc6 13. Nxc6 Bxc6 14. Bf4 0-0 15. d5 exd5 16. e5 Nd7 17. Nxd5 Bxd5 18. Bxd5 Rad8 19. Bd2 Nxe5 20. Be3 Qg6 21. b3 c3 22. Khl c2 23. Qd4 Qd6 24. Qa7 Rd7 Bb7 Rb8 26. f4 Ng4 27. Bc5 Qxc5 28. Qxb8+ Rd8 29. Qxd8+ Bxd8 30. b4 Nf2+ 31. Rxf2 Qxf2 32. Be3 Bf6 33. Bxc2 Bxa1 34. h3 Qfl+ 35. Kh2 Qxf4+ 36. Kgl Bd4+ 37. Khl Qfl+ 38. Kh2 Be54 39. g3 Qe2+

/0:1/ 1,49-1,14

LABIRINT 64 - SUPERSTAR X

1. e3 d5 2. Bb5+ c6 3. Ba4 a5 4. d4 b5 5. Bb3 a4 6. Nc3 axb3 7. cxb3 b4 8. Na4 Nf6 9. Ne2 e6 10. 0-0 Bd6 11. Nf4 Bxf4 12. exf4 0-0 13. Bd2 Qd6 14. Nb6 Ra6 15. Nxc8 Rxc8 16. Qe2 c5 17. dxc5 Qxc5 18. Be3 d4 19. Rfcl Rxa2 20. Rxa2 Qxcl+ 21. Bxcl Rxcl+ 22. Qfl Rxfl+ 23. Kxfl Kf8 24. Ra8 Nfd7 25. h3 Ke7 26. h4 d3 27. Kel Nc6 28. Kd2 Nc5 29. f3 Nd4 30. Rb8 Ndxb3+ 31. Ke3 d2 32. Ke2 Nd3 33. Rb7+ Kd6 34. Rxf7 Nxb2 35. h5 dlQ+ 36. Kf2 Nd4 37. Kg3 Qhl 38. h6 Qxh6 39. Kf2 Qhl 40. Rb7 Ndl+ 41. Kg3 Nf5+ 42. Kg4 Qh4+ mate

/0:1/ 0,54-1,17

CHESSMASTER - 65 CYRUS X

1. e4 e6 2. d4 d5 3. Nd2 c5 4. exd5 exd5 5. Bb5+ Bd7 6. Bxd7+ Nxd7 7. Qe2+ Qe7 8. dxc5 Qxe2+ 9. Nxe2 Bxc5 10. Nb3 Nf6 11. Nxc5 Nxc5 12. Be3 b6 13. Bd4 Nce4 14. f3 Nd6 15. Bxf6 gxf6 16. 0-0-0 forfeit

/1:0/ 0,25-0,44

ELITE A/S - NOVAG X

1. e4 e5 2. Nc3 Nc6 3. Bc4 Nf6 4. d3 Be7 5. f4 exf4 6. Bxf4 d6 7. Nf3 Bg4 8. h3 Bxf3 9. Qxf3 0-0 10. Ne5 11. Qf2 Nxc4 12. dxc4 Nd7 13. Be3 Bh4 14. Qe2 Ne5 15. c5 dxc5 16. Bxc5 Be7 17. Be3 c6 18. Radl Qa5 19. Qh5 Bc5 20. Bxc5 Qxc5 21. Rf2 Rfe8 22. a3 Qb6 23. Na4 Qa5 24. Nc3 Qc5 25. Qf5 Qb6 26. Na4 Qa5 27. Nc3 Rad8 28. Rxd8 Rxd8 29. b4 Qc7 30. Qg5 a5 31. Rfl axb432. axb4 h6 33. Qe3 Qd6 34. b5 Qd2 35. Qg3 Re8 36. bxc6 bxc6 37. Rf2 Qel+ 38. Kh2 Ra8 39. Re2 Qxg3+ 40. Kxg3 f6 41. Kf4 Kf7 42. Rd2 g6 43. Ne2 h5 44. g4 Ra3 45. c3 hxg4 46. hxg5 Ral 47. Kg3 Rel 48. Rb2 Rdl 49. Nf4 Ke7 50. Rg2 g5 51. Ne2 Rd3+ 52. Kf2 Rf3+ 53. Kgl Re3 54. Ng3 Rxe3 55. Nf5+ Kd7 56. Nh6 Re3 57. Rd2+ Kc7 58. Rf2 Rg3+ 59. Rg2 Re3 60. Rf2 Nd7 61. Ng8 Rxe4 62. Nh6 e5 63. Rf3 Rb4 64. Kf2 c4 Rc3 Ne5 66. Kel Rb3 67. Kd2 Rxc3 68. Kxc3 Kd6 69. Kd4 Ke6 70. Nf5 Nxg4 71. Ng7+ Kf7 72. Nf5 Ne5 73. Ne3 g4 74. Nf5 Kg6 75. Ng3 Kf7 76. Nf5 Kg8 77. Kc3 Kf7 78. Kd4

/½:½/ 3,46-3,22

CONSTELLATION - PRESTIGE

1. d4 d5 2. c4 dxc4 3. Nf3 Nf6 4. e3 e6 5. Bxc4 c5 6. 0-0 a6 7. a4 cxd4 8. exd4 Nc6 9. Nc3 Be7 10. Be3 0-0 11. Rel Nd5 12. Rcl Nxe3 13. fxe3 Bd7 14. e4 Qb6 15. Qb3 Qa7 16. Khl Rac8 17. Ne2 Na5 18. Qa2

b5 19. axb5 Nxc4 20. Rxc4 Rxc4 21. Qxc4 Rc8 22. Qa2 Bxb5 23. Nc3 Qb7 24. Ne5 Bb4 25. Qb3 a5 26. Kgl Qb6 27. Kdl Ba6 28. Qa4 Bd6 29. Nd7 Qxb2 30. Qxa5 Bb7 31. Qb5 Qb4 32. Qxb4 Bxb4 33. Nc5 Bxc5 34. dxc5 Kf8 35. Rbl Rxc5 36. Na4 Rc7 37. Nc5 Rxc5 38. Rxb7 f5 39. exf5 Rxf5 40. h3 Rf7 41. Rb8+ Ke7 42. Rh8 g6 43. g3 e5 44. Kg2 e4 45. Rc8 Ke6 46. Rd8 Ke5 47. Rc8 e3 48. Rc2 Kd4 49. Ra2 h6 50. Ra4+ Kd3 51. Ra3+ Ke4 52. Ra4+ Kd5 53. Ra5+ Ke4 54. Ra4+ Kc3 55. Ra3+ Kd2 56. Ra2+ Kel 57. Ral+ Ke2 58. Ra2+ Kdl 59. Ral+ Ke2 60. Ra2+ Kel 61. Re2 Re7 62. Kf3 Kdl 63. Rxe3 Rxe3+ 64. Kxe3 Kel 65. h4 Kfl 66. Kf3 Kgl 67. Ke3 Kg2 68. Kf4 Kh3 69. Kf3 g5 70. h5 Kh2 71. Kg4 Kg2 72. Kf5 Kxg3 73. Kg6 Kf4 74. Kxh6 g4 75. Kg7 g3 76. h6 g2 77. h7 glQ+ 78. Kf7 Qa7+ 79. Kg6 Qd4

/0:1/ 3,45-3,33

SITUATION AFTER THE 4TH ROUND

3½ p. ELITE A/S,
3 p. MEPHISTO EXC., NOVAG X, PRESTIGE,
2½ p. CHESS 2001 X, MEPHISTO X, SUPER CONSTELLATION
2 p. CHESS 2001, SENSORY-9, SCISYS SUPERSTAR X
1½ p. CONSTELLATION, LOGICHESS 2,2, MEPHISTO Y, MICROMURKS,
1 p. CHESSMASTER, GEDEON X
0 p. 65 CYRUS X, LABIRINT 64

5TH ROUND

CHESS 2001 X - ELITE A/S

1. Nf3 c5 2. b3 Nc6 3. Nc3 d5 4. d3 d4 5. Ne4 f5 6. Ng3 e5 7. Bg5 Be7 8. Qd2 Bxg5 9. Nxg5 Nh6 10. a4 f4 11. N3e4 0-0 12. g3 Bg4 13. Bg2 fxg3 14. hxg3 Qb6 15. f3 Bd7 16. Bh3 Bxh3 17. Rxh3 Nb4 18. 0-0-0 a5 19. e3 Bac8 20. Rdhl Nd5 21. exd4 cxd4 22. Kbl Qa6 23. Rlh2 Nb4 24. Qdl Qc6 25. Rh4 Qd5 26. Qgl Nxd3 27. cxd3 Qxb3+ 28. Rb2 Qxd3+ 29. Kal Qa3+ 30. Kbl Qxa4 31. Rxb7 Rb8 32. Nc5 Rxb7+

/0:1/ 1,13-1,25

MEPHISTO EXCALIBUR - NOVAG X

1. Nf3 Nf6 2. d4 d5 3. c4 c6 4. cxd5 cxd5 5. e3 Nc6 6. Bb5 Bg4 7. 0-0 a6 8. Be2 e6 9. h3 Bxf3 10. Bxf3 Be7 11.l Nc4 Rc8 12. Bd2 0-0 13. Rcl Rc7 13. Rcl Rc7 14. Qc2 h6 15. a3 ae5 16. dxe5 Nxe5 17. Be2 Ne4 18. Rfdl Rc6 19. Qb3 Nf6 20. Bel Rb6 21. Qc2 Rc6 22. Qf5 Qc7 23. Rc2 Rc8 24. Rlcl Bd6 25. Qbl Qd7 26. Qa2 Qf5 27. Rd4 Bc5 28. R4dl Bb6 29. a4 Bc5 30. Nxd5 Nxd5 31. Rxd5 Qe6 32. Rcdl Bd6 33. e4 Rc2 34. Bh5 Bc7 35. Qb3 Rc4 36. Bc3 g6 37. Bxe5 Bxe5 38. Bg4 Qe8 39. Bd7 Qe7 40. Bxc8 Rxc8 41. Rd7 Qf6 42. Rxb7 Kg7 43. f3 Rc6 44. a5 Rc7 45. Rb8 Re7 46. Rbd8 Bc7 47. R8d5 Be5 48. Qe3 Bxb2 49. Rd6 Re6 50. Rxe6 Qxe6 51. Qc5 Bf6 52. Rd6 Qa2 53. Qd5 Qal+ 54. Kf2 Bc3 55. Ke3 Qel+ 56. Kd3 Bxa5 57. Qe5+ Kh7 58. Qf6 Qd2+ 59. Kc4 Qb4+ 60. Kd5 Qb3+ 61. Kc5 Bc3 62. Rd4 Qb5 63. Kd6 Qb6+ 64. Kd7 Qxf6

/0:1/ 2,47-2,55

CONSTELLATION - LOGICHESS 2,2

1. e4 e6 2. d4 d5 3. e5 c5 4. c3 Nc6 5. Nf3 Qb6 6. Be2 cxd4 7. cxd4 Nge7 8. Na3 Nf5 9. Nc2 Bb4+ 10. Klf 0-0 11. Kgl Ba5 12. h3 h5 13. Bd3 f6 14. Bxf5 exf5 15. Nh4 Qd8 16. Ng6 Re8 17. exf6 Qxf6 18. Nf4 h4 19. Nxd5 Qd6 20. Nc3 Bxc3 21. bxc3 Qd5 22. Kh2 Qc4 23. Rel Re6 24. Rxe6 Bxe6 25. Bg5 Qxc3 26. Bxh4 Bc4 27. Ne3 Be2 28. Rcl Qa3 29. Qb3+ Qxb3 30. Qxb3 Nxd4 31. Rc7 f4 32. Nd5 Ba6 33. Nxf4 Re8 34. Nh5 Ne6 35. Rd7 Rc8 36. Re7 Rc5 37. Nf6+ gxf6 38. Rxe6 f5 39. g4 fxg4 40. hxg4 Rc3 41. Re3 Bxe3 42. fxe3 Be2 43. Kg3 Bdl 44. b4 Kf7 45. g5 b6 46. e4 Bb3 47. e5 Bc2 48. Kf4 Ke6 49. Bf2 Kd5 50. Be3 Bd3 51. Bf2 in 61

/½:½/ 2,56-2,51

MICROMURKS - MEPHISTO Y

1. e4 c5 2. b4 cxb4 3. Bb2 d5 4. exd5 Qxd5 5. d4 Bf5 6. Nbd2 Qc6 7. Nc4 Nf6 8. Ne3 Be4 9. Nf3 Bxf3 10. gxf3 Nd5 11. Be2 Nc3 12. Qd2 Nxe2 13. Kxe2 Qa6+ 14. Kdl Qf6 15. Ke2 Nc6 15. Rabl e6 17. d5 Ne5 18. Bxe5 Qxe5 19. Qd3 Rd8 20. Qe4 Qd6 21. Kd2 b6 22. f4 Be7 23. Rhgl exd5 24. Qe5 Qxe5 25. fxe5 g6 26. f3 d4 27. Ng4 h5 28. Nf2 Rd5 29. Nd3 Rb5 30. a3 b3 31. a4 Rd5 32. cxb3 Rf8 33. Rbcl Kd7 34. b4 a6 35. Ke2 Bd8 36. Rgdl g5 37. Rfl f6 38. f4 g4 39. Kd2 Ke7 40. Rfel h4 41. Rc8 Ke6 42. Rc6+ Kd7 43. Rc4 g3 44. e6+ Ke7 45. hxg3 hxg3 46. R4cl Rg8 47. Re2 Rg4 48. Rhl Rg7 49. Rgl Bc7 50. Kc2 b5 51. axb5 Rxb5 52. Kb3 Rb6 53. f5 Rg5 54. Rc2 bd6 55. Kc4 Rxf5 56. Re2 Be5 57. Nxe5 fxe5 58. Rxg3 Rc6+ 59. Kd5 Rd6+ 60. Ke4 Kxe6 61. Rg6 Rf6 62. Rxf6+ Kxf6 63. Rf2+ Ke6 64. Rh2 d3 65. Rh6+ Ke7 66. Rxd6 Kxd6 67. Kxd3 Kd5 68. Ke3 Kc4 69. Ke4 Kxb4 70. Kxe5 Kb3 71. Kd4 a5

/0:1/ 2,17,-2,16

SUPERSTAR X - SENSORY 9

1. e4 e5 2. Nf3 Nc6 3. Bc4 Nf6 4. d3 Bc5 5. Nc3 0-0 6. 0-0 d6 7. Be3 Bxe3 8. fxe3 Na5 9. Nd2 Nxc4 10. Nxc4 Bc6 11. Qf3 Bxc4 12. dxc4 c6 13. Radl Qb6 14. Rbl Rae8 15. a3 Kh8 16. h3 Rg8 17. Qe2 Ref8 18. Qd3 Rd8 19. b4 Qa6 20. a4 Qb6 21. a5 Qc7 22. Rdbl Qc8 23. Rf5 b6 24. axb6 axb6 25. Ral Qd7 26. Ra6 Qc7 27. Rfl Ra8 28. Rfal Rxa6 29. Rxa6 Qb7 30. Ra4 Qe7 31. Ra6 Qc7 32. Ra3 Re8 33. Ra4 Qd7 34. Ra3 Qe7 35. Ra4 Kg8 36. Ra6 Qb7 37. Ra2 Qd7 38. Ra3 Time /1:0/ 1,59-2,01

65 CYRUS X - LABIRINT 64

1. d4 d5 2. c4 e6 3. Nc3 dxc4 4. e3 Nf6 5. Bxc4 Bd6 6. e4 Bb4 7. Bg5 c5 8. Nf3 Bxc3+ 9. bxc3 Qa5 10. Qd3 h6 11. Bxf6 gxf6 12. Rbl cxd4 13. Qxd4 e5 14. Qd3 Rg8 15. 0-0 h5 16. Rfdl a6 17. Qe3 Rg6 18. Rd6 Qc7 19. Qd3 Nc6 20. Nh4 Rg8 21. Rxf6 Rg4 22. Nf3 Rg7 23. Rh6 h4 24. Rh8 Ke7 25. Rxh4 b5 26. Bd5 Bb7 27. g3 Rag8 28. c4 Na7 29. Bxb7 Qxb7 30. cxb5 axb5 31. Nxe5 Qc7 32. Qd4 f6 33. Qb4+ Ke8 34. Nf3 Qc2 35. Rb2 Qc6 36. Nd4 Qcl+ 37. Kg2 Rb7 38. Rc2 Qg5 39. Nf5 Rd7 40. h3 Kd8 41. Rg4 Qxg4 42. hxg4 Rh7 43. Qd6+ Ke8 44. Qb8+ Kf7 45. Rc7+ Kg6

/1:0/ 1,10-1,56

SUPER CONSTELLATION - CHESS 2001

1. e4 e5 2. Nc3 Nc6 3. Nf3 Bc5 4. Bc4 d6 5. 0-0 Nf6 6. d3 Bg4 7. h3 Bh5 8. Be3 Bxe3 9. fxe3 0-0 10. d4 Qd7 11. Bd5 Rfe8 12. Qd2 Bg6 13. Nh4 exd4 14. exd4 Bxe4 15. Rxf6 Bxd5 16. Nxd5 Ne7 17. Qg5 h6 18. Qg3 Nxd5 19. Nf5 g6 20. Nxh6+ Kg7 21. Rxf7+ Qxf7 22. Nxf7 Kxf7 23. Qf3 Ke6 24. Qe4+ Kd7 25. Qxd5 c6 26. Qf7+ Re7 27. Qxg6 Rae8 28. Rfl d5 29. g3 Rel 30. h4 Kc7 31. h5 R8e6 32. Qg5 Kb6 33. Qd2 Rle3 34. Rf7 a5 35. Kf2 Re7 36. Rxe7 Rxe7 37. h6 Rf7+ 38. Ke2 Re7+ 39. Kf3 Rf7+ 40. Kg4 Rh7 41. Qg5 Rd7 42. Qg7 Rxg7 43. hxg7 Kc7 44. Kf5 b6 45. Kf6 a4 46. g8Q

/1:0/ 2,05-1,51

CHESSMASTER - GEDEON X

1. e4 e5 2. f4 exf4 3. Nf3 d5 4. exd5 Nf6 5. Bb5+ c6 6. dxc6 Nxc6 7. Bxc6+ bxc6 8. 0-0 Be6 9. Nc3 Bd6 10. Rel 0-0 11. Ne4 Nxe4 12. Rxe4 Rb8 13. Qe2 Bd5 14. Ra4 Bc5+ 15. Kfl Re8 16. Qd3 Qf6 17. a3 Re6 18. Nd4 Rd6 19. Nf3 Bb3 20. Qxb3 Rxb3 21. cxb3 Qf5 22. Hel Re6 23. d3 f3 24. gxf3 Qh3+ 25. Ng2 Qxf3+ mate

/0:1/ 1,04-0,46

PRESTIGE - MEPHISTO X

1. e4 d5 2. exd5 Qxd5 3. Ne3 Qd6 4. d4 Bf5 5. Qf3 Qe6+ 6. Be3 c6 7. Bc4 Qxc4 8. Qxf5 e6 9. Qe5 Nd7 10. Qg3 Ba3 11. Bcl Bb4 12. Nge2 Bxc3+ 13. bxc3 g6 14. Qc7 Qa6 15. Rbl b5 16. Rb2 Ne7 17. 0-0 Nd5 18. Qg3 Ndb6 19. Qf3 Rc8 20. a3 0-0 21. Bh6 Rfe8 22. Ral f5 23. Rbbl Nc4 24. Rb4 e5 25. Rb3 Qa4 26. Qd3 e4 27. Qh3 Na5 28. Rb2 c5 29. d5 Nc4 30. Rba2 Nf6 31. Nf4 Nb6 32. d6 Red8 33. Rdl Rc6 34. Qg3 Rd6 35. Rxd6 Rxd6 36. Nd5 Rxd5 37. Qb8+ Kf7 38. h3 Qc4 39. Ral Qxc3 40. Rbl Qxc2 41. Rxb5 Qa4 42. Rxc5 Rdl+ 43. Kh2 Ne8 44. Re5 Rd3 45. Be3 Nc4 46. Rxe8 Qxe8 47. Qc7+ Kf6 48. Qxc4 Qe5+ 49. g3 a5 50. Qa6+ Qd6 51. Qxa5 Rxa3 52. Qb5 Rd3 53. Qb2+ Ke6 54. Kg2 h5 55. Qg7 Kd5 56. Qb7+ Qc6 57. Qf7+ Qe6 58. Qb7+ Kd6 59. Bf4+ Kc5 60. Qa7+ Kb5 61. Be3 Qc6 62. Qb+ Kc4 63. Qe5 Kb3 64. Qb8+ Kc3 65. Qbl Kc4 66. Qa2+ Kb5 67. Qbl+ Ka5 68. Qb2 Ka4 69. Qal+ Kb4 70. Qb2+ Rb3 71. Qd4+ Ka5 72. Qal+ Kb5 73. Qe5+ Ka6 74. Qal+ Kb7 75. Qg7+ Qc7 76. Qxg6 Qd7 77. Qxh5 Rb5 78. Bf4 Qc6 79. Qf7+ Ka6 80. Be3 Ka5 81. Bd2+ Ka6 82. Be3 Rd5 83. g4 Adj.

/½:½/ 2,50-4,10

SITUATION AFTER THE 5TH ROUND

4½ p. ELITE A/S,
4 p. NOVAG X,
3½ p. SUPER CONSTELLATION, PRESTIGE
3 p. SUPERSTAR X - SCISYS, MEPHISTO X, MEPHISTO EXC.,
2½ p. CHESS 2001 X, MEPHISTO Y,
2 p. CHESS 2001, CONSTELLATION, SENSORY 9, LOGICHESS 2,2, GEDEON x,
½ p. MICROMURKS,
1 p. 65 CYRUS X, CHESSMASTER,
0 p. LABIRINT-64

6TH ROUND

MEPHISTO Y - CONSTELLATION

1. d4 d5 2. c4 dxc4 3. Nf3 Nf6 4. e3 e6 5. Bxc4 c5 6. 0-0 a6 7. Qe2 Nc6 8. Rd1 cxd4 8. Rd1 cxd4 9. Nxd4 10. Nc3 Bb4 11. f3 Bd7 12. Qc2 Rc8 13. a3 Be7 14. Qb3 Qxb3 15. Bxb3 0-0 16. Bd2 Na5 17. Bc2 Nc4 18. Ra2 e5 19. Nb3 Be6 20. e4 Rfd8 21. Bc1 Rxd1+ 22. Bxd1 Nxa3 23. Bg5 Nc4 24. Ne2 h6 25. Bc1 Nd7 26. f4 Nd6 27. Ra4 Nb6 28. Ra1 exf4 29. e5 Ndc4 30. Nxf4 Rd8 31. Bc2 Nxe5 32. Be3 Bxb3 33. Bxb3 Nbc4 34. Bc1 Bc5+ 35. Kh1 Bd4 36. Ra2 Be3 37. Bxe3 Nxe3 38. Ra4 N3c4 39. Nxb2 40. Rb4 b5 41. Bxf7+ Kxf7 42. Rxb2 g5 43. Nh3 Nc4 44. Rf2+ Ke6 45. Re2+ Kf7 46. Rf2+ Ke7 47. Re2 Kf8 48. Re6 Rd6 49. Re1 Rd2 50. Re6 Rd1+ 51. Kg2 Rd6 52. Re1 a5 53. Nf2 Rd2 54. Kf3 a4 55. h4 gxh4 56. gxh4 a3 57. Ra1 a2 58. Ng4 Kg7 59. Kf4 h5 60. Ne3 Rd4+ 61. Kf3 Rd3 62. Rxa2 Rxe3+ 63. Kf4 Rd3 64. Kf5 Rd5+ Ke4 Rd2 66. Ra6 Nd6+ 67. Ke3 Nc4+ 68. Ke4 b4 69. Ra4 Nd6+ 70. Ke3 Nc4+ 71. Ke4 Rh2 72. Rxb4 Rxh4+ 73. Kf3 Ne5+ /0:1/ 2,10-3,22

MEPHISTO X - SENSORY 9

1. e4 c5 2. Nf3 d6 3. Bc4 Nc6 4.d4 cxd4 5. Nxd4 Nxd4 6. Qxd4 Nf6 7. 0-0 e5 8. Qd3 Be7 9. Nc3 0-0 10. f3 Qb6+ 11. Be3 Qc6 12. Rad1 Bd7 13. Bb5 Qc7 14. Bxd7 Qxd7 15. Nb5 Ne8 16. c4 b6 17. Qd5 Nf6 18. Qd3 Ne8 19. f4 exf4 20. Bxf4 Qg4 21. Qd5 Qc8 22. Rd4 Bf6 23. Rxd2 Be5 24. Bxe5 dxe5 25. b3 Qc5+ 26. Qxc5 bxc5 27. Rd5 a6 28. Nc3 Rc8 29. Na4 Nf6 30. Rxe5 Nd7 31. Re7 Nb8 32. Rf5 Rfd8 33. Rfxf7 Rd1+ 34. Kf2 Rd2+ 35. Kg3 g5 36. Rg7+ Kf8 37. Rxh7 Rd3+ 38. Kg4 Rd2 39. g3 Rxh2 40. Ref7+ Ke8 41. Rc7 Rxc7 42. Rxc7 Kd8 43. Rxc5 Rxa2 44. Rxg5 Nd7 45. Rg8 Kc7 46. Rg7 Kc6 47. Rg6+ Kb7 48. Kf4 Rd2 49. Ke3 Rd1 50. Nc3 Ra1 51. Nd5 Rb1 52. b4 Re1+ 53. Kf4 Rf1+ 54. Kg5 Rf3 55. g4 Ne5 56. Rb6+ Ka7 57. c5 Nf7+ 58. Kh4 Ne5 59. g5 Rf2 60. g6 Re2 61. Kh3 Re1 62. Re6 Rh1+ 63. Kg2 Rh5 64. Kg3 Nd3 65. Re7+ Kb8 66. Re8 Kb7 67. Nf4 Rg5+ 68. Kh4 Rg1 69. Nxd3 Rxg6 70. Re7+ Kc8 71. Nf4 Rg1 72. Nd5 Rc1 73. Kg5 Kb8 74. e5 a5 75. Re6 Kb7 76. c6+ Rxc6 77. Rxc6 Kxc6 78. bxa5 Kd7 79. a6 Kc6 80. e6 /1:0/ 2,30-3,27

65. CYRUS X - MICROMURKS

1.e4 e5 2. Nf3 f5 3. exf5 d6 4. Nc3 Nc6 5. Bb5 Bxf5 6. d4 e4 7. Ng1 d5 8. Qh5+ g6 9. Bxc6+ bxc6 10. Qe2 Bg7 11. g4 Be6 12. Be3 Ne7 13. 0-0-0 0-0 14. Bg5 Qd7 15. h3 h6 16. Be3 Nc8 17. Qd2 Kh7 18. Nge2 Nd6 19. Ng3 Nc4 20. Qe2 Rab8 21. b3 22. fxe3 c5 23. Qa6 cxd4 24. exd4 Rf3 25. Nge2 c6 26. Rdf1 Rbf8 27. Rfd1 Rf7 28. Kb1 Qc7 29. Rhg1 Rh2 30. Rg3 Rf3 31. Rdg1 Rxg3 32. Rxg3 Bxd4 33. Nxd4 Qxg3 34. Qa7+ Kh8 35. Nxe6 Rh1 36. Kb2 Qe5 37. Qf7 Rb1+ 38. Kxb1 Qxc3 39. Qxg6 e3 40. Qxh6+ Kg8 41. Ng5 Qe1+ 42. Kb2 Qf2 43. Qxc6 e2 44. Qxd5+ Kg6 45. Qe5+ Kg6 46. Ne6 Qf6 47. Nf4+ Qxf4 48. Qxf4 elQ 49. Qf5+ Kg7 50. a4 Qh4 51. g5 Qd4+ 52. Kc1 Qe3+ 53. Kd1 Kg8 54. a5 Qd4+ 55. Ke2 Kg7 56. Kf3 Qc3+ 57. Kf4 Qd4+ 58. Kg3 Qe3+ 59. Kg4 Qe2+ 60. Kh4 Qe1+ 61. Kh5 Ad1+ 62. Qg4 Ad8 64. Qe4 Qxa5 65. Qe7+ Kg8 66. Kh6 Qa6+ 67. g6 Qf6 68. Qe8+ Qf8+ 69. Qxf8+ Kxf8 70. g7+ /1:0/ 3,15-2,53

CHESS 2001 X - GEDEON X

1. e4 e5 2. d4 exd4 3. Qxd4 Nc6 4. Qe3 Nf6 5. Nc3 Bb4 6. Bd2 0-0 7. 0-0-0 Re8 8. a3 Bxc3 9. Bxc3 Nxe4 10. Bd4 Rxd4 11. Qxd4 d5 12. Bb5 c6 13. Be2 Bf5 14. g4 Nd6 15. Qd2 Be4 16. f3 Bg6 17. Nh3 Qe7 18. Nf4 Rac8 19. Re1 Qh4 20. Nxg6 fxg6 21. Ra4 Nc4 22. Rxc4 dxc4 23. Bxc4+ Kh8 24. Re2 Rxe2 25. Qxe2 Rd8 26.a4 Qg5+ 27. Kb1 Qa5 28. b3 Qc3 29. Bd3 Qb4 30. Qe3 Qd4 31. Qe7 Qd7 32. Qe3 b6 33. Qe5 Qd5 34. Qxd4 Rxd4 35. Kb2 Rf4 36. Be4 c5 37. Kc3 Rf8 38. Kc4 Rd8 39. Bd3 Kg8 40. Kc3 Kf7 41. g5 Ke6 42. h3 Ke5 43. h4 Rf8 44. Be4 Rf4 45. Kc4 Rxh4 46. Kb5 Rf4 47. Ka6 Kd6 48. Kxa7 Kc7 49. Ka6 h6 50. gxh6 gxh6 51. Bxg6 Rxf3 52. Kb5 Rf6 53. Bh5 Rf5 54. Bg6 Re5 55. a5 bxa5 56. Kxa5 h5 57. b4 cxb4+ 58. Kxb4 h4 59. Bd3 h3 60. Bf1 /0:1/ 1,55-2,42

LABIRINT 64 - CHESSMASTER

1. e3 Nf6 2. d4 d5 3. Bb5+ c6 4. Bd3 Bg4 5. Nf3 Lxf3 6. Qxf3 Nbd7 7. Nc3 e5 8. Bf5 Bd6 9. Bxd7+ Qxd7 10. dxe5 Bxe5 11. h4 Bxc3+ 12. bx3 0-0-0 13. 0-0 Rhe8 14. Qf4 Re4 15. Qf3 Rxh4 16. Qg3 Rg4 17. Qf3 Rc4 18. Qg3 Rxc3 19. Qxg7 Qf5 20. Bb2 Qxc2 21. Bxc3 Qxc3 22. Rac1 Qe5 23. Qxf7 Re8 24. g3 Re7 25. Qf8+ Kc7 26. a3 Qd6 27. a4 h5 28. Rfd1 a6 29. a5 c5 30. Qa8 Re8 31. Qa7 Ne4 32. Rb1 Rb8 33. Rb6 Qf8 34. Rb2 Qf7 35. Rc2 Qe6 36. f3 Rg8 37. fxe4 Rxg3+ 38. Rg2 Rxg2+ 39. Kxg2 Qg4+ 40. Kf2 Qxd1 41. Qxc5+ Kd7 42. exd5 Qd3 43. Qd4 Qxd4 44. exd4 Kd6 45. Kg1 Kxd5 46. Kh2 Kxd4 47. Kg3 Kc5 48. Kh4 Kb6 49. Kg5 Kxa5 50. Kh4 Kb5 51. Kxh5 Kc4 52. Kg6 b5 53. Kf7 b4 54. Ke6 b3 55. Ke5 b2 56. Kd6 b1Q 57. Kc7 Kd5 58. Kd8 Kd6 59. Ke8 Qf5 60. Kd8 Qf8+ mate /0:1/ 2,03-2,18

NOVAG X - SUPERSTAR X

1. e4 e5 2. Nf3 Nc6 3. Bb5 a6 4. Ba4 Nf6 5. 0-0 b5 6. Bb3 Bb7 7. Re1 Bc5 8. c3 0-0 9. d4 exd4 10. e5 Ng4 11. h3 Nxf2 12. Kxf2 dxc3+ 13. Kf1 cxb2 14. Bxb2 Qe7 15. Nc3 Rfe8 16. Bd5 h6 17. Ne4 Bb4 18. Nc3 Bxc3 19. Bxc3 Qc5 20. Bb2 a5 21. Rc1 Qb6 22. Re4 Re7 23. Rf4 Rae8 24. Qb3 Nd8 25. Bd4 Bxd5 26. Qxd5 Qb8 27. Bc5 c6 28. Qd2 Re6 29. Qxd7 b4 30. Nd4 Qxe5 31. Nxe6 Qxe6 32. Rd1 Qxd7 33. Rxd7 Ne6 34. Rc4 Nxc5 35. Rxc5 Kf8 36. Rxc6 g6 37. Rcc7 Re6 38. Rxf7+ Ke8 39. Rh7 Rf6 /1:0/ 1,38-1,58

PRESTIGE - MEPHISTO EXCALIBUR

1. e4 d5 2. exd5 Qxd5 3. Nc3 Qe6+ 4. Nge2 Nf6 5. d4 Qb6 6. g3 e5 7. dxe5 Ng4 8. Nd4 Nxe5 9. Bb5+ c6 10. Be2 Bh3 11. Nb3 Bb4 12. Be3 Bxc3+ 13. bxc3 Qc7 14. f4 Ng6 15. Bc5 Bg2 16. Rg1 Be4 17. Nd2 Bd5 18. Nc4 Bxc4 19. Bxc4 Ne7 20. Qd4 0-0 21. Bxa7 Nd7 22. 0-0-0 Rfd8 23. Rge1 Qa5 24. Bb6 Qa3+ 25. Kb1 Nd5 26. Bxd5 Nxb6 27. Bxf7+ Kxf6 28. Qxb6 Qxa2+ 29. Kc1 Qa1+ 30. Qb1 Qxc3 31. Qxb7+ Kg8 32. Qb3+ Qxb3 33. Rxd8+ Rxd8 34. cxb3 Rd3 35. Ke2 Rf3 36. Re6 Rf2+ 37. Kb1 c5 38. Rc6 Rxh2 39. Rxc5 Rg2 40. Rc3 Kf7 41. b4 Ke6 42. b5 Rd2 43. b6 Rd1+ 44. Ka2 Rd2+ 45. Ka1 Rd1+ 46. Kb2 Rd2 47. Ka3 Rd7 48. Ka4 Rb7 49. Kb5 Kd6 50. Ka6 Rb8 51. b7 g5 52. fxg5 h6 53. gxh6 Rh8 /1:0/ 2,17-1,42

CHESS 2001 - LOGICHESS 2,2

1. e4 e5 2. Nf3 Nc6 3. Bb5 a6 4. Ba4 Nf6 5. d4 exd4 6. 0-0 b5 7. Bb3 Nxe4 8. Nxd4 Qf6 9. Nxc6 dxc6 10. Qe2 Qe5 11. Nd2 Bf5 12. Nf3 Qe7 13. Nd4 Qf6 14. Nxf5 Qxf5 15. f3 Qc5+ 16. Khl Be7 17. Qxe4 f5 18. Qe6 Rf8 19. Bf4 Rd8 20. Radl Rxdl 21. Rxdl Qd6 22. bxd6

/1:0/ 0,25-1,20

ELITE A/S - SUPER CONSTELLATION

1. e4 c5 2. Nf3 Nc6 3. Bb5 g6 4. 0-0 Bg7 5. c3 a6 6. Bxc6 dxc6 7. d4 Nf6 8. Rel cxd4 9. cxd4 Bg4 10. Nc4 0-0 11. Be3 Ne8 12. e5 Qb6 13. Rbl Nc7 14. d5 Qb4 15. dxc6 Rad8 16. Bd2 Ne6 17. Ne4 Qb6 18. h3 Bxf3 19. Qxf Qxc6 20. Ba5 Rd5 21. Bd4 Nd4 22. Qc3 Bxe5 23. Bxe7 Ne2+ 24. Rxe2 Bxc3 25. Nxc3 Rc8 26. Nxd5 Qxd5 27. b3 Qd3 28. B2el Qd2 29. a3 Kg7 30. Rbdl Qb2 31. Rbl Qa2 32. a4 Rc6 33. Bg5 Rc3 34. Be3 Rd3 35. Bb6 h6 36. a5 Rxb3 37. Rbdl g5 38. Re7 Rbl 39. Rxbl Qxbl+ 40. Kh2 h5 41. Rxb7 Qe4 42. Ra7 Q4 43. Kgl Kf6 44. Rc7 Qe2 45. Kh2 Qe4 46. Ra7 Qc4 47. Kgl Ke6 48. Rc7 Qe4 59. Ra7 Qel+ 50. Kh2 Qe5+ 51. Kgl Qe2 52. Ra8 Kd6 53. Rd8+ Ke7 54. Rd5 f6 55. Be3 Ke6 56. Rd2 Qel+ 57. Kh2 Qal 58. Bb6 Qe5+ 59. g3 Qe4 60. Rd8 Qb7 61. Rh8 Qf3 62. Be3 Kd6 63. Rb8 Ke5 64. Rb6 Qe2 65. Rb4 Qa2 66. Bb6 Q2 67. Kg2 Ke6 68. Ba7 Qf5 69. Bb6 Qd5+ 70. Kh2 Qd3 71. Kg2 Qd6 72. Rb2 Qd3 73. Rb4 Qd7 74. Rb2 Qdl 75. f3 Ke5 76. Bf2 g4 77. hxg4 hxg4 78. f4+ Kf5 79. Bb6 Qf3+ 80. Kh2 Qfl 81. Rg2 Ke4 82. Bgl Kd3 83. Bc5 Ke4 84. Bgl Kf5 85. Bb6 Kg6 86. Bd4 Kf5 87. Bb6

/½:½/ 3,35-3,55

This game played at 17th October in 5th round between Prestige and Mephisto X was continued at 18th October by decision of the supreme jury.

PRESTIGE - MEPHISTO X

83. g4 Qd7 84. Qg8 fxg4 85. hxg4 Kb5 86. Qg6 Re5 87. Qg8 Qe6 88. Qg7 Rd5 89. g5 Qg4+ 90. Kh2 Qh5+ 90. Kg3 Qf3+ 91. Kh4 Kc6 Adj.

/½:½/ 0,22-0,23

SITUATION AFTER THE 6TH ROUND

5 p. ELITE A/S, NOVAG X,K
4½ p. PRESTIGE,
4 p. MEPHISTO X, SUPER CONSTELLATION
3 P. CONSTELLATION, CHESS 2001, GEDEON X, MEPHISTO E., SUPERSTAR-SCISYS,
2½ p. CHESS 2001x, MEPHISTO Y,
2 p. CHESSMASTER, LOGICHESS 2,2 SENSORY-9 CYRUS X,
1½ p. MICROMURKS
0 P. LABIRINT-64.

7TH ROUND

GEDEON X - CONSTELLATION

1. Nf5 Nf6 2. g3 g6 3. Bg2 Bg7 4. 0-0 Nc6 5. d4 d5 6. Ne5 Nxe5 7. dxe5 Ng4 8. Bxd5 Nxe5 9. Nc3 e6 10. Be4 0-0 11. Bf4 Nd7 12. Qd2 Re8 13. Radl c6 14. Na4 f5 15. Bf3 e5 16. Bg5 Qc7 17. Qb4 h6 18. Bd2 e4 19. Qb3+ Kh8 20. Bg2 Ne5 21. Qb4 Bf8 22. Qa5 b6 23. Qc3 Bg7 24. Qb4 c5 25. Qb5 Be6 26. Nc3 Rad8 27. Bf4 Qb7 28. Qa4 Bd7 29. Qb3 Bc6 30. Bxe5 Bxe5 31. Qc4 Rd4 32. Rxd4 cxd4 33. Nb5 Bd5 34. Qb4 Qg7 35. Rdl Rd8 36. a3 a5 37. Qa4 Bc6 38. Qb3 f4 39. Nc3 time

/1:0/ 1,36-2,01

MEPHISTO EXCALIBUR - SUPER CONSTELLATION

1. c4 c5 2. Nf3 Nf6 3. e3 e6 4. d4 d5 5. Bd3 cxd4 6. exd4 Bb4+ 7. Bd2 Nc6 8. Bxb4 Nxb4 9. Qd4+ Nc6 10. Nc3 0-0 11. Nb5 Bd7 12. cxd5 Nxd5 13. Qc2 Ncb4 14. Qc4 Rc8 15. Qb3 Bxb3 16. Bxb5 Nc2+ 17. Kd2 Qa5+ 18. Kd3 Ndb4+ 19. Kd2 Nxal 20. Qa4 Rc2+ 21. Ke3 Nd5+ 22. Kd3 Nb4+ 23. Ke3 Qxa4 24. Bxa4 Rc4 25. Rxal Nd5x 26. Kd2 Rxa4 27. a3 Rc4 28. Rcl Rxcl 29. Kxcl Nf4 30. Nel Rd8 31. g3 Nh3 32. f3 Rxd4 33. Nc2 Rd5 34. Nb4 Re5 35. Kd2 Ngl 36. f4 Re2+ 37. Kd3 37. Kd3 Rxh2 38. g4 Rxb2 39. Ke4

/0:1/ 1,49-1,45

SUPERSTAR X - ELITE A/S

1. d4 d5 2. c4 dxc4 3. Nf3 Nf6 4. e3 e6 5. Bxc4 c5 6. 0-0 a6 7. a4 cxd4 8. exd4 Nc6 9. Bf4 Bd6 10. Bxd6 Qxd6 11. Nc3 0-0 12. Rcl Rd8 13. Ne2 b6 14. h3 Bb7 15. Qb3 Na5 16. Qe3 Nxc4 17. Rxc4 Bd5 18. Rccl Qb4 19. Qa3 Qxa3 20. bxa3 Bxf3 21. Gxf3 Rd3 22. Rc6 e5 23. Rxb6 exd4 24. Rdl Nd7 25. Rb4 d3 26. Nf4 Rg5+ 27. Kfl Ne5 28. h4 Rf5 29. Nxd3 Nxf3 30. Kg2 a5 31. Re4 Rd8 32. Nf4 Nxh4+ 33. Kg3 Rc8 34. Kxh4 g5+ 35. Kg4 Rxf4+ 36. Rxf4 gxf4 37. Rd5 Rc2 38. f3 Rc3 39. Rxa5 Rxa3 time

/0:1/ 2,01-1,33

CHESS 2001 - PRESTIGE

1. e4 e5 2. Nc3 Nc6 3. Nf3 Nf6 4. d3 Bb4 5. Fg5 h6 6. Fd2 0-0 7. e4 d6 8. Qa4 Bd7 9. Be2 Nd4 10. Qdl Nxd2 11. Qxe2 Qe7 12. 0-0 a5 13. Rfcl a4 14. Nb5 Bxd2 15. Qxd2 Bg4 16. Qe3 c6 17. Nc3 Be6 18. b3 Ng4 19. Qd2 a3 20. d4 f5 21. exf5 Bxf5 22. Rel e4 23. Radl Bh7 24. d5 c5 25. h3 Nf6 26. Nh2 b6 27. Nfl Bg6 28. Na4 Bh5 29. g4 Bf7 30. Nb6 Rab8 31. Na4 Nh7 32. Qe3 Qh4 33. Qg3 Qxg3 34. Nxg3 Ng5 35. Kg2 Bg6 36. Nc3 Rfe8 37. Re3 Bb6 38. h4 Nf3 39. h5 Bf7 40. Ngxe4 Ng5 41. Nxg5 hxg5 42. Rxe8+ Bxe8 43. Ne4 Bd7 44. Kf3 Kh7 45. Nxg5+ Kh6 46. Nf7+ Kh7 47. Re1 Kg8 48. Re7 Bc8 49. Ng5 Kf8 49. Ng5 Kf8 50. Ra7 Bb7 51.Ne6+ Kg8 52. g5 Kh8 53. Rxa3 Kh7 54. Ra7 Kg8 55. g6 Rb4 56. Nd8 Kf8 57. Nxb7 Rb6 58. Ra8+ Ke7 59. h6 Kf6 60. h7 Kxg6 61. h8Q Rxb7 62. Kg4 Rb8 63. Qxb8 Kh6 64. Qxd6+ Kh7 65. Kf5 g5 66. Qg6+ mate

/1:0/ 2,38-2,39

MICROMURKS - LABIRINT 64

1. e4 e5 2. Nf3 d5 3. Qe2 dxe4 4. Qxf4 Nf6 5. Qxe5+ Be7 6. Bb5+ Nc6 7. Nd4 Bd7 8. Bxc6 Bxc6 9. 0-0 Qd7 10. Rel 0-0 11. Nxc6 Bd6 12. Ne7+ Kh8 13. Qf5 Qxf5 14. Nxf5 Ng4 15. h3 Nh6 16. Nxh6 gxh6 17. d3 Kg7 18. Be3 c5 19. Nd2 Rfe8 20. d4 b6 21. Nc4 Re6 22. Nxd6 Rxd6 23. dxc5 bxc5 24. Bxc5 R6d8 25. c4 Rdc8 26. Bd4+ Kg6 27. b3 a5 28. Kh2 Rab8 29. Kg3 Rg8 30. Bc3 a4 31. b4 a3 32. Rad1 Kh5 33. Kf3 Kg6 34. Rd6+ f6 35. Rxf6+ Kg5 36. h4+ Kh5 37. Re5+ Rg5 38. g4+ Kxh4 39. Rxh6+ Rh5 40. Rexh5+ mate /1:0/ 1,37-0,59

insert rerun 1-18

CHESSMASTER - MEPHISTO Y

1. Nf3 d5 2. c4 d4 3. g3 Nc6 4. Bg2 e5 5. 0-0 e4 6. Nel Nf6 7. d3 Bf5 8. Bg5 exd3 9. Bxc6+ bxc6 10. exd3 Be7 11. Bxf6 Bxf6 12. Nd2 0-0 13. g4 Bd7 14. Ne4 Be7 15. Qe2 f5 16. gxf5 Bxf5 17. Rcl Rb8 18. b3 Qd7 19. Nc2 Bh3 20. Rfel Rf4 21. Ng3 Re8 22. Qe5 Rh4 23. Nh5 Rg4+ 24. Ng3 c5 25. f4 a5 26. Re2 c6 27. Rcel Rg6 28. a3 Be6 29. a4 Bd6 30. Qe4 Rg4 31. Nxd4 cxd4 32. Qxd4 c5 33. Qe3 Bxf4 34. Qxc5 Bxg3 35. hxg3 Rxg3+ 36. Khl Rxd3 37. Qb6 Bf7 38. Rxe8+ Bxe8 39. Re6 Kf7 40. Re5 Qh3+ 41. Kgl Rg3+ 42. Kf2 Rg2+ 43. Kel Qhl+ 44. Qgl Qxgl+ mate /0:1/ 2,01-1,40

SENSORY 9 - 65. CYRUS X

1. c4 c5 2. Nc3 Nc6 3. g3 Nf6 4. Bg2 d6 5. Nf3 e5 6. 0-0 Bf5 7. d3 Be7 8. e4 Bg4 9. Nd5 Nxd5 10. cxd5 Nd4 11. Be3 0-0 12. Rcl Bg5 13. Bxg5 Qb6 14. b3 f5 15. Rc3 Qa5 16. Rc4 fxe4 17. Qel Nxfe+ 18. Bxf3 Qxel 19. Rxel Rxf3 20. dxe4 b5 21. Rc2 a5 22. Kg2 Rf7 23. f4 h6 24. fxe5 Bf3+ 25. Kgl hxg5 26. exd6 Rc8 27. Rd2 c4 28. bxc4 Rxc4 29. e5 Rd7 30. Re3 Be4 31. h3 Rcl+ 32. Kf2 Rf7+ 33. Ke2 Bg2 34. Kd3 Bxd5 35. e6 Rf6 36. d7 Bc4+ 37. Kd4 Rf8 38. e7 Rcfl 39. d8Q a4 40. exf8Q+ Rxf8 41. Qxg5 Kh8 42. Re7 Bf743. Rf2 Rd8+ 44. Ke3 /1:0/ 2,05-1,56

LOGICHESS 2,2 - CHESS 2001 X

1. d4 d5 2. c4 c6 3. Nc3 Nf6 4. e3 e6 5. c5 Be7 6. Bd3 b6 7. cxb6 axb6 8. Nf3 Qd6 9. Ne5 0-0 Nbd7 11. f4 Ba6 12. a4 Bxd3 13. Qxd3 b5 14. Qc2 bxa4 14. Qc2 bxa4 15. Rxa4 Nb6 16. Rxa8 Rxa8 17. Ne2 c5 18. Nc3 cxd4 19. exd4 nc4 20. b3 Na5 21. Rf3 Qb6 22. Ne2 Ne4 23. Rh3 Qb4 24. Kfl Bd6 25. Nd7 Qb5 26. Ne5 Rb8 27. Kgl Nxb3 28. Rd3 f6 29. Ng4 Nxcl 30. Nxcl Bxf4 31. Rf3 Bd6 32. Rb3 Qe8 33. Ne2 Rxb3 34. Qxb3 Qh5 35. Qh3 Qxh3 36. gxh3 h5 37. Ne3 h4 38. Ng4 Kf7 39. Kg2 g5 40. Nh6+ Kg6 41. Ng4 f5 42. Ne5+ Kf6 43. Nd7+ Ke7 44. Ne5 f4 45. Nc6+ Kf6 46. Ngl Nd2 47. Nf3 Nxf3 48. Kf3 Kf5 49. Ke2 Ke4 50. Nd8 f3+ 51. Kf2 Bxh2 52. Nxe6 Bg3+ 53. Kfl Bf4 54. Kel Be3 55. Kfl Kd3 56. Kel Kc4 57. Kdl g4 58. Nc5 gxh3 /0:1/ 2,47-1,41

NOVAG X - MEPHISTO X

1. e4 c5 2. c3 e6 3. d4 d5 4. exd5 exd5 5. Nf3 Nf6 6. Be2 Bf5 7. Bf4 Bd6 8. Bxd6 Qxd6 9. 0-0 0-0 10. Na3 Qb6 11. b3 Nc6 12. Nb5 Rfd8 13. Rel Ne4 14. Qcl a6 15. Qf4 Bg6 16. Qc7 Qxc7 17. Nxc7 Rac8 18. Nxa6 bxa6 19. Bxa6 Rc7 20. Re3 cxd4 21. cxd4 Nb4 22. Bfl Ra8 23. Nel Rxa2 24. Rxa2 Nxa2 25. Nd3 Rc3 26. Re2 Ncl 27. Nxdl Rxcl 28. b4 Rbl 29. f3 Nf6 30. Ra2 Ne8 31. Kf2 Rxb4 32. Ke3 f5 33. Ra7 f4+ 34. Kxf4 Rxd4+ 35. Ke3 Rdl 36. Kf2 h6 37. Be2 Rhl 38. h3 Nf6 39. Rc7 Bf5 40. Ke3 Rel 41. Kd2 Ral 42. Ke3 Ra4 43. Bb5 d4+ 44. Kf4 Ra5 45. Rc5 Bel 46. Ke5 Nd7+ 47. Bxd7 Rxc5+ 48. Kxe6 Ra5 49. Kd6 Kf8 50. f4 Ra6+ 51. Kc5 d3 52. Kc4 d2 53. Bg4 Ral 54. Kc3 dlQ 55. Bxdl Rxdl 56. Kc4 Rfl 57. Kd3 Rxf4 58. Ke3 g5 59. Ke2 Ra4 60. Kf3 Ra3+ 61. Kf2 Kg7 62. Kgl Kf6 63. Kfl Kf5 64. Kf2 Kf4 65. g3+ Rxg3 66. Ke2 h5 67. Kf2 h4 /0:1/ 3,10-2,58

RESULT OF THE 3RD WORLD MICROCOMPUTER CHESS CHAMPIONSHIP

WORLD CHAMPIONSHIP, 1.	ELITE A/S /FIDELITY/	6 p	
2.	MEPHISTO X /HEGENER + GLASER/	5 p	/Bucholz 29,o/
3.	NOVAG X /NOVAG/	5 p.	/Bucholz 27,5/
4.	SUPER CONSTELLATION /NOVAG/	5 p.	/Bucholz 25,o/
5.	PRESTIGE /FIDELITY/	4½ p.	
6.	CHESS 200I /INTELLIGENT SOFTWARE/	4 p	/Bucholz 26,o/
7.	GEDEON X	4 p	/Bucholz 12,5/
8.	CHESS 2001 X /ISW/	3½ p	/Bucholz 27,o/
9.	MEPHISTO Y /HEGENER & GLASER/	3½ p	/Bucholz 24,o/
10.	MEPHISTO E. /HEGENER & GLASER/	3 p	/Bucholz 29,5/
11.	CONSTELLATION /NOVAG/	3 p	/Bucholz 24,o/
12.	SENSORY-9 /FIDELITY/	3 p.	/Bucholz 23,5/
13.	SUPERSTAR X /SCISYS-Hong-Kong/	3 p	Bucholz 22,o/
14.	MICROMURKS /UNIVERSITY of Hamburg/	2½ p	
15.	LOGICHESS 2,2 /UNIVERSITY of Copenhaga/	2 p	/Bucholz 26,o/
16.	CHESSMASTER Microelektr. of Erfurt/	2 p	/Bucholz 21,o/
17.	65. CYRUS X /ISW/	2 p	/Bucholz 15,5/
18.	LABIRINT-64 /Romania/	o p	

BEST COMMERCIAL UNIT: SENSORY-9 /FIDELITY/
BEST AMATEUR PROGRAM: MICROMURKS /UNIVERSITY of Hamburg/

REPORT FROM NEW YORK

The 4th World Computer Chess Championship

The 14th annual North American Computer Chess Championship held at the Sheraton Center in New York City, also served as the 4th World Computer Chess Championship (WCCC) which is held every three years since its inception in 1974 in Stockholm. There were a record total of twenty-two programs participant in the event which took place October 22-25, 1983. Eight countries were represented, including nine entries from the U.S.A., three from Canada, three from England, three from West Germany, and one each from Austria, Finland, the Netherlands, and Sweden. The five round Swiss System event was again hosted by the Association for Computing Machinenery (ACM) while concurrently holding its annual conference and by the International Computer Chess Association (ICCA) headed by Professors Benjamin Mittman (Northwestern University) and Monroe Newborn (McGill University).

Number Two Tries Harder

The 4th World Championship was won outright by the program CRAY BLITZ of the University of Southern Mississippi's Computer Science Department, authored by Robert Hyatt, Albert Gower, and Harry Nelson. This was only a mild surprise as CRAY BLITZ, an ACM Computer Chess Championship participant since 1976, had come very close to winning the tournament for the past few years only to have its efforts stymied by the World Champion Program, BELLE on each occasion since 1980 either by losing or drawing. For example, at last year's Championship in Dallas, Texas, CRAY BLITZ held BELLE to a draw in the crucial last round encounter only to end up runner-up on tie-break (i.e. both programs scored 3-1, two wins and two draws, but BELLE'S opponents' composite scores were higher). However this year CRAY BLITZ, who had not even participated in the 1980 WCCC in Linz, Austria, suceeded with flying colors, scoring 4½ - ½, (fours wins, one draw) achieving a 2418 performance rating and defeated BELLE in the process which was marked by yet another tense last round encounter between these two programs.

The final standings were highlighted by surprises at the top with long-standing middle of the field finisher AWIT (Professor Tony Marsland, University of Edmonton, Alberta Canada) and a relative newcomer, BEBE (Tony Scherzer, Hoffman Estates, Illinois) finishing tied for second with 4-1, each losing one game, BEBE taking second place on tie-break. In fourth place on tie-break was NUCHESS (David Slate and William Blanchard, Northwestern University, Illinois) over CHAOS (Mike Alexander, Fred Swartz, Jack O'Keefe, Mark Hersey, University of Michigan) each scoring 3½ - 1½, three wins, one draw, and one loss. The position of these perennial contenders, behind BEBE and AWIT was truly unexpected when one considers that NUCHESS and CHAOS were tied with CRAY BLITZ and BELLE on a score of 3-1 in last year's North American Computer Chess Championship (see Computer Chess Digest Annual 1983).

Even more surprising was the final score of BELLE, the famous World Champion of Computer Chess developed by Ken Thompson and Joe Condon of Bell Laboratories, Murray Hill, New Jersey, which had distinguished herself (Ken Thompson believes its likely to be a female) as the most outstanding program for at least the past three years. In fact, since the 1978 ACM when BELLE won her first title in Washington, she had not lost a game against another computer chess program. Great things have always come to be expected from BELLE, especially after achieving a wonderful 8½ - 3½ score and 2300+ performance at the U.S. Open Championship in Los Angeles as recently as August, defeating four human masters en route. Ironically BELLE was awarded a certification plaque just prior to the start of the 3rd round for having become the first computer program to obtain a USCF master rating (2203). This may

have been an unlucky omen, for BELLE lost that game to NUCHESS after having had a significant advantage in the middlegame and early endgame. Then in the final 5th round showdown with CRAY BLITZ, BELLE still had a chance to tie for first and serve as spoiler again for CRAY BLITZ, but lost, leaving her with a final score of 3-2, three wins and two losses, which could only be termed as a "disappointment and bad tournament" for Ken Thompson and Joe Condon.

Just as experienced human chess tournament campaigners must get used to occasional bad results, so must computer chess programmers suffer through the idiosyncracies and occasional deficiencies which result in bad play by their programs. After all it is just a sporting event, is it not? Not quite so. Firstly, it is clear that many hundreds (and in some cases thousands) of people hours went into the writing, development, and debugging of all the participating programs. However the attitudes of the programmers of microcomputer entrants (as a group the far newer participants) was noticably more serious and heart-throbbing than that of the programmers of mainframes (the generally more experienced campaigners) especially where there were commercial interests involved.

The improved performance of CRAY BLITZ may be primarily attributable to its modification in the weeks leading up to the tournament which enabled operation on two CRAY X-MP processors. CRAY is the family of the world's fastest computers, and the X-MP processor costs over nine million dollars. The 64-bit word of the CRAY computers is particularly suitable for chess programming. CRAY Research began supporting the work of Hyatt (a strong programmer, but a relatively weak chess player) and his chorts, Gower and Nelson (the chess advisors) in 1980, and the group has made tremendous progress since. While CRAY BLITZ is "outsearched" by BELLE by a 6 to 1 ratio (30,000 positions/move vs. 5,000) and BELLE has an opening library of 375,000 positions vs. CRAY BLITZ's 30,000 positions, Hyatt feels that this is compensated by his program's search being based on more chess-specific knowledge.

Hyatt also gave a very effective ad hoc lecture (having forgotten his typescript) entitled "Using Time Wisely" at the technical session on computer chess jut prior to the last round of play. He explained how algorithms have been devised to force CRAY BLITZ to distribute its time logically, as some humans would based upon situation-dependent events.

After NUCHESS (a successful offspring of the CHESS series authored by Larry Atkin and David Slate of Northwestern University and dominant in computer chess in the 1970's) defeated BELLE in the 3rd round and escaped with a draw in the 4th round against CRAY BLITZ (the below) it seemed that NUCHESS was unbeatable. In both games it stood considerably worse in the early middlegame, but successfully struggled to make its way out of difficult positions. In this regard Hans Berliner, (an honored guest, former World Correspondence Champion and author of a program which participated, PATSOC 2.0) noted to me that he feels that NUCHESS plays more like a human than any other program — that is it seems to know what's necessary to do in order to improve a bad position.

The general increase in public interest and awareness of computer chess was reflected in a number of ways possibly related to the presence of former World Chess Champion (1948-63) Mikhail Botvinnik and to the choice of an excellent site for the WCCC. The programming teams were regularly interviewed by journalists from the popular and science press. A number of well-known luminaries in the world of chess including Grandmasters Reuben Fine, Leonid Shamkovich, and Lev Alburt came to watch play. The increased size of the field to 22 participants requiring an extension to 5 rounds also reflects an increased interest in computer chess.

Progress of Micros and in General

Clearly the general level of play has risen, with fewer duffers at the tail end, and the stiffer competition at the top indicates progress into the field in general. The fact that BELLE could only finish 6th and the shuffling of places with newcomers at the top enhances this point of view. However it would seem worthwhile to point out that a 5-round Swiss System tournament should not be taken too seriously for determining an absolute champion. The sample size in

terms of number of games played is simply too small to reach any definite conclusions. We can nonetheless reach conclusions about general levels of play which are meaningful. For example, despite BELLE's relatively poor final score, it is clearly amongst the best programs. It is possible that some changes made to BELLE not long before the tournament may have had adverse effects.

Nine microcomputer programs were amongst the 22 participants. Although the Third World Microcomputer Chess Championship (held just prior to this event) was convincingly won by a Fidelity ELITE program and in the view of some they had a chance to win the overall championship, the best performance by micros was achieved by ADVANCE 3.0 (Mike Johnson and David Wilson, London, England) and MEPHISTO Experimental (Emar Henne and Thomas Nitsche, Munich, West Germany) each scoring 3-2 and placing 8th and 9th respectively. Nitsche, who claims to have made considerable improvements to his program, feels that his program could have done better had it been given a more suitable Opening Library. Following in 10th and 11th places respectively, were the microcomputer programs Fidelity Experimental (Dan and Kathe Spracklen, Boris Baczynsky, San Diego, Cal., U.S.A.) and NOVAG Experimental (David Kittenger, Van Nuys, Cal, U.S.A.). These results indicate that the top micros have established themselves in the upper middle range of the field. The advantages of mainframes in terms of speed, memory and word size still give them a considerable edge over micros.

It is difficult to deny that computer chess programs are getting stronger. There will always be skeptics, but the following anecdote repeated with the permission of Professor Monroe Newborn (to appear in ABACUS) illustrates how they may be convinced!

> At 1 a.m. following the final round Bernard Zuckerman, an International Master sat down across the table from BELLE for a few games of speed chess. Thompson, although dead tired from a strenuous week accompanying BELLE through her disappointing performance, was eager to see how the games would go. A confident Zuckerman asked whether he would own BELLE's soul if the won ten games in a row. After losing the first game, BELLE's soul was no longer a subject for discussion: Zuckerman simply had to hold onto his chair and fight for survival himself. At 3 a.m., and after eight more games, I.M. "Zuk the book" (as his good friends call him in reference to his ability to remember book openings) went home to bed on the short end of a 5-4 score.

During the ICCA meeting great appreciation was expressed for the efforts and achievements of Professor Ben Mittman who established the organization at the Second World Computer Chess Championship in Toronto in 1977. Recently Ben has stepped down as editor of the *ICCA Newsletter* which he started and from the Presidency of the ICCA. Professor Monroe Newborn has been elected to take over this duty, Johan Enroth (Sweden) is Vice-President, and William Blanchard is the Secretary-Treasurer. The new editor of the *ICCA Journal* is Jaap van den Herik (Netherlands). The meeting also passed a motion stating that the World Microcomputer Chess Championship should be sanctioned by the ICCA not more frequently than once a year if willing sponsors were available.

References: I would like to acknowledge the ACM Computer Chess Committee's excellent pamphlet and Professor Monroe Newborn for providing much useful information.

Danny Kopec
Visiting Assistant Professor
McGill University

4th World Computer Chess Championship
New York, 1983

	rate	perf	1	2	3	4	5	total
1 Cray Blitz	0	2418	16 + □	10 + ■	8 + □	4 = ■	6 + ■	4½
2 Bebe	1900	2072	11 – ■	18 + □	7 + □	10 + ■	4 + ■	4
3 Awit	0	1854	14 + □	8 – □	12 + ■	17 + □	13 + ■	4
4 Nuchess	2150	2192	18 + □	11 + ■	6 + □	1 = □	2 – ■	3½
5 Chaos	1850	1957	7 = ■	21 + □	17 + ■	6 – □	8 + □	3½
6 Belle	2203	2087	13 + ■	9 + □	4 – ■	5 + ■	1 – □	3
7 Schach 2.7	0	1860	5 = □	12 + □	2 – ■	11 + ■	10 = □	3
8 Advance 3.0	0	1920	22 + □	3 + ■	1 – ■	9 + □	5 – ■	3
9 Mephisto X	0	1712	19 + □	6 – ■	15 + □	8 – ■	14 + □	3
10 Fidelity X	1850	1775	15 + ■	1 – □	19 + ■	2 – □	7 = ■	2½
11 Merlin	0	1791	2 + □	4 – □	13 = ■	7 – □	17 + ■	2½
12 Novag X	0	1419	20 = □	7 – ■	3 – □	21 + ■	16 + ■	2½
13 Phoenix	0	1652	6 – □	22 + ■	11 = □	20 + ■	3 – □	2½
14 Ostrich	0	1348	3 – ■	15 – □	18 + ■	19 + □	9-■	2
15 Pion	0	1349	10 – □	14 + ■	9 – ■	16 – □	20 + □	2
16 BCP	0	1260	1 – ■	19 – □	22 + ■	15 + ■	12 – □	2
17 Patsoc 2.0	0	1291	21 = ■	20 + □	5 – □	3 – ■	11 – □	1½
18 Philidor X	0	1196	4 – ■	2 – ■	14 – □	22 + □	19 = ■	1½
19 Conchess X	0	1247	9 – ■	16 + ■	10 – □	14 – ■	18 = □	1½
20 Bobby	0	1186	12 = ■	17 – ■	21 + □	13 – □	15 – ■	1½
21 Shy	0	1118	17 = □	5 – ■	20 – ■	12 – □	22 + ■	1½
22 Sfinks X	1000	776	8 – ■	13 – □	16 – □	18 – ■	21 – □	0

Round 1

Phoenix — Belle 1 d4 d5 2 Bg5 f6 3 Bf4 Nc6 4 Nf3 g5 5 Bg3 h5 6 Qd3 h4 7 Qg6 + Kd7 8 Nxh4 gxh4 9 Qg4 + e6 10 Bxh4 f5 11 Bxd8 fxg4 12 Bg5 Nxd4 13 Kd1 Bd6 14 e3 Rh5 15 h4 gxh3 16 Rxh3 Rxh3 17 gxh3 Nf3 18 h4 Be5 19 Nc3 Bxc3 20 bxc3 e5 21 Be2 Ng1 22 f4 exf4 23 Bg4 + Kd6 24 Bxf4 + Kc6 25 Bxc8 Rxc8 26 Rbl Ne7 27 Rb4 Nh3 28 Be5 Nf5 29 h5 Nxe3 + 30 Kc1 Nc4 0-1

Cray Blitz — BCP 1 e4 c5 2 Nf3 Nf6 3 e5 Nd5 4 Nc3 e6 5 Nxd5 exd5 6 d4 Nc6 7 dxc5 Bxc5 8 Qxd5 Qb6 9 Qd2 0-0 10 Bc4 Re8 11 0-0 Nxe5 12 Nxe5 Rxe5 13 Qf4 Qf6 14 Qxf6 gxf6 15 Kh1 d5 16 f4 Rh5 17 Be2 Rh4 18 Bf3 d4 19 g3 Rh3 20 f5 Kg7 21 Kg2 Rh6 22 Bxh6 + Kxh6 23 Bd5 Kg7 24 Rad1 a5 25 Kh1 Ra6 26 Be4 b5 27 Rfe1 Bd7 28 Rd2 Bc6 29 Bxc6 Rxc6 30 Re8 Bb6 31 Rb8 b4 32 Rb7 Kf8 33 Re2 Bc7 34 g4 Rc5 35 Ra7 Bb6 36 Ra6 Rc6 37 Rd2 Rd6 38 Rd3 Kg 39 c3 Kg8 40 a4 Kg7 41 cxb4 2xb4 42 a5 Bc5 43 Rxd6 Bxd6 44 Rxd4 Bc5 45 Rd5 Be3 46 Rd3 Bc5 47 Rd7 Be3 48 a6 h5 49 gxh5 Kf8 50 Rd3 Bc5 51 Rg3 Ke8 52 h6 Bd 53 a7 Ke7 54 Rd3 Bc7 55 a8Q Bd6 56 h7 b3 57 Qb7 + Ke8 58 h8Q + Bf8 59 Qe # 1-0

Schach 2.7 — Chaos 1 d4 Nf6 2 c4 e6 3 Nf3 b6 4 g3 Bb7 5 Bg2 Be7 6 0-0 0-0 7 Nc3 Ne4 8 Qc2 Nxc3 9 Qxc3 Be4 10 Bf4 c6 11 Rfd1 d5 12 cxd5 Qxd5 13 Nel Bxg2 14 Kxg2 Nd7 15 f3 Qb5 16 e4 c5 17 d5 exd5 18 Rxd5 Nf6 19 Rd3 Rfd8 20 Rad1 rxd3 21 Rxd3 c4 22 Rd1 Bc5 + 23 Be3 Bb4 24 Qc2 h6 25 h4 Rc8 26 Kf2 Bc5 27 Qe2 Qa5 28 Bx 5 Qxc5 + 29 Ne3 b5 30 Qd2 b4 31 Qe2 c3 32 Qc2 a5 33 Re1 Rd8 34 Rc1 Qd4 35 bxc3 Qd2 + 36 Qxd2 Rxd2 + 37 Ke1 Rxa2 38 cxb4 axb4 39 Nd5 b3 40 Nxf6 + gxf6 41 Rb1 b2 42 Kd2 Kg7 43 Kc2 Ra3 44 Rxb2 Rxf3 45 Rb3 Rxb3 46 Kxb3 Kg6 47 Kc Kh5 48 Kc5 Kg4 49 Kd6 f5 50 exf5 Kxf5 51 Ke7 Kg6 ½-½

Nuchess — Philidor X 1 f4 d5 2 Nf3 Nf6 3 e3 g6 4 Be2 Bg7 5 0-0 0-0 6 d3 c5 7 Qe1 Kc6 8 c3 b6 9 Na3 e6 10 Ne5 Nxe5 11 fxe5 Ne8 12 d4 Bd7 13 Bd2 Ba4 14 Qg3 Bc6 15 b4 Rb8 16 Nb5 Rxb5 17 Bxb5 Qe7 18 Rab1 Qc7 19 bxc5 bxc5 20 Bd3 Rb6 21 Bc2 h6 22 Qh4 g5 23 Qh5 Qc6 24 h4 gxh4 25 Qxh4 Rxb1 26 Rxb1 Qa6 27 a4 Qc4 28 Qe1 Qa6 29 Bc1 Qc4 30 Ba3 Qa2 31 Qc1 a6 32 Bxc5 Qxa4 33 Qd2 Nd6 34 exd6 1-0

Merlin — Bebe 1 e4 c5 2 c3 d5 3 exd5 Qxd5 4 d4 e6 5 Nf3 Nc6 6 Be2 Nf6 7 dxc5 Bxc5 8 Qxd5 Nxd5 9 Nbd 2 0-0 10 0-0 Rd8 11 Ne4 Be7 12 Re1 e5 13 Bd2 Nc7 14 Bg5 Bxg5 15 Nexg5 h6 16 Ne4 Bf5 17 Nc5 b6 18 Nb7 Rd7 19 Rad1 Rb8 20 Rxd7 Bxd7 21 Kd6 Be6 22 Bc4 Rd8 23 Bxe6 Nxe6 24 Rd1 Kh7 25 Kf1 Kg6 26 Nh4+ Kh5 27 Nhf5 f6 28 f3 Kg6 29 h4 Nf4 30 g3 Ne6 31 Kf2 a5 32 Ke3 Rd7 33 Ke4 Ncd8 34 Rh1 h5 35 Rh2 Nc7 36 Rf2 Nde6 37 Rd2 Nc5+ 38 Ke3 a4 39 c4 N7e6 40 Nc8 Rxd2 41 Kxd2 Nd7 42 Nfe7± Kf7 43 Nd5 Nd4 4 4 Ncxb6 Nxf3+ 45 Ke3 Nxb6 46 Nxb6 a3 47 bxa3 Nd4 48 a4 Ke6 49 a5 Nc2+ 50 Ke2 Nb4 51 a3 Na6 52 Nd5 Nc5 53 Nb4 Kd6 54 Ke3 Kc7 55 Nd3 Nb3 56 a6 Kb6 57 Ke4 Nd2+ 58 Kf5 Nxc4 59 Kg6 Kxa6 60 Kxg7 f5 61 Kg6 e4 62 Nb4+ Ka5 63 Kxf5 e3 64 Kf4 e2 65 Nd3 Nb2 66 Ne1 Ka4 67 Kg5 Kxa3 68 g4 hxg4 69 Kxg4 Na4 70 h5 Nb6 71 h6 Nd7 72 Kf3 Nf8 73 Kxe2 Nh7 74 Ke3 Kb3 75 Kf4 Kb2 76 Kf5 Kc3 77 Nf3 Kd3 1-0

Advance 3.0 — Sfinks X 1 e4 e5 2 Nf3 Nc6 3 Bb5 a6 4 Ba4 Nf6 5 0-0 Be7 6 Re1 b5 7 Bb3 0-0 8 c3 d5 9 exd5 Nxd5 10 a4 bxa4 11 Bxa4 Bb7 12 Bxc6 Bxc6 13 Nxe5 Bb7 14 d4 Qd6 15 Nd2 Qe6 16 Ndf3 Rae8 17 c4 Nb4 18 Qb3 c5 19 Qc8 20 dxc5 Nc6 21 Nxc6 Qxc6 22 Qb6 Bxc5 23 Qxc6 Rxe1+ 24 Nxe1 Bxc6 25 b4 Be7 26 Bc3 Bb7 27 b5 Ra8 28 Rd1 Re8 29 h3 axb5 30 cxb5 Bd8 31 Rd7 Bc8 32 Rd6 Bf6 33 Bxf6 Rxe1+ 34 Kh2 gxf6 35 Rd8+ Kg7 36 Rxc8 Rb1 37 Rb8 Rb2 38 Kg3 Rb3+ 39 f3 Kg6 40 b6 Kf5 41 Rb7 h5 42 Kh4 Kg6 43 f4 Kf5 44 g3 Ke6 45 Rc7 Rxb6 46 Kxh5 Rb5+ 47 Kh4 Rd5 48 Ra7 Rd8 49 Rab+ Rd6 50 Rxd6+ Kxd6 51 Kg4 Ke6 52 h4 f5+ 53 Kg5 Ke7 54 Kh6 Kf8 55 Kh7 f6 56 Kg6 Kg8 57 Kxf6 Kh7 58 Kxf5 1-0

Pion — Fidelity X 1 Nf3 Nf6 2 g3 g6 3 Bg2 Bg7 4 c4 0-0 5 d4 d5 6 cxd5 Nxd5 7 0-0 Nc6 8 Re1 Nb6 9 e3 Qd6 10 Qc2 Bg4 11 Rd1 e5 12 dxe5 Qxe5 13 h3 Bxf3 14 Bxf3 Na4 15 Bxc6 bxc6 16 Qe2 Nxb2 17 Rd4 c5 18 Re4 Qd5 19 Bxb2 Bxb2 20 Qxb2 Qxe4 21 Nc3 Qe5 22 Rc1 Rfb8 23 Qe2 Rb4 24 a3 Rb3 25 Na4 Rxa3 26 Nxc5 a5 27 Qf3 Rd8 28 Ne4 f5 29 Nc5 Ra1 30 Rxa1 Qxa1+ 31 Kg2 Qe5 32 Qc6 Qd5+ 33 Qxd5+ Rxd5 34 Ne6 a4 35 Nxc7 a3 36 Nxd5 a2 37 Nf6+ Kg7 38 Ne8+ Kf7 39 Nd6+ Ke7 40 Nc8+ Ke6 41 Nb6 a1Q 42 e4 Qb1 43 exf5+ Kxf5 44 Nd7 Qb7+ 0-1

Mephisto X — Conchess X 1 e4 c5 2 Nf3 a6 3 Bc4 Nf6 4 Nc3 d6 5 d4 cxd4 6 Nxd4 Qc7 7 Qd3 Nbd7 8 f4 e6 9 0-0 b5 10 Bb3 b4 11 Na4 Bb7 12 Re1 Nxe4 13 Rxe4 Bxe4 14 Qxe4 Rc8 15 Bd2 Nf6 16 Qe2 Qb7 17 Bc4 Ra8 18 f5 e5 19 Nf3 Be7 20 Be3 e4 21 Ng5 d5 22 Bb3 h6 23 Nh3 0-0 24 Rd1 Rad8 25 Nf4 Bd6 26 Nh5 Nxh5 27 Qxh5 Be5 28 f6 Bxf6 29 Bxd5 Qb5 30 b3 Rd7 31 Nc5 Re7 32 Qg4 Bg5 33 Bd4 Rd8 34 Bc4 Qb6 35 c3 bxc3 36 Na4 Qc6 37 Bxc3 Be3+ 38 Kh1 Rxd1+ Qxd1 Bf4 40 Qd8+ 1-0

Awit — Ostrich 1 c4 e5 2 Nc3 d6 3 Nf3f5 4 d3 Be7 5 g3 Nc6 6 Bg2 Nf6 7 0-0 0-0 8 Bd2 e4 9 Nh4 Nd7 10 dxe4 Bxh4 11 gxh4 Qxh4 12 exf5 Rxf5 13 f4 Ne7 14 e3 Nb6 15 Be1 Qf6 16 Nb5 Nxc4 17 Nxc7 Rb8 18 Qa4 Qf7 19 Qxa7 Nc6 20 Bxc6 Qxc7 21 e4 Rf6 22 Bc3 Rg6+ 23 Kf2 Kh8 24 Rg1 Bg4 25 f5 Rf8 26 Qxb7 Qxb7 27 Bxb7 Bh5 28 a4 Ne5 29 a5 Rxg1 30 Rxg1 g6 31 Ke3 gxf5 32 Rg5 f4+ 33 Kf2 Bg6 34 Bxe5+ dxe5 35 a6 Rd8 36 a7 Bxe4 37 Bxe4 Rd2+ 38 Kf3 Rd8 39 Rxe5 h6 40 b4 Kg7 41 b5 Kg8 42 b6 Rc8 43 b7 Rc3+ 44 Kxf4 Kg7 45 b8Q 1-0

Novag X — Bobby 1 e4 e5 2 f4 Nf6 3 fxe5 Nxe4 4 Nf3 Ng5 5 d4 Nxf3+ 6 Qxf3 Qh4+ 7 Qf2 Qxf2+ 8 Kxf2 Nc6 9 Be3 d6 10 Bb5 dxe5 11 Bxc6+ 12 dxe5 Bf5 13 Rc1 Be7 14 Nc3 0-0 15 Ne2 Rfd8 16 Nd4 Be4 17 e6 Rab8 18 exf7+ Kxf7 19 Nb3 Bf6 20 c3 a6 21 Bf4 Rb7 22 Kg1 Re8 23 Rf1 Bd5 24 Rf2 Kg8 25 Nc5 Ra7 26 Bg3 Bg5 27 Kh1 Be3 28 Re2 Bc4 29 Ree1 Bf7 30 Nd3 Bd2 31 Rxe8+ Bxe8 32 h3 Bg6 33 Rd1 Bg5 34 h4 Bh5 35 Re1 Bf6 36 Re6 Bf7 37 Rxc6 Bd5 38 Rxc7 Rxc7 39 Bxc7 Bxa2 40 g3 Bd5+ 41 Kg1 Kf7 42 Nc5 Bc4 43 Nd7 Bd5 44 Nxf6 Kxf6 45 b4 Kf5 46 Kf2 Ke4 ½-½

Shy — Patsoc 2.0 1 e4 e5 2 Bc4 Nf6 3 Nf3 Nc6 4 d4 exd4 5 0-0 Nxe4 6 Rd1 d5 7 Bxd5 Qxd5 8 Nc3 Qh5 9 Nxe4 Be6 10 Nxd4 Qxd1 11 Rxd1 Nxd4 12 Rxd4 Rd8 13 Rxd8+ Kxd8 14 Be3 b6 15 Ng5 Kd7 16 Nxe6 Kxe6 17 Rd1 Bd6 18 Re1 Kd5 19 Rd1+ Kc6 20 Rd4 Be5 21 Rc4+ Kd6 22 c3 Re8 23 Ra4 a5 24 Rh4 h6 25 Rh5 a4 26 Bd2 Ke6 27 f4 Bd6 28 Kh1 f5 29 c4 Kf6 30 Rh4 Re4 31 b3 Kg6 32 Bc3 axb3 33 axb3 Re3 34 Rh3 Rxh3 35 gxh3 Bxf4 36 h4 h5 37 b4 Bd6 38 b5 Kf7 39 Kg2 Be7 40 Be5 Bc5 41 Bxc7 Ke6 42 Bf4 g6 43 Kf3 Kf7 44 Kg2 Bd4 45 Kg3 Ke7 46 Kf3 Kd7 47 Kg3 Kc8 48 Bd2 Kc7 49 Kf4 Bf6 50 Kg3 Be5+ 51 Kg2 Bd6 52 Bg5 Kb7 53 Be3 ½-½

Round 2

Belle — Mephisto X 1 e4 c5 2 c3 e6 3 d4 d5 4 exd5 exd5 5 Nf3 Bd6 6 dxc5 Bxc5 7 Be2 Nf6 8 0-0 Bf5 9 Nd4 Qc8 10 Bb5+ Nc6 11 Re1+ Kf8 12 Nxf5 Qxf5 13 Be3 Bxe3 14 Rxe3 Re8 15 Rxe8+ Nxe8 16 Na3 a6 17 Bd3 Qg5 18 Qb3 b5 19 Nc2 Nc7 20 a4 Ne5 21 Be2 Nc4 22 axb5 axb5 23 Nd4 Kg8 24 Bxc4 dxc4 25 Qxb5 Qxb5 26 Nxb5 Ne8 27 Nd6 Nc7 28 Ra7 Ne6 29 Nxf7 g6 30 Nxh8 Kxh8 31 Ra4 Kg7 1-0

Fidelity X — Cray Blitz 1 c4 e5 2 Nc3 nc6 3 Nf3 f5 4 d4 e4 5 Ng5 Bb4 6 d5 Bxc3+ 7 bxc3 Na5 8 Qd4 Qf6 9 c5 Qxd4 10 cxd4 Nf6 11 d6 cxd6 12 cxd6 Nc6 13 e3 Nb4 14 Ke2 b6 15 Bd2 Ba6+ 16 Kd1 Nd3 17 Bxd3 exd3 18 f3 0-0 19 Be1 Rfe8 20 Bd2 Rac8 21 Rc1 Rxc1+ 22 Kxc1 Rc8+ 23 Kb1 Rc2 24 Rd1 Bc4 25 a3 h6 26 Nh3 Ba2+ 27 Ka1 Bb3 28 Kb1 Ra2 29 Bc1 Rxg2 30 Rd2 Rxd 2 31 Bxd2 Bd5 32 Nf2 Bxf3 33 Nxd3 Be4 34 Kc2 Ng4 35 Kc3 Bxd3 36 Kxd3 Nxh2 37 Be1 g5 38 Ke2 Kf7 39 Bg3 Ng4 40 Kf3 Nf6 41 Be5 h5 42 Kg2 Ng4 43 Kf3 Nxe5+ 44 dxe5 b5 45 Kf2 a5 46 e4 f4 47 Ke2 g4 48 Ke1 h4 49 Kf2 h3 50 Kg1 g3 51 Kf1 f3 0-1

Merlin — Nuchess 1 e4 e5 2 Nf3 Nf6 3 Nxe5 d6 4 Nf3 Nxe4 5 Qe2 Qe7 6 d3 Nf6 7 Bg5 Nbd7 8 Nc3 Qxe2+ 9 Bxe2 h6 10 Bd2 g6 11 0-0 Nb6 12 Nb5 Nfd5 13 c4 c6 14 nbd4 Ne7 15 Bf4 Nf5 16 Rfe1 Be7 17 Nxf5 Bxf5 18 Nd4 19 Bfe Kf8 20 h3 Re8 21 a4 nc8 22 Nb3 g5 23 Bh2 Bf6 24 Na5 Bxb2 25 Rxe8+ Kxe8 26 Re1+ Be6 27 Nxb7 Kd7 28 c5 d5 29 Rb1 Bc3 30 Nd6 Nxd6 31 Bxd6 a5 32 Rb7+ Kd8 33 Ra7 Re8 34 Bc7+ Kc8 35 Bxa5 Kb8 36 Ra6 Bxa5 37 Rxa5 Kb7 38 g4 Bd7 39 Kf1 h5 40 Kg2 hxg4 41 Bxg4 Bxg4 42 hxg4 Re2 43 Kf3 Re1 44 Kg2 Rd1 45 Kf3 Rxd3+ 46 Ke2 Rh3 47 Kd2 Rh2 48 Ke1 Rg2 49 f3 Rc2 50 Kd1 Rf2 51 Kc1 0-1

Awit — Advance 3.0 1 c4 e5 2 Nc3 d6 3 Nf3 Nc6 4 d4 exd4 5 Nxd4 Nxd4 6 Qxd4 Nf6 7 Bf4 Be6 8 0-0-0 Be7 9 Nd5 Bxd5 10 cxd5 Qd7 11 e4 c5 12 Qe3 Qa4 13 e5 dxe5 14 Qxe5 Ng4 15 Qc7 Nxf2 16 Re1 0-0 17 Rg1 Bd8 18 Qd6 Ba5 19 Be2 Rfe8 20 Be5 Bd2+ 21 Kxd2 Ne4+ 22 Kc1 Nxd6 23 Bxd6 Qxa2 24 Bf3 Qa1+ 25 Kd2 Qxb2+ 26 Kd3 c4+ 27 Kxc4 Rac8+ 28 Bc5 Qc2+ 29 Kb4 Re3 30 Rxe3 Qxc5+ 31 Ka4 Qd4+ 0-1

Chaos — Shy 1 d4 Nf6 2 c4 e5 3 dxe5 Ng4 4 Bf4 Nc6 5 Nf3 Bb4+ 6 Nbd2 Qe7 7 a3 Ngxe5 8 Nxe5 Nxe5 9 e3 Bxd2+ 10 Qxd2 0-0 11 Qd5 d6 12 c5 Re8 13 cxd6 Qxd6 14 Qxd6 cxd6 15 Rd1 Be6 16 Rxd6 Bb3 17 Bb5 Rec8 18 0-0 Ng6 19 Bg3 Rc2 20 Rd7 Rxb2 21 Rxb 7 Be6 22 Rd1 Bd5 23 Rd7 Rxb5 24 R7xd5 Rxd5 25 Rxd5 Ne7 26 Rd7 Rc8 27 h3 Nc6 28 f3 a5 29 Rd5 Ra8 30 e4 Ne7 31 Rd7 Nc6 32 Kf2 Re8 33 Ke3 Nb8 34 Ra7 Nc6 35 Ra6 Ne7 36 Rxa5 Nc6 37 Rc5 Ne7 38 a4 Ra8 39 Rc7 Re8 40 Kd2 Ng6 41 Rb7 Ra8 42 Ke3 Ra6 43 Rb8+ Nf8 44 Rd8 Rxa4 45 Bd6 g6 46 Bxf8 h5 47 Bc5+ Kh7 48 Kf4 Ra5 49 Rc8 Kh6 50 Rc7 Kg7 51 e5 Ra4+ 52 Ke3 Ra6 53 Kd4 h4 54 f4 Ra4+ 55 Ke3 Ra1 56 Kf3 Kg8 57 Be7 Rf1+ 58 Kg4 Rf2 59 Rc8+ Kh7 60 Bf6 Rxg2+ 61 Kxh4 1-0

Patsoc 2.0 — Bobby 1 d4 Nf6 2 Nc3 e6 3 Nf3 Bb4 4 a3 Bxc3+ 5 bxc3 Ne4 6 c4 c5 7 e3 Qa5+ 8 Bd2 Nxd2 9 Qxd2 Qb6 10 Qc3 cxd4 11 exd4 Nc6 12 c5 Qd8 13 Bd3 Ne7 14 Qb2 Qa5+ 15 Kf1 Nd5 16 Kg1 f5 17 Re1 0-0 18 Bb5 Nf4 19 g3 Ng6 20 Kg2 f4 21 c3 Qc7 22 Qb1 fxg3 23 hxg3 b6 24 Qe4 Rb8 25 c6 d5 26 Qe3 Rf5 27 Ng5 Qe7 28 Nxh7 e5 29 dxe5 Rxe5 30 Qc1 Bf5 31 Rxe5 Nxe5 32 Ng5 Rc8 33 Re1 Qf6 34 Qf4 Ng6 35 Qd2 Qd6 36 Bc4 Ne7 37 Rxe7 1-0

Schach 2.7 — Novag X 1 d4 Nf6 2 c4 e6 3 Nf3 b6 4 g3 Ba6 5 Bd2 Be7 6 Bg2 c6 7 0-0 d5 8 Ne5 Nfd7 9 cxd5 10 Nxd7 Nxd7 11 Nc3 Rc8 12 Rc1 0-0 13 h3 Nf6 14 a4 Qd7 15 Bg5 Rc6 16 Bxf6 Bxf6 17 Qd2 Rfc8 18 Na2 Rxc1 19 Rxc1 Rxc1+ 20 Nxc1 Qd6

21 Qc3 e5 22 dxe5 Bxe5 23 Qf3 Qc5 24 Nd3 Bxd3 25 Qxd3 d4 26 Qe4 a5 27 Qa8 + Qf8 28 Qc6 Qd8 29 Be4 g6 30 Bd5 Kg7 31 Qb5 h6 32 Kf1 h5 33 Bxf7 Qf6 34 Qe8 Qf5 35 Bxg6 Qxh3 + 36 Ke1 Bxg3 37 Qf7 + Kh6 38 Bd3 Bxf2 + 39 Qxf2 Qe6 40 Qxd4 Kg5 41 e3 Qf6 42 Bb5 h4 43 Bd7 Qxd4 44 exd4 Kf4 45 Be6 1-0

Bebe — Philidor X 1 e4 c5 2 Nf3 d6 3 d4 cxd4 4 Nxd4 Nf6 5 Nc3 e6 6 Be2 a6 7 0-0 Qc7 8 Qd3 Nbd7 9 Qc4 Qd8 10 Bg5 Nc5 11 Nf3 Be7 12 e5 dxe5 13 Nxe5 Bd6 14 Qd4 Bxe5 15 Qxe5 Ncd7 16 Qd6 Qa5 17 Ne4 Qf5 18 Bd3 Qg4 19 f3 Qh5 20 h4 Ne5 21 Bxf6 Nc6 22 Bxg7 1-0

Ostrich — Pion 1 e4 d6 2 d3 g6 3 Be2 Nf6 4 Nf3 Bg7 5 0-0 0-0 6 Nc3 Re8 7 Bg5 c5 8 e5 dxe5 9 Nxe5 Nd5 10 d4 Nxc3 11 bxc3 cxd4 12 cxd4 12 cxd4 f6 13 Bc4 + e6 14 Bh4 g5 15 Bxg5 fxg5 16 Bb5 Bd7 17 Nxd7 Nxd7 18 Qg4 Rc8 19 Qe4 a6 20 Bd3 Nf8 21 Qxb7 a5 22 Rad4 Bxd4 23 Qe4 Qb6 24 h4 gxh4 25 Qg4 + Bg7 26 Qxh4 Qb2 27 Qa4 Qb6 28 Bb5 Red8 29 Rc1 Bb2 30 Rcd1 Rxd1 31 Qg4 + Bg7 32 Qxd1 Rc3 33 Qe2 Kf7 34 Bd3 Kf6 35 Qh5 Qb4 36 g4 e5 37 g5 + Ke7 38 f3 Qa4 39 Bxh7 Qe8 40 Qh4 Nxh7 41 Qxh7 Qf8 42 Qe4 Ke6 43 Rf2 Qf5 44 Qa8 Qxg5 + 45 Rg2 Qc1 + 46 Kh2 Qf4 + 47 Kg1 Qd4 + 48 Kh2 Qh4 + 49 Kg1 Qe1 + 50 Kh2 Rc7 51 Qe8 + Re7 52 Qc6 + Kf7 53 Qg6 + Kf8 54 Qd3 Ke8 55 Qh7 Bf8 56 Qh5 + Rf7 57 f4 e4 58 Re2 Qb4 59 Qg6 Qc3 60 Qxe4 + 61 Qg6 + Kd7 62 Qg4 + Kd8 63 Rxe7 Kxe7 64 Qg5 + Ke8 65 Qf5 Bg7 66 Qe4 + Kd7 67 Kg2 Bd4 68 f5 Kd6 0-0

Sfinks X — Phoenix 1 e4 e6 2 d4 d5 3 exd5 exd5 4 Bd3 Nc6 5 Nf3 Bg4 6 Be3 Nb4 7 Be2 Bf5 8 Na3 Nc6 9 0-0 Bxa3 10 bxa3 Nf6 11 Rb1 Rb8 12 Bd3 Bxd3 13 Qxd3 0-0 14 c4 Re8 15 Rfe1 dxc4 16 Qxc4 Qd5 17 Qxd5 Nxd5 18 Bd2 Rxe1 + 19 Rxe1 Nce7 20 Bc1 Re8 21 Bb2 b6 22 Kf1 f6 23 Ke2 Nf4 + 24 Kf1 Nd3 25 Re2 Nxb2 26 Rxb2 c6 27 Ke2 Nd5 + 28 Kf1 b5 29 h3 Re7 30 Kg1 Re6 31 Kh2 Kf7 32 Kg3 Re4 33 Rc2 Ne7 34 Kh2 Ke8 35 Kg1 Kd7 36 Kf1 Nd5 37 Kg1 Kc7 38 Kh2 Kb6 39 Kg3 Nf4 40 Rd2 Ka5 41 Rc2 Ne2 + 42 Kh2 Kb6 43 Rd2 Nc3 44 Rb2 Re2 45 Nd2 Kc7 46 f3 Nd1 0-1

BCP — Conchess X 1 e4 e6 2 d4 d5 3 e5 c5 4 c3 Nc6 5 Nf3 Qb6 6 Bd3 cxd4 7 cxd4 Nxd4 8 Nxd4 Bc5 9 Qa4 + Bd7 10 Bb5 0-0-0 11 Bxd7 + Rxd7 12 Nf3 Bxf2 + 13 Ke2 Ne7 14 Nc3 Nc6 15 Qg4 d4 16 Qxg7 d3 + 17 Kf1 Rhd8 18 Qxh7 Kb8 19 Nd1 Bc5 20 Bh6 f6 21 Bg7 d2 22 g4 Qa6 + 23 Kg2 Qe2 + 24 Kg3 Rd3 25 Ne3 Rxe3 26 Rhf1 d1Q 27 Raxd1 Rxd1 28 Qh8 + Kc7 29 exf6 Rxf3 + 30 Rxf3 Bd6 + 31 Kh4 Qxf3 32 Qe8 Qf2 + 33 Kh5 Qxh2 + 34 Kg6 Ne5 + 35 Kg5 Qd2 + 36 Kh4 Nf3 + 37 Kh3 Rh1# 0-1

Round 3

Nuchess — Belle 1 e4 e5 2 Nf3 Nc6 3 Bb5 a6 4 Ba4 Nf6 5 d4 exd4 6 0-0 Be7 7 e5 Ne4 8 Nxd4 0-0 9 Nf5 d5 10 exd6 Bxf5 11 dxe7 Nxe7 12 Be3 Nd5 13 Qf3 Nxe3 14 fxe3 Bg6 15 Qf4 b5 16 Bb3 c5 17 c4 Qf6 18 Qxf6 Nxf6 19 Rc1 b4 20 Nd2 Rfe8 21 Re1 Rad8 22 Nf1 Bd3 23 Rad1 Ng4 24 Ba4 Rf8 25 Nd2 Ne5 26 Bb3 Rd6 27 Nf3 Nxf3 + 28 gxf3 f5 29 Rd2 Re8 30 Kf2 f4 31 exf4 Rxe4 32 Kxe1 Rd4 33 Kf2 Kf7 34 Ke3 Bxc4 35 Rxd4 cxd4 + 36 Kxd4 Bxb3 37 axb3 Kf6 38 Ke4 g6 39 h4 Ke6 40 f5 + gxf5 + 41 Kd4 Kd6 42 f4 Ke6 43 Kc5 a5 44 h5 Kf7 45 Kd5 Kf6 46 Kd6 Kf7 47 Ke5 Ke8 48 Kxf5 1-0

Cray Blitz — Advance 3.0 1 e4 c5 2 Nf3 d6 3 d4 cxd4 4 Nxd4 Nf6 5 Nc3 a6 6 Bg5 e6 7 f4 Qb6 8 Nb3 Qe3 + 9 Qe2 Qxe2 + 10 Bxe2 Be7 11 0-0 0-0 12 Rad1 Rd8 13 e5 Nbd7 14 exf6 gxf6 15 Bh6 Kh8 16 Bh5 Kg8 17 Rf3 Bf8 18 Rg3 + Kh8 19 Ne4 Bxh6 20 Nxd6 Rf8 21 Nxf7 + Rxf7 22 Bxf7 Bg7 23 Bxe6 Nf8 24 Rd8 Bxe6 25 Rxa8 Bg8 26 Rb8 f5 27 c3 b5 28 Nc5 Ng6 29 Re2 Bf8 30 Nxa6 Bxa2 31 b4 Kg7 32 g3 Bc4 33 Nc7 Be7 34 Ne6 + Kf7 35 Nd4 Bd6 36 Rb7 + Kg8 37 Nxf5 Bd3 38 Nxd6 1-0

Patsoc 2.0 — Chaos 1 d4 Nf6 2 Nc3 d5 3 Bg5 Bf5 4 f3 c6 5 g4 Bd7 6 e3 e6 7 Qd3 h6 8 Bh4 c5 9 Nge2 Nc6 10 a3 Be7 11 Bg2 Qb6 12 dxc5 Bxc5 13 Bxf6 gxf6 14 Na4 Qa5 + 15 Qc3 Bxe3 16 Qxa5 Nxa5 17 Nac3 Nc4 18 Nd1 Bc5 19 Nf4 Rc8 20 Nh5 Ke7 21 a4 f5 22 gxf5 exf5 23 f4 Rce8 24 Bf3 Rhg8 25 b3 Kd8 + 26 Be2 Rg2 27 Ng3 Ne3 28 Rc1 Ng4 29 Kf1 Rxh2 30 Rxh2 Nxh2 + 0-1

Bebe — Schach 2.7 1 e4 e5 2 Nf3 Nc6 3 Bb5 a6 4 Ba4 Nf6 5 0-0 Be7 6 Re1 b5 7 Bb3 d6 8 c3 0-0 9 h3 Nb8 10 d3 Nbd7 11 Nbd2 Bb7 12 Nf1 Nc5 13 Bc2 a5 14 Ng3 c6 15 d4 Ncd7 16 Nf5 Re8 17 a4 Bf8 18 axb5 cxb5 19 Qe2 Qb6 20 Be3 Qa6 21 d5 Rab8 22 b4 a4 23 c4 Ba8 24 cxb5 Qxb5 25 Qxb5 Rxb5 26 Rxa4 Rc8 27 Bd3 Rbb8 28 Rea1 Bb7 29 Bb5 Rc2 30 Ra5 Rc3 31 Bd2 Rc7 32 Ng3 Rbc8 33 Ra7 Nb8 34 Be3 Be7 35 Bb6 Rc1 + 36 Rxc1 Rxc1 + 37 Kh2 Bxd5 38 Rxe7 Be6 39 Bc7 Nc6 40 Bxc6 Rxc6 41 b5 Rc5 42 Bxd6 Rxb5 43 Bxe5 Ra5 44 Bxf6 gxf6 45 Re8 + Kg7 46 Nd4 h5 47 Nxe6 + fxe6 48 Rxe6 Kf7 49 Rc6 Kg6 50 f4 h4 1-0

Conchess X — Fidelity X 1 c4 c5 2 Nc3 Nc6 3 Nf3 g6 4 d3 Nd4 5 Bf4 d6 6 Nxd4 cxd4 7 Nd5 e6 8 Nb4 Bg7 9 h3 Bd7 10 Qd2 e5 11 Bg3 h5 12 Nd5 Nf6 13 Bh4 Bc6 14 Bxf6 Bxf6 15 Rd1 Bg5 16 Qb4 a5 17 Qb3 a4 18 Qb4 a3 19 b3 Ra7 20 Qb6 Qxb6 21 Nxb6 Bd8 22 c5 dxc5 23 Nc4 b5 24 Nd2 Ba5 25 Rc1 Bc3 26 Kd1 f5 27 Kc2 Rhh7 28 Rd1 h4 29 Rg1 Bd5 30 Nf3 e4 31 Ng5 Rh5 32 f4 c4 33 dxc4 bxc4 34 bxc4 Bxc4 35 e3 Bxf1 36 Rgxf1 dxe3 37 Kxc3 e2 38 Rg1 exd1Q 39 Rxd1 Rb7 40 Rd6 Rb2 41 Rd2 e3 42 Rd3 e2 43 Re3 + Kd7 44 Nf7 Rxa2 45 Ne5 + Kc7 46 Nxg6 Rb2 47 Ne5 Rh6 48 Nc4 49 Re7 + Kc8 50 Re5 Rxc4 + 0-1

Mephisto X — Pion 1 e4 d6 2 Nf3 Nf6 3 Nc3 g6 4 d4 Bg7 5 Bb5 + c6 6 Be2 0-0 7 0-0 Nbd7 8 a4 Re8 9 Ng5 Qc7 10 f4 Rd8 11 Bc4 d5 12 exd5 cxd5 13 Bb3 Nb6 14 Nb5 Qb8 15 Qe2 Re8 16 Re1 Bf5 17 a5 Nbd7 18 Bd2 Bg4 19 Qe3 Qd8 20 h3 Bf5 21 g4 a6 22 Nc3 Bxg4 23 hxg4 Nxg4 24 Qh3 Bxd4 + 25 Kg2 Ndf6 26 Bxd5 Rf8 27 Ne6 Nf2 28 Nxd8 Nxh3 29 Bxf7 + Kh8 30 Kxh3 Raxd8 31 Bb3 Bc5 32 Be3 Bb4 33 Bb6 Rde8 34 Bd4 Rd8 35 Rad1 h5 36 Re5 Bxc3 37 bxc3 Rd7 38 Rde1 Rc7 39 Rxe7 Rxe7 40 Rxe7 b6 41 axb6 g5 42 b7 g4 + 43 Kh4 a5 44 Bxf6 + 45 b8R + Rf8 46 Rxf8# 1-0

Phoenix — Merlin 1 d4 d5 2 Bg5 Nf6 3 Bxf6 exf6 4 Bf5 5 c4 Bb4 + 6 Nc3 Nc6 7 Qb3 Be7 8 Qd1 0-0-0 9 cxd5 Rxd5 10 Nge2 Rhd8 11 Rc1 Rb5 12 Ng3 Rxd4 13 Bxb5 Rxd1 + 14 Rxd1 Bxc3 + 15 bxc3 Bg6 16 Bxc6 bxc6 17 Rd2 Qa3 18 Ne2 Be4 19 0-0 Bd5 20 Rc1 Kb7 21 c4 Be6 22 Rb1 + Ka6 23 Nd4 Bxc4 24 Nxc6 Qa4 25 Nb8 + Ka5 26 Rb7 a6 27 Rxc7 Qb5 28 Rd1 Bxa2 29 Rc8 Ka4 30 Rc2 Kb3 31 Rdd2 Qf5 32 Nc6 g6 33 f3 Bb1 34 Rb2 + Kc4 35 Ne7 Qh6 36 f4 Be4 37 Rd6 Qh4 38 Rd4 + Kc3 39 Re2 Qg4 40 Red2 Qe6 41 Nd5 + Bxd5 42 R2d3 + Kb2 43 Rxd5 Kc2 44 Kf2 h6 45 Rd6 Qg4 46 Rd2 + Kb3 47 Rxa6 Qh4 + 48 Kf3 Kxh2 49 Rb6 + Kc3 50 Rd5 Kc4 51 e4 Qg1 52 Rc6 + Kb4 53 Rc7 Qf1 + 54 Ke3 Qe1 + 55 Kf3 Qf1 + 56 Ke3 ½-½

Novag X — Awit 1 d4 Nf6 2 c4 g6 3 Nc3 d5 4 cxd5 Nxd5 5 e4 Nxc3 6 bxc3 c5 7 Nf3 Bg7 8 Bc4 Nc6 9 Bd5 cxd4 10 cxd4 0-0 11 Be3 Qa5 + 12 Bd2 Qa6 13 Bc3 Bg4 14 h3 Bxf3 15 gxf3 e5 16 dxe5 Nxe5 17 Bxe5 Bxe5 18 Rc1 Bf4 19 Rc5 B6 20 Rc2 Rac8 21 Rg1 Rxc2 22 Qxc2 Rc8 23 Bc6 b5 Kf1 Rxc6 Qb2 Rc1 + 26 Kg2 Rxg1 + 27 Kxg1 f6 28 Qb3 + Kg7 29 Qd5 Qa3 30 Kg2 a6 31 Qd7 + Kh6 32 Qf7 Qb2 33 Qf8 + Kh5 34 Qf7 a5 35 Qxh7 + Bh6 36 Qd7 Bd2 37 f4 Kh6 38 Qd8 Bxf4 39 Kf3 Kg5 40 Qxa5 Qe5 41 Qb6 Qc3 + 42 Kg2 Qc4 43 Kg1 Qxe4 44 Qxb5 + Kh4 45 Qd7 f5 46 Qh7 + Kg5 47 Qf7 Be5 48 a3 Qf4 49 Qe7 + Bf6 50 Qe1 Bh4 51 Bg2 Qa4 52 Qb4 + Qxb4 53 axb4 Bd4 54 b5 Bc5 55 f4 Bd4 56 Kh2 Be3 57 Kg2 Bxf4 58 b6 g5 59 b7 Bb8 0-1

Bobby — Shy 1 e4 e5 2 Nc3 Nf6 3 f4 d5 4 fxe5 Nxe4 5 Nf3 Be7 6 d4 0-0 7 Bd3 f5 8 exf6 Bxf6 9 0-0 Nc6 10 Nxe4 dxe4 11 Bxe4 Bxd4 + 12 Nxd4 Qxd4 + 13 Qxd4 Rxf1 + 14 Kxf1 Nxd4 15 Bf4 c6 16 Rd1 Ne6 17 Be3 Kh8 18 Ke2 Nf8 19 Rd6 Be6 20 b3 Bg4 + 21 Kd3 Nd7 22 Bd4 Nf8 23 h3 Be6 24 g4 Bf7 25 a3 Ne6 26 Rd7 Nxd4 27 Kxd4 Bg6 28 Bxg6 hxg6 29 Rxb7 a5 30 Kc5 a4 31 b4 Rf8 32 Kxc6 Rf3 33 Kb5 Rxa3 34 Rc7 Ra1 35 c4 a3 36 Ra7 g5 37 Kc5 Kh7 38 b5 a2 39 b6 Kh6 40 b7 Rb1 41 Kc6 a1Q 42 Rxa1 Rxa1 43 b8Q Kh7 44 c5 Ra3 45 Qh2 Kg8 46 Kd5 Rd3 + 47 Kc4 Rd1 48 c6 Rc1 + 49 Kd5 Rd1 + 50 Ke6 Rd4 51 Qe5 Rc4 52 c7 Rc1 53 Kf5 1-0

Philidor X — Ostrich 1 e4 d5 2 exd5 Nf6 3 d4 Nxd5 4 Nf3 Bg4 5 c4 Nb6 6 c5 Nd5 7 Qb3 Bc8 8 Bb5 + c6 9 Bd3 e6 10 0-0 b6 11 Bg5 f6 12 cxb6 Qxb6 13 Qxb6 axb6 14 Bd2 Ba6 15 Bxa6 Nxa6 16 Re1 Nac7 17 Nc3 Nxc3 18 bxc3 Bd6 19 Rab1 b5 20 Rb2 0-0 21 Re4 Rfe8 22 Re1 Nd5 23 Ra1 e5 24 dxe5 Bxe5 25 Rb3 Re7 26 a3 Rf7 27 Nxe5

fxe5 28 Re1 Raf8 29 f3 Rf5 30 Re4 Nf6 31 Reb4 e4 32 f4 Re8 33 c4 bxc4 34 Rxc4 Rb5 35 Bb4 e3 36 a4 Rxb4 37 Rbxb4 e2 38 Rb1 e1Q + 39 Rxe1 Rxe1 + 40 Kf2 Re4 41 Rxe4 Nxe4 + 42 Kf3 Nc5 43 a5 Kf7 44 h4 Ke6 45 Kf2 Kd5 46 g4 Kc4 47 Ke2 Kb5 48 Kf2 Kb4 49 Ke2 h6 50 Kd2 Nb3 + 51 Kc2 Nxa5 52 Kb2 Nc4 + 53 Kc2 0-1

Sfinks X — BCP 1 e4 c5 2 Nf3 Nf6 3 Nc3 d5 4 exd5 Nxd5 5 Nxd5 Qxd5 6 c3 e5 7 d4 cxd4 8 cxd4 Bb4 + 9 Bd2 Bd6 10 dxe5 Bxe5 11 Nxe5 Qxe5 + 12 Qe2 Nc6 13 Qxe5 + Nxe5 14 Bc3 f6 15 Rc1 0-0 16 f4 Nc6 17 Bc4 + Kh8 18 Kf2 Bf5 19 Rhd1 Rfd8 20 Kf3 h5 21 Kg3 a6 22 Kh4 Be4 23 Kxh5 Bxg2 24 Rxd8 + Rxd8 25 Kg6 Be4 + 26 Kf7 Kh7 27 h3 Kh6 28 Be1 Bh7 29 Ke6 Kg6 30 f5 + Kh6 31 Bd2 + Rxd2 0-1

Round 4

Nuchess — Cray Blitz 1 f4 d5 2 Nf3 Nf6 3 e3 Bg4 4 b3 Nbd7 5 Bb2 e6 6 Bd3 Bd6 7 h3 Bxf3 8 Qxf3 e5 9 Be2 0-0 10 0-0 exf4 11 exf4 Re8 12 Nc3 c6 13 Qd3 Nc5 14 Qf3 d4 15 Nb1 Re4 16 g3 Qb6 17 Qf2 Na4 18 Ba3 Bxa3 19 Nxa3 Nc5 20 Bf3 Re7 21 Nc4 Qd8 22 Rfe1 Nfe4 23 Qg2 d3 24 c3 Nd6 25 Ne5 f6 26 Nxc6 bxc6 27 Bxc6 Ncb7 28 Qd5 + Rf7 29 Qf3 Kh8 30 Bd5 Rd7 31 Kg2 Rb8 32 b4 f5 33 Be6 Re7 34 Re5 Nf7 35 Re3 Nfd6 36 Rd5 Ne4 37 Rxd3 Rd7 38 c4 Nf6 39 Re1 Nxd5 40 Rxd5 Rxd5 41 Qxd5 Qxd5 + 42 cxd5 Nd6 43 Re6 Ne4 44 Re7 Ra8 45 d3 Nc3 46 d6 Nd5 47 Re5 Nf6 48 Rxf5 Rd8 49 Ra5 Rd7 50 d4 Ne4 51 Kf3 Nxd6 52 g4 Kg8 53 Rd5 Kf8 54 a4 Ke8 55 Rh5 h6 56 Rc5 Re7 57 d5 Ne4 58 Rc6 Kd8 59 d6 Nd2 + 60 Kf2 Re4 61 Rc7 Rxb4 62 Rxg7 Rxa4 63 Rh7 Ne4 + 64 Kf3 Nxd6 65 Rxh6 Ke7 66 Rh7 + Ke6 67 f5 + Kd5 68 h4 Nc4 69 Rd7 + Kc5 70 Rg7 Ne5 + 71 Kg3 a5 72 h5 Kd6 73 h6 Ra3 + 74 Kg2 Ra2 + 75 Kg3 Ra3 + 76 Kg2 Ra2 + 77 Kg3 Ra3 + ½-½

Chaos — Belle 1 d4 d5 2 c4 e6 3 Nc3 4 cxd5 exd5 5 Nf3 Bd6 6 e4 dxe4 7 Nxe4 Bb4 + 8 Bd2 Bxd2 + 9 Qxd2 Ne7 10 Bc4 b5 11 Be2 a6 12 0-0 0-0 13 Rfc1 Be6 14 Nfg5 Bf5 15 Ng3 Bg6 16 Rc3 Ra7 17 Rac1 Re8 18 Bf3 Rd7 19 Rd1 Nf5 20 Nxf5 Bxf5 21 g4 Be6 22 Nxe6 Rxe6 23 Re3 Rxe3 24 fxe3 c5 25 Qc3 cxd4 26 exd4 Rc7 27 Qa5 Qc8 28 d5 Rc2 29 b4 Nd7 30 d6 Qc3 31 Qd8 + Nf8 32 Qa8 Qe3 + 33 Kh1 Qf4 34 Bg2 Qxg4 35 Rf1 Qe6 36 Qxa6 Rxa2 37 Qb7 Rd2 38 Bh3 Qc4 39 Qe7 Qc6 + 40 Bg1 f6 41 d7 Qb6 + 42 Kh1 Qb8 43 Bg2 Rxd7 44 Qe2 Rd4 45 Qa2 + Kh8 46 Qb3 Qd6 47 Rb1 f5 48 Qf3 f4 49 Qb3 Rd3 50 Qc2 f3 51 Bxf30—1

Advance 3.0 — Mephisto X 1 e4 c5 2 Nf3 e6 3 d4 cxd4 4 Nxd4 Nf6 5 Nc3 Nc6 6 Nxc6 bxc6 7 e5 Nd5 8 Ne4 Qc7 9 f4 Qb6 10 Bd3 Be7 11 c4 Bb4 + 12 Ke2 Ne7 13 a3 Bc5 14 Nxc5 Qxc5 15 Be3 Qa5 16 b4 Qd8 17 Be4 0-0 18 Qd6 Nf5 19 Bxf5 exf5 20 Qd3 g6 21 Rad1 Qh4 22 Bc5 Rd8 23 Qg3 Qh5 + 24 Kf2 Ba6 25 Rd4 Qh6 26 a4 Bc8 27 b5 cxb5 28 axb5 a6 29 Qf3 Rb8 30 b6 Bb7 31 Qg3 Rdc8 32 Bd6 Ra8 33 Rb1 Qg7 34 Kg1 f6 35 Rbd1 Rc6 36 Qh3 Bc8 37 Qb3 Bb7 38 c5 + Qf7 39 Qxf7 + Kxf7 40 exf6 Bc8 41 Be7 Re6 42 Rb4 Rb8 43 Bd6 Rb7 44 Be5 Rc6 45 Bd6 Kxf6 46 Ra4 Kg7 47 Rxa6 h6 48 Rda1 Kf5 49 Ra7 Rxd6 50 Rxb7 Rc6 1-0

Fidelity X — Bebe 1 d4 Nf6 2 c4 e5 3 dxe5 Ng4 4 Bf4 Nc6 5 Nf3 Bc5 6 e3 Qe7 7 Qd5 Bb4 + 8 Nc3 Bxc3 + 9 bxc3 Qa3 10 Qd2 Qa5 11 Rb1 a6 12 Bd3 Ngxe5 13 Nxe5 Nxe5 14 Bxe5 Qxe5 15 Qc2 h5 16 0-0 0-0 17 Bh7 + Kh8 18 Be4 Ra7 19 f4 Qc5 20 Qd3 Re8 21 f5 Qe7 22 Rf4 Kg8 23 Qd5 Qa3 24 Qd2 d6 25 Rb3 Qa5 26 Rb2 Re5 27 Qd3 Qa3 28 Rff2 b6 29 Rb1 Qc5 30 f6 Be6 31 Rb4 b5 32 Bh7 + Kh8 33 fxg7 + Kxg7 34 cxb5 Rxe3 35 Qd4 + Qxd4 36 cxd4 Kxh7 37 bxa6 Rxa6 38 a4 Ra3 39 Rb7 R6xa4 40 Rxc7 Rxd4 41 Rb7 Rd1 + 42 Rf1 Rxf1 + 43 Kxf1 Ra1 + 44 Kf2 Ra2 + 45 Kf1 Bc4 + 46 Ke1 Rxg2 47 Rc7 Be6 48 h4 Rh2 49 Ra7 Rxh4 50 Kf2 Rc4 51 Ra6 d5 0-1

Awit — Patsoc 2.0 1 c4 e5 2 Nc3 Nf6 3 g3 Bb4 4 Bg2 0-0 5 Nh3 Nc6 6 b3 d6 7 0-0 Bc5 8 Bb2 Bg4 9 Na4 Nd4 10 Re1 h6 11 Nxc5 dxc5 12 f4 Bxh3 13 Bxh3 exf4 14 gxf4 Ne4 15 e3 Ne6 16 d3 nf6 17 Bg2 c6 18 a3 Qe7 19 Qd2 Nh5 20 f5 Ng5 21 b4 Rae8 22 Rad1 a6 23 d4 Ne4 24 Qe2 Qg5 25 dxc5 Qxf5 26 a4 Qg5 27 Rd7 a5 28 Rxb7 ax b4 29 a5 Qxc5 30 a6 Nd6 31 Bd4 Qxd4 32 exd4 Rxe2 33 Rxe2 Nxb7 34 axb7 c5 35 dxc5 Rd8 36 Re1 Nf4 37 c6 Kh7 38 c7 Rd2 39 c8Q Rxg2 + 40 Kh1 Rg5 41 b8Q b3 42 Qxf4 Rg6 43 Qxf7 h5 44 Qcf5 Kh8 45 Q5xg6 h4 46 Re8# 1-0

Bobby — Phoenix 1 e4 e6 c3 d5 3 exd5 exd5 4 d4 Bd6 5 Bd3 Nf6 6 Ne2 0-0 7 Na3 Bxa3 8 bxa3 c5 9 dxc5 Nbd7 10 Be3 Qa5 11 Bf5 Nxc5 12 Bxc5 Qxc5 13 Bxc8 Raxc8 14 Qb3 Rfe8 15 Rd1 Qxc3 + 16 Kf1 Qe5 17 Ng3 Rc3 18 Qa4 Qe7 19 Qb4 Rxa3 20 Qb2 Rd3 21 Qc2 Rxd1 + 22 Qxd1 Qe5 23 a4 d4 24 f3 d3 25 Kf2 Ng4 + 26 fxg4 Qf4 + 27 Kg1 d2 0-1

Merlin — Schach 2.7 1 e4 e5 2 Nf3 Nc6 3 Bc4 Bc5 4 c3 Nf6 5 d3 d6 6 0-0 0-0 7 Nbd2 h6 8 b4 Bb6 9 Qb3 a5 10 b5 a4 11 Qc2 Ne7 12 Rb1 Re8 13 a3 d5 14 Ba2 Ng6 15 exd5 Nxd5 16 Re1 Ndf4 17 d4 exd4 18 Rxe8 + 19 cxd4 Nh4 20 Ne5 Ne2 + 21 Kf1 Bf5 22 Qc4 Bxb1 23 Nxb1 Nxc1 24 Qxc1 Qxb5 + 25 Bc4 Qa5 26 Qc2 Bxd4 27 Nxf7 Kf8 28 h3 Qc5 29 g3 b5 30 gxh4 Qxc4 + 31 Qxc4 bxc4 32 Nh8 Rb8 33 Ng6 + Ke8 34 Nc3 Bxc3 35 Nf4 c5 36 Nd5 Bb2 37 Ne3 c3 38 Nc2 Rd8 39 Ke1 Rd2 40 Ne3 Bxa3 41 h5 Bb4 42 Kf1 c2 43 Nxc2 Rxc2 0-1

Ostrich — Conchess X 1 e4 c5 2 c3 Nf6 3 e5 Nd5 4 Bc4 Nb6 5 Bb3 c4 6 Bc2 d6 7 Nf3 dxe5 8 Nxe5 Qd5 9 Qe2 Qxg2 10 Be4 Qg5 11 Nxc4 Nxc4 12 Qxc4 Nd7 13 Na3 Qe5 14 0-0 Qg5 + 15 Bg2 e6 16 Nb5 Ne5 17 Nc7 + Kd8 18 Qe2 Kxc7 19 d4 Qg4 20 Qxe5 + Bd6 21 Qa5 + Kb8 22 Be3 Bd7 23 h3 Qg624 c4 Rc8 25 Rac1 Bc6 26 d5 exd5 27 cxd5 b6 28 Qd2 Bb5 29 Rxc8 + Kxc8 30 Rc1 + Kd7 31 Qd4 Re8 32 a4 Be2 33 Rc6 Qb1 + 34 Bc1 f6 35 h4 Re7 36 a5 Qg6 37 axb6 Bd3 38 Bf4 Bxf4 39 Qxf4 axb6 40 Qb8 Re1 + 41 Kh2 Ba6 42 Rc7 + Kd6 43 Rc8 + Ke7 44 Qc7# 1-0

Pion — BCP 1 Nf3 d5 2 g3 Nf6 3 Bg2 c5 4 0-0 Nc6 5 d3 e5 6 a3 Bd6 7 c4 0-0 8 Nc3 Be6 9 Ng5 d4 10 Nxe6 fxe6 11 Na4 Kh8 12 b3 Qd7 13 Bg5 Ng4 14 e4 Nh6 15 Bxh6 gxh6 16 Qd2 Qg7 17 Rae1 Rf7 18 Qe2 Rg8 19 Rb1 b6 20 Qd2 h5 21 Bh3 Qf6 22 Bg2 Rg6 23 Qe2 Qg5 24 f4 exf4 25 b4 Rfg7 26 bxc5 bxc5 27 e5 Qxe5 28 Qd2 fxg3 29 Kh1 Rc7 30 Rfe1 Qf6 31 hxg3 Rxg3 32 Nb2 Qh4 + 33 Kg1 Rcg7 34 Kf1 Rf7 + 35 Kg1 Rg6 36 Re5 Bxe5 37 Qf4 Qxf4 38 Re1 Qg3 39 Re2 Qh2# 0-1

Shy — Novag X 1 e4 e5 2 Bc4 Nf6 3 Nf3 Nxe4 4 Nc3 Nxc3 5 dxc3 f6 6 Qd5 Qe7 7 Qd1 d6 8 Nd2 Be6 9 Bxe6 Qxe6 10 c4 Be7 11 Qh5 + g6 12 Qf3 Nc6 13 0-0 0-0 14 Rb1 f5 15 Rd1 e4 16 Qb3 b6 17 Qa4 Ne5 18 Re1 19 Qa6 Bg5 20 Nxe4 Bxc1 21 Rbxc1 fxe4 22 Rxe4 Qf5 23 Re2 Nf3 + 24 Kf1 Nxh2 + 25 Ke1 Rae8 26 Kd1 Rxe2 0-1

Phildor X — Sfinks X 1 e4 e6 2 d4 d5 3 Nd2 Nc6 4 Ngf3 Bb4 5 f6 6 Bb5 Bd7 7 Bd3 fxe5 8 dxe5 Bc5 9 0-0 Nge7 10 Ng5 Nf5 11 Nb3 Be7 12 Bxf5 exf5 13 e6 0-0 14 exd7 Bxg5 15 Qxd5 + Rf7 16 Nc5 Bxc1 17 Raxc1 Qe7 18 Rfe1 Qf8 19 Nxb7 Ne7 20 d8Q Nxd5 21 Qxd5 Rb8 22 Na5 Rxb2 23 Nc4 Rxa2 24 Ne5 1-0

Round 5

Belle — Cray Blitz 1 e4 c5 2 c3 d5 3 exd5 Qxd5 4 Nf3 e6 5 d4 Nf6 6 Bd3 Nc6 7 0-0 Be7 8 Be3 0-0 9 dxc5 Rd8 10 Nd4 Bxc5 11 c4 Qd6 12 Nxc6 bxc6 13 Bxc5 Qxd3 14 Qa4 Ne4 15 Bb6 Rd7 16 Ba5 Bb7 17 Nc3 Nc5 18 Qb4 Qd4 19 Rad1 Nd3 20 Qa4 Qg4 21 c5 Qf5 22 b4 Nb2 23 Rxd7 Nxa4 24 Nxa4 Qc2 25 Rxb7 Qxa4 26 Ra1 e5 27 f3 Qc2 28 Rc7 Qd3 29 Rf1 Qd5 30 a3 g5 31 Re7 f6 32 Rc7 h5 33 h3 Kh8 34 Kh2 a6 35 Re1 Re8 36 Re4 f5 37 Re2 g4 38 hxg4 fxg4 39 fxg4 hxg4 40 Rf2 e4 41 Rff7 Qe5 + 42 g3 e3 43 Rh7 + Kg8 44 b5 cxb5 45 Be1 Qb2 + 46 Kg1 Qa1 47 Kg2 Qf6 48 Kh2 Rd8 49 Rhd7 Rf8 50 Rd6 Qb2 + 51 Kg1 Qb1 52 Kh2 Qc2 + 53 Kg1 Qf5 0-1

Bebe — Nuchess 1 e4 e5 2 Nf3 Nf6 3 d4 Nxe4 4 Bd3 d5 5 Nxe5 Bd6 6 0-0 0-0 7 Bxe4 dxe4 8 Nc3 Qe7 9 Qh5 g6 10 Qe2 Bxe5 11 dxe5 Qxe5 12 Qxe4 Qxe4 13 Nxe4 Bf5 14 Re1 Kg7 15 Bf4 Na6 16 Be5 + Kh6 17 Re2 Rae8 18 Nf6 Re6 19 g4 Bxc2 20 g5 + Kg7 21 Nd7 + Rxe5 22 Nxe5 Bf5 23 Rae1 Nb4 24 a3 Nd5 25 Rd2 c6 26 Nc4 f6 27 Nd6 fxg5 28 Nxb7 Bg4 29 b3 h5 30 Na5 Bd7 31 Nc4 Bc8 32 b4 Bb7

33 Na5 Ba8 34 Rc2 Rf3 35 Re8 Nb6 36 Nc4 Rf8 37 Rxf8 Kxf8 38 Ne5 Kg7 39 Nxc6 a6 40 Nb8 a5 41 Rc7 + Kh6 42 bxa5 Na4 43 Nd7 Bf3 44 a6 g4 45 a7 Kg5 46 Rc8 Kh6 47 Ne5 Bd5 48 Rd8 Bb7 49 Nf7 + Kg7 50 Nd6 Bf3 51 Rd7 + Kg8 52 Nc4 Bc6 53 Ne5 Be4 54 Rd4 Nb6 55 Rxe4 Na8 56 Rc4 Kg7 57 Rc8 Nb6 58 Rb8 Na8 59 Rxa8 Kf6 60 Re8 Kg5 61 a8Q Kf5 62 Qa6 Kg5 63 Qxg6 + Kh4 64 Nxg4 hxg4 65 Rh8# 1-0

Chaos — Advance 3.0 1 d4 d5 2 c4 dxc4 3 Nf3 Nf6 4 e3 e6 5 Bxc4 c56 Qe2 a6 7 0-0 Nc6 8 Nc3 Qc7 9 Bd2 cxd4 10 exd4 Be7 11 Bb3 Qd8 12 Qe3 h6 13 Rac1 0-0 14 Rfe1 Na5 15 Bc2 Nc4 16 Qe2 b5 17 a4 Bb7 18 axb5 Nxb2 19 Rb1 Bxf3 20 gxf3 Ba3 21 bxa6 Qxd4 22 Nb5 Qc5 23 Nxa3 Qxa3 24 Bc1 Rxa6 25 Bxb2 Qa5 26 Be5 Rc6 27 Rb5 Qa6 28 Bd3 Nh5 29 Rb8 Qa3 30 Bh7 + Kxh7 31 Qe4 + f5 32 Qxc6 Rxb8 33 Bxb8 Qb4 34 Qxe6 Qc5 35 Be5 Qf8 36 Rc1 Nf4 37 Bxf4 Kh8 38 Be5 Qa3 39 Qxh6 + Kg8 40 Qxg7# 1-0

Phoenix — Awit 1 d4 Nf6 2 Bg5 Ne4 3 Bh4 d5 4 f3 Nf6 5 Nd2 g6 6 e4 Nbd7 7 e5 Nh5 8 c4 Bh6 9 cxd5 Nb6 10 g4 Nf4 11 g5 Bg7 12 Ne4 Nbxd5 13 Bg3 h6 14 Qd2 hxg5 15 Nxg5 Nh5 16 N1h3 f6 17 exf6 exf6 18 Ne4 Qe7 19 Qe2 Bxh3 20 Bxh3 Nhf4 21 Nxf6 + Bxf6 22 Qxe7 + Kxe7 23 Bf1 Bxd4 24 0-0-0 Be3 + 25 Kb1 Rad8 26 Bd3 c6 27 Rhe1 Kf6 28 Be4 g5 29 Rh1 Rh3 30 Rhe1 Nh5 31 Bxd5 Rxd5 32 Rxd5 cxd5 33 Rxe3 Nxg3 34 hxg3 Rxg3 35 Rb3 g4 36 Rxb7 Rxf3 37 Rxa7 g3 38 Ra6 + Kg5 39 Ra8 Rf1 + 40 Kc2 Rf2 + 41 Kc3 d4 + 42 Kxd4 Rxb2 43 Kc3 Rb6 44 Rd8 Kf5 45 Rd2 Ke4 46 a4 Rc6 + 47 Kb4 Kf3 48 Rd3 + Kf4 49 Rd4 + Ke3 50 Rg4 Kf2 51 Rf4 + Ke2 52 Rf7 Rc8 53 Re7 + Kf2 54 Rf7 + Kg1 55 a5 Rh8 56 a6 g2 a7 Kh2 58 a8Q 0-1

Schach 2.7 — Fidelity X 1 d4 d5 2 c4 dxc4 3 Nf3 Nf6 4 e3 e6 5 Bxc4 c5 6 0-0 a6 7 Qe2 b5 8 Bb3 Bb7 9 Rd1 Nbd7 10 Nc3 Qb8 11 d5 exd5 12 Nxd5 c4 13 Nxf6 + Nxf6 14 Bc2 Bc5 15 b3 c3 16 a3 0-0 17 Rd3 Ne4 18 Nd4 Bd6 19 Qh5 Rc8 20 f3 Nf6 21 Qh3 Rc5 22 Nf5 Bxh2 + 23 Qxh2 Qxh2 + 24 Kxh2 Rxf5 25 Rxc3 Rh5 + 26 Kg1 Rd8 27 Bb2 Rd2 28 Rd1 Rxd1 + 29 Bxd1 Rd5 30 Rc1 Rd6 31 g3 h5 32 e4 Nd7 33 Bc3 f6 34 Bb4 Rd4 35 Be2 Ne5 36 Bc3 Rd7 37 Bxe5 fxe5 38 Rc5 Re7 39 a4 bxa4 40 bxa4 Kh7 41 Bc4 g5 42 Kf2 h4 43 Kg2 hxg3 44 Kxg3 Kg7 45 Kg4 Kf6 46 a5 Re8 47 Rc7 Re7 48 Rxe7 Kxe7 49 Kxg5 Kd6 50 Bf1 Kc5 51 Kf5 Kd6 52 Kf6 Bc8 53 Be2 Bb7 54 Bd3 Bc8 55 Bc4 Bb7 56 Be6 Bc6 ½-½

Mephisto X — Ostrich 1 e4 d5 2 exd 5 Nf6 3 d4 Nxd5 4 c4 Nb6 5 Nf3 Bg4 6 Be2 Nc6 7 d5 Bxf3 8 Bxf3 Ne5 9 b3 g6 10 Bb2 Bg7 11 Nc3 0-0 12 Be2 Ned7 13 f4 Bxc3 + 14 Bxc3 a5 15 Qd2 a4 16 0-0 axb3 17 axb3 Rxa1 18 Rxa1 Re8 19 Qb2 e6 20 dxe6 Rxe6 21 Ra7 Qb8 22 Ra5 Re4 23 Bf3 Re3 24 Qd2 Re7 25 Qd4 f6 26 c5 Nc8 27 Bg4 b6 28 Qd5 + Kg7 29 Ra8 c6 30 Rxb8 cxd5 31 Bxd7 Rxd7 32 Rxc8 bxc5 33 Rxc5 d4 34 Bd2 d3 35 Kf2 Re7 36 Kf3 Re2 37 Bc1 Ra2 38 Rc7 + Kg8 39 Rd7 Rc2 40 Be3 Rc3 41 Bd4 Rxb3 4 2 Bxf6 Ra3 43 Be5 d2 + 44 Ke2 d1Q + 45 Rxd1 h5 46 Rd6 Ra2 + 47 Kf1 Kf7 48 h4 Rc2 49 Rf6 + Ke7 50 Rxg6 Kf7 1-0

BCP — Novag X 1 e4 e6 2 d4 e5 c5 4 c3 Nc6 5 Nf3 Qb6 6 Be2 Be7 7 0-0 Rb8 8 Na3 cxd4 9 cxd4 Bxa3 10 bxa3 Nge7 11 Bg5 0-0 12 Rb1 Qa5 13 Qb3 h6 14 Bf4 Ng6 15 Bd2 Qd8 16 Qa4 Nge7 17 Rfc1 Bd7 18 Kh1 Nf5 19 Bb5 a6 20 Bxc6 Bxc6 21 Qb3 Rc8 22 a4 Qd7 23 Qb4 Rc7 24 Rc5 b6 25 Qxb6 Rb7 26 Rxc6 Rxb6 27 Rbxb6 Ne7 28 Rd6 Qxa4 29 Rxa6 Qd1 + 30 Be1 Nf5 31 Ra3 Nxd4 32 Re3 Nc2 33 Rb6 Nxe3 34 fxe3 Qc2 35 Bb4 Ra8 36 Bd2 Qd1 + 37 Be1 Rxa2 38 Rb8 + Kh7 39 h4 Re2 40 Kh2 Rxe1 41 Nxe1 42 Rb3 Qxh4 + 43 Kg1 Kg6 44 Rd3 Qe1 + 45 Kh2 h5 46 Rb3 h4 47 Ra3 Kg5 48 Rb3 Qg3 + 49 Kh1 d4 50 Rb7 dxe3 51 Rb2 Qf2 52 Rxf2 53 Kh2 f1Q 0-1

Patsoc 2.0 — Merlin 1 d4 d5 2 Nc3 Nf6 3 Bg5 Bf5 4 f3 c6 5 g4 Bg6 6 e3 h5 7 gxh5 Rxh5 8 h4 Qb6 9 Na4 Qa5 + 10 c3 Nh7 11 Nh3 e5 12 Qb3 b5 13 Nc5 Bxc5 14 dxc5 f6 15 Bf4 exf4 16 Nxf4 Rh6 17 Ne6 Na6 18 h5 Ng5 19 Nxg7 + Kf8 20 Bg2 Nxc5 21 Qd1 Nd3 + 22 Kf1 Nxb2 23 Qc1 Bd3 + 24 Kg1 Na4 25 Qd2 Qxc3 26 Rd1 Bc2 27 Qxc3 Nxc3 28 Rd2 Bh7 29 f4 Nge4 30 Ne6 + Ke7 31 Bxe4 Bxe4 32 Nd4 c5 33 Rh3 cxd4 34 exd4 b4 35 Kf1 Rah8 36 a3 Rxh5 37 Rxh5 Rxh5 38 axb4 Rh1 + 39 Qf2 Rh2 + 40 Ke1 Rh1 + 41 Kf2 Ke6 42 Kg3 Rb1 43 Kh2 Rxb4 44 f5 + Bxf5 45 Rh8 Rxd4 46 Rd8 Rd3 + 1-0

Pion — Bobby 1 Nf3 Nf6 2 g3 e6 3 Bg2 Nc6 4 0-0 d5 5 d4 Bd6 6 Nc3 Bd7 7 Nb5 Be7 8 Bf4 Rc8 9 Ng5 Nh5 10 Nh3 Nxf4 11 Nxf4 a6 12 Nc3g5 13 Nh5 f5 14 e3 0-0 15 Rc1 Qe8 16 a3 Kh8 17 Re1 Na5 18 b4 Nc4 19 Ra1 Ra8 20 Bf1 Nb2 21 Qc1 Na4 22 Nxa4 Bxa4 23 Qd1 a5 2 4 bxa5 Rxa5 25 Bd3 Bc6 26 c4 Rxa3 27 Rxa3 Bxa3 28 Qe2 dxc4 29 Bxc4 b5 30 Ra1 Bd6 31 Bb3 Qg6 32 Rc1 Be8 33 Bd1 Qh6 34 Rb1 e5 35 dxe5 Bxe5 36 f4 Bxh5 37 Qxh5 Qb6 38 Qe2 gxf4 39 Rxb5 fxg3 40 Rxb6 gxh2 + 41 Kh1 Rg8 42 Rb8 Rxb8 43 Qh5 Rg8 44 Bg4 Ra845 e4 c5 46 exf5 c4 47 f6 Ral + 48 Bd1 Bxf6 49 Qd5 h6 50 Kxh2 Ra2 + 51 Kg3 Ra3 + 52 Bf3 Rc3 53 Qf5 Kg7 54 Qg4 + Kf7 55 Qd7 + Kf8 56 Qd6 + Kg7 57 Qc5 Bg5 58 Qa7 + Kg6 59 Qb6 + Bf6 60 Qe6 Kg7 61 Qf5 Bg5 62 Qd7 + Kf8 63 Qd6 + Kf7 64 Kg4 1-0

Conchess X — Philidor X 1 e4 c5 2 Ne2 Nc6 3 d4 cxd4 4 Nxd4 g6 5 c4 Nf6 6 Nxc6 dxc6 7 Qxd8 + Kxd8 8 Bd3 e5 9 Bg5 Bg7 10 0-0 Kc7 11 f4 exf4 12 Bxf4 + Kd7 13 Nc3 Re8 14 Bg3 Ke7 15 Be5 Be6 16 c5 Rad8 17 Rad1 Nh5 18 Bc7 Bd4 + 19 Kh1 Rd7 20 Bd6 + Kd8 21 Bb1 Bxc3 22 bxc3 Bc4 23 Rf2 g5 24 Rd4 Be6 25 Bb8 a6 26 Bd6 h6 27 Bc2 f6 28 Bd1 g4 29 Bb3 Kc8 30 Rf1 Rf7 31 Bxe6 + Rxe6 32 Rb1 Ng7 33 Rc4 Ne8 34 Bf4 Rfe7 35 Rbb4 a5 36Ra4 h5 37 Kg1 Ng7 38 Rd4 Rd7 39 Rd6 Kd8 40 g3 Ree7 41 Rxf6 Rd1 + 42 Kf2 Rb1 43 Rf8 + Re8 44 Rxe8 + Kxe8 45 Rxa5 Rb2 + 46 Kg1 Rb1 + 47 Kf2 Rb2 + Rd2 49 Be4 Nc3 50 Rg2 Nxe4 51 fxe4 g4 52 b4 Kf3 53 Rg1 Rxf2 54 e5 g3 55 e6 Re2 56 Rf1 + Kg4 57 e7 Rxe7 58 Rd1 Re3 + 59 Ka4 Re4 60 Rd7 h3 Rg7 + Kf3 62 Rc7 h2 63 Rf7 + Kg2 0-1
48 Ke3 Rxh2 49 Ra8 + Ke7 50 Bg5 + Kd7 51 Rd8 + Kc7 52 Rd2 Rh3 53 Bf4 + Kc8 54 Rd6 Rh2 55 Rh6 Kd8 56 Be5 Ne8 57 Rh7 Kc8 58 a3 Ra2 59 Rxh5 Rxa3 60 Rh4 Ra5 61 Kd4 Ra2 62 Rxg4 Ra4 + 63 c4 Ra1 64 Rg8 Kd7 65 g4 Rd1 + 66 Ke3 Re1 + 67 Kd3 Rd1 + 68 Ke2 Rc1 69 Kd3 Rd1 + 70 Ke3 Re1 + 71 Kd3 Rd1 + ½-½

Sfinks X — Shy 1 d4 Nf6 2 c4 g6 3 Nc3 d5 4 cxd5 Nxd5 5 Nxd5 Qxd5 6 Nf3 Bg4 7 Bf4 Bg7 8 Bxc7 Bxf3 9 gxf3 Qxd4 10 Qxd4 Bxd4 11 Rd1 Nc6 12 Rd2 Rc8 13 Bf4 h6 14 Bh3 Rd8 15 Bg2 e5 16 Bg3 f5 17 e3 Bc5 18 Ke2 Rxd2 + 19 Kxd2 g5 20 Rc1 Bb4 + 21 Kc2 f4 22 exf4 exf4 23 a3 fxg3 24 axb4 gxh2 25 Kc3 Ne7 26 Rh1 Nd5 + 27 Kc4 Nf4 28 Rxh2 h5 29 Kd4 Ke7 30 Ke4 Rd8 31 Bf1 Kf6 32 Bc4 a6 33 b5 Re8 + 34 Kd4 axb5 35 Bxb5 Re5 36 Bc4 b5 37 Bf1 b4 38 Kc4 Re1 39 Rh1 Rb1 40 b3 Rb2 41Rh2 Rb1 42 Bg2 Rb2 43 Bf1 h4 44 Kxb4 Rc2 45 Bcf Kf5 46 Bb5 Nd5 + 47 Ka3 Kf4 48 Bd3

NUCHESS vs. BELLE

The following marks the first game which BELLE has lost in the last 5 years against another computer chess program under tournament time conditions. After obtaining a solid advantage in the middlegame and endgame, BELLE falters badly. This is particularly surprising since I can testify from personal experience that in the past with similar positional advantages in blitz play BELLE has demonstrated a deadly and accurate "killer technique". The ensuing p-ending illustrates the classic knowledge vs. search problem in computer chess for endgame play.

a)	5.d4?!	This early central thrust can catch an unwary opponent off guard.
b)	6. ...Be7!	Developing and wisely avoiding 6...Nxe4? which leads to unfavorable complications for B after 7. Re1 d5 8.Nxd4 Bc5 9.Nxc6 Qh4 etc. Probably the text is in BELLE's book.
c)	9.Nf5?!	It is likely that the forced exchange sequence which follows is still book for both programs
d)	11. ...Nxe7	Now that the central pawns have been cleared away Black's lead in development more than compensates for White's two bishops, which cannot be retained in any sensible manner.

e)	14.fxe3	This results in a permanent and serious weakening of White's pawn structure. Although after 14.Qxe3 White's Q is somewhat exposed to a later ...Re8 after ...b5, that was the lesser evil.
f)	17.c4	This move is somewhat forced since White does not want to contend with ...C4 followed by ...Nc5 - Nd3.
g)	17...Qf6?	One of those hard to comprehend, sudden errors which computer programs make from time to time. It relinquishes some of Black's advantage though she's still better. Simply 17. ...Qe7 was strong.
h)	19.Rc1?	Correct is 19.Nc3
i)	19. ...b4!	A fine move gaining space and fixing White's pawn on c4 thereby making his bishop bad.
j)	21...Rad8	BELLE still has a considerable advantage. Now a doubling manoeuvre such as 22...Rd6 is indicated.
k)	22...Bd3?!	The beginning of an ill-advised manoeuvre, since the bishop gets pinned.
l)	24...Rf8?	An inexplicable move. After 23...Re6 24.Bc2 Red6 Black is still better.
m)	26...Rd6?!	Now its too late for this. Instead 26...Bg6 gives Black considerable threats.
n)	28.gxf3	White has succeeded in trading off his bad knight for Black's significantly better one. the game is now roughly even.
0)	30...f4?!	An almost desperate effort to liberate the pinned and trapped bishop, but it not succeed.
p)	34...Bxc4?!	A clever little trick taking advantage of the fact that after 35.Rxd4 cxd4 the WK is in check. However BELLE does not realize that the resulting p-ending is lost, although the loss of another and decisive pawn was unavoidable.
q)	38.Ke4	White could win more quickly with 38.Kc4 and promotion of his b-pawn.
r)	41.Kd4	After his detour and temporary return of the pawn, NUCHESS is a little lucky to still be winning.
s)	45...Kf6	On 45...Kg7 46. Ke5 Kh6 47. Kxf5 Kxh5 White promotes first and wins.
t)	48.Kxf5	The K + P ending now being beyond doubt, Ken Thompson gracefully resigned for his program.

NOVAG X = AWIT, Round 3

The performance of NOVAG X (author David Kittenger) was not up to expectations, especially after the recents ravings I've heard about the CONSTELLATION. However this could have a number of explanations including that possibly an experimental version had been used, or the stiff competition it encountered. Here the experience campaigner, AWIT (Tony Marsland), probably the most improved program of the tournament, also plays one of the best games of the event.

a)	9.Bd5 ?!	Here 9.Be3 is standard in the this, the Gruenfeld Exchange Variation (5.e4 Nxc3 6.bxc3).
b)	11.Be3 ?!	After this White does not get out of the Opening alive. 11.h3 should be played.
c)	12.Bd2?	12.Qd2 had to be tried for better or worse. After 12...Qxd2 + 13.Kxd2 Bg4 Black still maintains some pressure on White's center.
d)	12...Qa6 !	AWIT prevents White from castling and maintains the pressure on his center.

e)	15...e5 !	Black has played very simply and well. This lever is timely and destroys White's center.
f)	20...Rac8	White is already lost here. His king being caught between the crossfire of Black's queen and bishop coupled with his shattered k-side pawns splitting communications between left and right, spell imminent disaster. It is only a matter of time before a BR decisively penetrates his ranks.
g)	23.Bc6	Seeing that ...Rc1 will win at least a queen, NOVAG X gives up his bishop to at least find some safety for his king.
h)	24...Rxc6	Black should now win without much trouble, however AWIT, as was often the case in this tournament, started to flounder, not having a clearcut plan of action to capitalize on a decisive advantage.
i)	27.Kxg1	Probably Black's simplest way to win from this position is to improve the position of his queen, threeby protecting his king against a perpetual check, get his bishop on e5, and then advance his q-side pawns.
j)	36...Bd2	Here the threat was 37.Qg4 mate! However AWIT continues to swim for a plan.
k)	45...f5	At this point in the game AWIT's computing facility crashed for one hour and Tony Marsland had to take advantage of the permitted half-hour time-out to reestablish communications with his program. However, since the first 10 moves were in AWIT's book, over the next ten it searched 86,226 positions, and a total of only 194,070 for the first 30 moves (as Tony Marsland later reported to me), AWIT had time to spare.
l)	47...Be5	Although Black has not followed my prescribed winning method, his great material advantage allows a number of inferior moves in this ending to pass as harmless.
m)	52.Qb4 + ?	The exchange of queens deems Black's technical task as trivial.

MEPHISTO = PION, Round 3

MEPHISTO-X finished with a 3-2 score, leading the commercial microcomputer programs. The program, developed by Thomas Nitsche, has always been known for its human-like play, performing small tree searches, but "concentrating" on the right moves. In this game MEPHISTO demonstrates that it is also a competent tactician, punishing a number of errors by the opponent, PION.

a)	4... Bg7	PION specializes in this Opening, the Pirc-Robatsch Defence, which can be played against 1.e4 or 1.d4.
b)	5.Bb5 + ?	A wasted move since Black often plays ...c6 anyway.
c)	8.a4	After its poor 5th move, MEPHISTO shows an understanding of the structural needs of the position, restraining ...b5.
d)	9.Ng5 !?	A move which prepares f4 and provokes ...h6.
e)	9...Qc7	PION must have built-in Pirc strategies, for its moves are all standard for this Opening system. If 9...h6 10.Nh3 insists on getting in f4.
f)	10.f4	White's position "expands with lust" as Nimzowitsch used to say for pawns.
g)	10...Rd8?!	Black's first questionable move. 10...h6 followed by ...e5 put more tension into the position.
h)	11...d5!	Forced but not bad! On 11...e6? Bxe6 etc. wins. Both programs must "see" that on 12.ed cd (not 12. ...Nb6 13.d6!) 13.Bxd5 Nxd5 14. Nxd5 Qd6 15. c4 e6 Black recoups the pawn.

i) 14...Qb8 14...Qc6 looks more comfortable and is better in light of White's opportunity on the 16th move.

j) 16.Re1 White misses a chance to win material by 16.a5 followed by 17.f5 and 18.Bf4.

k) 19...Qd8 ? Just as a human might, Black misses the threat of g4. Necessary was 19...h5.

l) 22...Bxg4 An interesting decision. Seeing that he will lose at least a pawn, Black chooses to sacrifice a piece for two pawns.

m) 24.Qh3 Surprisingly MEPHISTO choses not to defend its d-pawn with 24.Qd3, but counterattacks instead.

n) 26.Bxd5! Played like a real MEPHISTO, White is brewing a real attack. Black should try 26...e6 to get some counter chances against the WK.

o) 27.Ne6! One blow follows after another, MEPHISTO is BURSTING IN. If 27...fxe6 28.Bxe6+ and 29.Bxg4. White now has a completely won game materially.

p) 32.Be3 The rest is rather straight forward as White is a piece up and Black has no real compensation.

SCHACH 2.7 vs. FIDELITY-X, Round 5

One of the "cleanest" games of the tournament was the encounter between SCHACH 2.7 and FIDELITY. Cleanest in the sense that the game did not include messy complications and unclear positions, nor did the game have a number of value-changing (i.e. bad) moves. FIDELITY-X has the early advantage leading into the middlegame. However a faulty combination actually leads to a shift of the advantage to White (ADVANCE 2.7) in the endgame due to a superior central control and the possession of two bishops against bishop and knight. The final position was submitted for adjudication. Participating in the verdict were I.M. and tournament director, Michael Valvo, G.M. Lev Alburt, I.M. Bernard Zuckerman, and myself. Without much ado, a unamimous verdict of a draw was reached because there are too few pawns remaining for White to be able to capitalize on his pawn advantage.

a) 10...Qb8 The Opening to here is an entirely logical and classical Queen's Gambit Accepted which offers White no particular advantage. Black's slight lag in K-side development is compensated by White's lag in Q-side development. White has slightly better central control but Black's Queen's Bishop is very free.

b) 15...c3 A double-edged and good move because it prevents White's Queen's Bishop from modelling Black's by moving to b2. If White now plays 16.e4? then Ng4 is a strong reply.

c) 19...Rc8 The last few moves by both sides have been very logical. White is clearly trying to remove the Black c-pawn which is a thorn in his position while Black has completed his development and is trying to protect it.

d) 21...Rc5!? FIDELITY-X is trying to carry out a "rook lift" which is always an exciting manuevre; ...Rh5 is threatened.

e) 22.Nf5! However SCHACH 2.7 finds a strong answer. Black should now play 22...Bc8. Then on 23.e4 Bxf5 24.exf5 Bf4 has a definite plus.

f) 22...Bxh2+ This is Black's miniature combination which is actually faulty, for the advantage shifts to White in the ensuing endgame.

g) 25.Rxc3 White's successful removal of the Black pawn on c3 (thanks to Black's combination), two bishops, and g,f, and e-pawns vs. Black's

h,g, and f pawns resulting in more potential central control, mean that he must be better in this position.

h) 27.Bb2?! This move does not really aid White's position. Much stronger was 27.e4 with Bf4 or Be3 to follow. Even though White is slightly behind in development, his position is more compact while Black has no entry points. 28.Bf4 would threaten to trap Black's rock on h4 after the sequence g4,...Rh3, Kg2,...Rh4,Bg5.

i) 30.Rc1 I would prefer 30.Ec2 although White is still better after the text if he follows with Bd4 and centralization coupled with the threat of Rc7.

j) 31.g3- It is now clear that White does not know how to improve his position.

k) 40.bxa4 For the last few moves White has played well and is still slightly better thanks to his more active rook and chances of obtaining the more active bishop as well. However a win would still require truly superior technique.

l) 42...h4 Black also plays well in reducing the number of pawns remaining whilst creating a passed pawn. White should now try Ed5 with chances of winning the R-ending.

m) 46.a5 Thanks to his superior rook and king White could still win the ending after 46.Bd5. After Black's next move (46...Re8) this is no longer possible since Black can answer 47.Bd5 with Rc8!

n) 49.Kxg5 Instead White wins a pawn, but the resulting bishop ending cannot be won because whenever White will try the break f4 Black will be able to force the liquidation of all the remaining pawns.

Choosing An Opening Library and A Test To Evaluate The Progress Of Computer Play

This article will focus on two subjects which have been prevailing problems in computer chess since interest in the field began some thirty years ago. The first subject is:

1) Choosing an Opening book (library) which is coherent with a program's idiosyncracies.

2) A test which may help to evaluate the progress of the play of computer chess programs in the past few years.

The first topic has evolved partially as a result of a decision which has been made based upon the empirical evidence of computer chess programmers. That is, programmers seem to have reconciled themselves to the conclusion that it is more efficient to try to improve Opening play by "preprogramming" a substantial library in conjunction with some evaluation functions specific to Opening play and searching as deeply as feasible. This is as opposed to writing computer chess programs which try to find the best or acceptable moves right from the start of a game. In this manner it has been determined that programs are able to allocate "think time" more effectively later in the Opening, Middlegame, and Endgame.

I agree with Professor Michie that we can expect to have a World Champion chessplayer of machine origin sometime in the 1990's. In my opinion that World Champion will play a somewhat different brand of chess than we are used to. Namely, it will take much greater risks to capture material, particularly pawns, thereby while withstanding attacks on its King and initiatives, deeming them "superficial". Already in 1969, no less an authority than former World Chess Champion, Mikhail Botvinnik, put forth his premise in **Chess, Computers, and Long-Range Planning** that the most important factor in an evaluation function for chess is **material**. Evidence of this trend is when BELLE, (or one of the top computer chess programs rated over 2000) defeats a strong human player, even Grandmasters, in blitz play. Usually

this happens because the machines can out-calculate the human over the short time periods available to make moves. This is manifested by a forcing sequence of moves which lead to the win of material. I have seen (and lost) a number of such blitz (5-minute) games where the human loses his way in the complications while the machine clings to material.

Danny Kopec

One of the variations which Bobby Fischer did much to advance the theory of was the "Poisoned Pawn Variation" of the Najdorf Variation in the Sicilian Defense. The moves go: 1.e4 c5 2.Nf3 d6 3.d4 cxd4 4.Nxd4 Nf6 5.Nc3 a6 6.Bg5 e6 7.f4 Qb6. This bold queen sortie initiates the "Poisoned Pawn Variation". White is pretty much compelled to gambit his b-pawn with 8.Qd2 since experience has shown that 8.Nb3 offers him no advantage after 8...Qe3+ or 8...Nbd7. There is a saying, "he who takes the queen knight's pawn sleeps in the subway" however Fischer snatched it a number of times (8...Qxb2 after 8.Qd2) with success against Grandmasters. The variation has not been refuted to this day, though an abundance of theory on it has amassed. Fischer was essentially betting that he could spot his opponents three moves of development in exchange for the pawn, and weave his way through the difficult defensive task before taking the initiative by utilizing his extra pawn and two bishops.

Now imagine a BELLE or CRAY BLITZ program which plays the Poisoned Pawn Variation. Such variations in the library of a powerful calculating machine would produce a very imposing brute-force opponent.

Now let us survey the Opening play of a few computer chess programs and see how compatible it is with their known stylistic predilections.

In Round 2 of the recent World Computer Chess Championship, BELLE (White) faced MEPHISTO-X (Black). This is a confrontation of two programs with known, distinctly, opposing styles; BELLE, the calculation-intensive, brute-force machine against MEPHISTO-X, the program which calculates very little and is said to play more like a human than any other — i.e. intuitively and naturally.

BELLE plays the 'c3 sicilian" as it's known. This steers away from the main-line variations of the Sicilian Defense, is tricky, and has been played a fair amount in International competition in recent years.

2...e6

MEPHISTO steers for a type of French Defense, a positionally oriented Opening suitable for its style. However 2...Nf6 and 2...d5 are fully satisfactory alternatives.

3.d4 d5 4.exd5 exd5?!

This move means that Black is willing to accept an isolated d-pawn which is compensated for by good central square control and active pieces. 4...Qxd5 avoids the isolated pawn, but leaves the queen's bishop hemmed in.

5.Nf3 Bd6 6. dxc5 Bxc5 7. Be2 Nf6 8.0-0 Bf5?

From here MEPHISTO' s real problems in this game begin. 8... 0-0 was imperitive. Although after the text Black is by no means lost, this active piece deployment should have been saved for later.

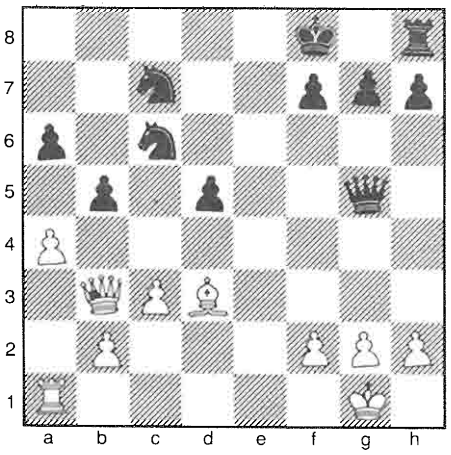
9.Nd4 Qc8?

After this move Black never really gets out of the Opening alive because he loses his castling rights and is unable to connect the rocks. 9...Bd7 was a better move.

10.Bb5+ Nc6 11.Re1+ Kf8 12.Nxf5 Qxf5 13.Be3 Bxe3 14.Rxe3 Re8 15.Rxe8+ Nxe8 16.Na3!

An unusual and interesting deployment. The knight heads for c2 and then to e3 or d4. Black should use the next few moves to free his rook with ...g6, ...Kg7, etc.

16...a6? 17.Bd3 Qg5 18.Qb3! b5 19.Nc2 Nc7 20.a4!



The winning move, opening lines rapidly for a final invasion via the q-side.

20...Ne5 21.Be2 Nc4 22.axb5 axb5 23.Nd4 Kg8 24.Exc4 dxc4 25.Qxb5 Qxb5 26.Nxb5 Ne8 27.Nd6 Nc7 28. Ra7 Ne6 29.Nxf7 g6 30.Nxh8 Kxh8 31.Ra4 Kg7 1:0

Although it was as a reusit of a number of bad moves that MEPHISTO - X lost this game, the fact that it was unwittingly drawn into an Opening position which was not suited for its style, just as a human might be, contributed much to its defeat.

The other game which MEPHISTO-X lost at the WCCC was also a Siclian Defense, though in this case a more standard variation. Even without considering these results, it would seem that the Sicilian Defense with its often requisite sharp play, would be an Opening least suited for MEPHISTO-X. More to its "tastes" would be double king pawn Openings or the solid Caro-Kann Defense.

White: ADVANCE 3.0
Black: MEPHISTO-X

1.e4 c5 2.Nf3 e6 3.d4 cxd4 4.Nxd4 Nf6 5.Nc3 Nc6 6.Nxc6 bxc6 7.e5 Nd5 8.Ne4 Qc7?

MEPHISTO was probably out of its book on the previous move. In what might appear to be a solid and harmless variation Black is heading into a devastating bind on gives his dark-squares, especially d6. For this reason theory here 8...f5 9.exf5 e.p. Nxf6 10.Nd6+ Bxd6 11.Qxd6 Qb6 (threatening ...Qxf2+ !) 12.Bd3 etc. The text is only purposeful if Black intends to follow it with ...d6. However this is not possible for tactical reasons.

9.f4 Qb6

If now 9...d6? 10.Nxd6+ Bxd6 11. exd6 Qxd6 12.c4 wins a piece for White. Therefore Black is unable to release the grip on d6 and seeks compensation elsewhere.

10.Bd3 Be7

Based on Black's next move, this is a wasted one. He should play 10...Ba6 with some relief through the exchange of this potentially bad bishop. If then 11.c4 Qd4! gives Black counterplay. Probably White's best is 11.Qe2 with at most a slight plus.

11.c4 Bb4+

On 11...Nb4 12.Be2 leaves Black's knight misplaced.

12.Ke2!

A move which is both necessary and strong.

12...Ney 13.a3

White forces Black's next four moves leaving him cramped and devoid of play.

13...Bc5 14.Nxc5 Qxc5 15.Be3 Qa5 16.b4 Qd8 17.Be4 0-0 18.Qd6

This completes the bind on Black's position, his d-pawn causing total disruption between the left and right flanks. Black never recovered and MEPHISTO-X resigned on move 50.

There were two problems with Black's Opening: a) It did not suit MEPHISTO's style and b) It was not programmed deeply enough at critical junctions, i.e. Black had important improvements at moves 8 and 10. Failing these he drifts into a terrible position by move 16.

Enough dwelling upon poor MEPHISTO-X's losses. Perhaps the Sicilian Defense will soon be removed from its library. Let us now have a look at the Opening play of tournament winner CRAY BLITZ. Despite its abilities as a deep brute-force calculator this program's play seems tempered by some good old-fashioned chess knowledge. CRAY BLITZ's Opeining play is simple and solid.

Observe how White's Bird's Opening is soon made to look ridiculous and just for "the birds" (no relationship to name) in the following encounter against NUCHESS at the WCCC, Round 4.

White: NUCHESS
Black: CRAY BLITZ

1.f4 d5 2.Nf3 Nf6 3.e3 Bg4

A simple, solid, and reliable response to White's attempt at a reversed Dutch Defense with tempo in hand. Black immediately begins to contest White's control of the e5 square.

4.b3 Nbd7 5.Bb2 e6 6.Bd3?

An ill-conceived though aggressive-looking move. Black will be able to play ...e5 with still more effect. If White wants to prevent this he should play 4.Be2 followed by Ne5 but with no particular advantage. However now not even the very compromising d4 is possible for White.

6...Bd6 7.h3 Bxf3 8.Qxf3 e5!

Black's simple Opening play is now an overwhelming success as after only eight moves he already stands unquestionably better.

9.Be2

A pitiful retreat to have to play at this early stage.

9...0-0 10.0-0 exf4!

Denying White any possible counterplay on the f-file and leaving the P/f4 slightly weak, Black can now concentrate on enhancing his central control.

11.exf4 Re8! 12.Nc3 c6!

White is now at a lose for good central moves.

13.Qd3 Nc5 14.Qf3 d4 15.Nb1 Re4! 16.g3

Black now appears to have an overwhelming advantage. However White does threaten 17.Bd3 followed by Bxd4 when he might escape Black's clutches. There are many interesting continuations for Black involving the sacrifice of material for a continuing initiative. One for example is 16...Qe7 17.Bd3 Nxd3 18.cxd3 Be2 19.Bxd4 Bc5 etc. with strong attacking chances for the exchange. It will be a long time (if ever) before computer programs are able to play such "speculative, intuitive and possibly optimistic" sacrifices as the latter variation. It is rare that one sees them sacrifice at all! Anyway the text move chosen by CRAY BLITZ is probably amongst Black's best, for it has no less than three positive aspects: 1) aims at the White king via x-ray attacks from b6. 2) prepares to double rooks on the e-file and 3) attacks the bishop on b2 indirectly.

16...Qb6 17.Qf2

Considering Black's lead in and superior development, one would now expect a winning combination to exist; it does but it's not obvious. The best I could find is 17...Rxe2 18.Qxe2 Nxb3 19.axb3 d3+ 20.Qf2 Bc5 21.Bxf6 dxc2! etc. and Black should win without too much difficulty. CRAY BLITZ makes a valiant effort, but NUCHESS defends accurately and finds a way to untangle its pieces.

17...Na4!? 18.Ba3 Bxa3 19.Nxa3 Nc5 20.Bf3 Be7 21.Nc4 Qd8

And with White's worst troubles being over, the game ended in a draw after 77 moves.

One game in the WCCC, CRAY BLITZ vs. ADVANCE 3.0 did actually involve the Poisoned Pawn Variation. However when White (CRAY BLITZ) deferred the gambit of his b-pawn with 8.Nb3 and after Black reached an endgame with 8...Qe3+ 9.Qe2 Qxe2+ 10.Bxe2, he soon lost his way and a piece.

Play went: 1.e4 c5 2.Nf3 d6 e.d4 cxd4 4.Nxd4 Nf6 5.Nc3 a6 6.Bg5 e6 7.f4 Qb6 8.Nb3 Qe3+ 9.Qe2 Qxe2 10. Bxe2 Be7 11.0-0 0-0?!

The point is that since this is already a middle-game-ending Black should develop and keep his king centralized somewhat longer particularly because his bishop on e7 will be unprotected after ...0-0. White cannot now win with 12.e5 de 13.fe Nd5 14.Nxd5 Bxg5 15. Nb6 because of Be3+.

12.Rad1 Rad8?

Already the losing move.

13.e5 Nbd7

If 13...de 14.fe Rxd1 15.Rxd1 Nd5 16.Bxe7 and Black cannot recapture due to the backrank threat. So he loses a piece and the game. It remains a problem to teach a program all the appropriate strategies for middle-game endings as might arise from transitions as in this example from the Poisoned Pawn Variation deferred.

Pity the Poor Chess Computer Buyer

If there was ever a blind item in the history of selling, the chess computer is it!

When the commercial chess computer was introduced to the public some 8 years ago, the uninformed public was divided into two schools of thought: either the computer must be so strong that no one could ever beat it, or it must be so weak as to be useless as a chess opponent. Unfortunately, the latter conjecture turned out to be far and away the more correct one as proven by those unlucky soles who ventured their hard earned money on Chess Challenger 1, JS&A's Computer Chess, CompuChess, and Boris. Here were "chess playing opponents" (all three terms used VERY loosely) that seemed disinterested in winning but did a tremendous job of leaving pieces en prise, giving no thought to positional values, and, worst of all, taking inordinate amounts of time to reach obvious conclusions. These electronic "wood pushers" probably created a world's record for dissatisfied customers. And to add insult to injury, quality control was not all that evident in the "ingenious" little gadgets, and department stores and mail-order houses had their return policies tested to the limit from customers with complaints ranging from, "It takes too long to move!" to "It makes illegal moves!" to "It doesn't work at all!" to "It just made a king sacrifice; in fact, it ALWAYS seems to sacrifice its king!" Those who chose to endure these earlier computers quickly lost interest because of their weaknesses and either put them away in the closet or used them for very expensive Frisbees.

Both the computer chess customer and the computer chess market moved aimlessly forward for some years with Boris (a product of Applied Concepts Inc.) competing with Chess Challenger "10" (from Fidelity Electronics Ltd.) for customers who were willing to spend $250 to $300 for a computerized chess opponent that looked impressive but actually played 1100 chess. However, it wasn't until Fidelity Electronics introduced the Chess Challenger "7" that the market exploded. For the very first time the "strongest" chess computer on the market (albeit 1150) was under $120, and tests proved that it was somewhat stronger than both the "10" and Boris. Ads appeared in papers and magazines all over the country, and over a quarter million people made the decision to purchase Chess Challenger "7". Fidelity Electronics, then located in Chicago, began bursting at the seams as did their bank account, and the decision was made to build a huge, beautiful factory in Miami, Florida, where their supply could better keep up with the incredible demand. The timing of the move was unfortunate, for it interfered with Christmas sales because the interruption caused by the move served to constrict the supply lines to retailers, and rumors have it that quality control died a quick death that 1979 Christmas season.

It was at just about this time that capitalism showed its greedy little head; at least five different companies were watching Fidelity's upward flight with ideas and visions of new chess computers dancing in their heads. To stave off the competition, Fidelity, seemingly without the ability to make stronger programs, went the route of gimmickry with voice simulation in their Voice Challenger while Applied Concepts Inc., with the help of Chafitz Inc., were planning the first real breakthrough in computer chess programming... the hiring of Kathe and Dan Spracklen. Sargon 2.5, Kathe and Dan's newest program, was incorporated into two impressive computer chess machines: the Modular Game System and the Auto Response Board, both playing 1500 chess (300-400 points stronger than all previous stand alone chess playing microprocessors). Each of these units offered a new (and what is now considered to be a highly controversial) feature... that of modular upgrading. Theoretically, the consumer could purchase either unit, and for life could simply obtain updated programs by purchasing inexpensive modules, NOT a new machine.

The concept was beautiful; the implementation was highly questionable, for Applied Concepts Inc. and Chafitz Inc. had a myriad of misunderstandings and shortly parted ways, and the Spracklens were off on their own, no

longer under contract to continue producing programs for the Modular Game System, Great Game Machine, or Auto Response Board. Those anxiously anticipated, impressive future modules would not be programmed by the Spracklens any longer so other programmers had to step in and devise a 3.0 Module which came to be known as Morphy on the Modular Game System (which was renamed the Great Game Machine). It is rumored that both Larry Atkin and David Slate, two well respected programmers, took part (and are still taking part) in the creation of chess programs for Applied Concepts. In spite of the fact that Applied had managed to latch onto some excellent programmers, it was from this point on that modularity began to get a bad name, for the customer was asked to now supplement his $100 Morphy with a $100 Gruenfeld Opening Book and a $150 Capablanca End Game. Then came Steinitz to upgrade all three and out went another $160. And for those who hadn't thrown up their hands already, Mega 4 Mainframe was announced but to this date not introduced to update the rest of the unit... good-by another $160. Consequently, the "inexpensive" upgrading would hypothetically cost $1230.00 and the final results would more than likely not surpass the current state-of-the-art under $200 chess computer. Of course, such a policy was not really what Applied Concepts had in mind in the beginning, but it was obvious that the public was willing to bear the quarterly introduction of new modules, and since the competition was getting rather fierce, the company "was between a rock and a hard place." They were forced to put out new programs to keep up with their competitors, but the public was asked to reach into their pockets each and every time if they wanted to maintain the "state of the art". Not unlike the field of education, the motto became "publish or perish!" As it turns out, in the chess computer business, marketing decisions are often made on a day-to-day basis, but if a lesson may be learned here, it is that a chess computer should be purchased on the basis of what it does NOW, not what it may do in the future.

Also, with the best intentions, AVE Microsystems, the manufacturer of the Auto Response Board, updated (albeit halfheartedly) to a 3.0 Module with the promise, but no delivery, of future programs- thus, the customer's original $800 investment plus $140 for the 3.0 module, purchased with the understanding that "state-of-the-art" would be maintained, resulted, realistically, in the ownership of a beautiful chess computer that played no better than the $130 Prodigy. Unfortunately, the sophisticated chess player who purchased the ARB had no option but to religate his beautiful computer to the closet, or take up a collection of them in order to parquet his living room floor. SciSys contributed somewhat to the debacle with the Philidor upgrade to the Mark V, an upgrade that didn't really upgrade, and the Mark V printer attachment which was promised but never made it to the marketplace. Novag upgraded Savant I to Savant II but mostly for the sake of correcting malfunctions in the I, and the $1500 updateable Robot Adversary (the modernistic polished aluminum chess player with the robotic arm) was such a problem mechanically that the U.S. distributor threw in the towel. However, even though the Robot Adversary will probably never compete, skillswise, with other top-of-the-line chess computers, it can always be a readily available arm-wrestling opponent. Conchess, also, became an instant member of the Anti-Modularity Hall of Fame with its three computer entrants: Escorter, Ambassador, and Monarch. All were advertised as, "The one and only system truly upgradeable without limit." Not only was the program upgradeable but so was the microprocessor— "Now for the first time," the customer thought, "I can make the program stronger AND faster!" Guess what? Since Milton Bradley took over distribution of the Conchess units in mid stream, plans for updating were thrown out the proverbial window, at least, until Milton Bradley's contract runs out in early 1984. And we have now received information that Waltham Electronics, the manufacturer, has filed for bankruptcy.

And let us not forget Fidelity Electronics, which announced 5 modules (over and above the two opening book modules) for use with the Prestige, Elite A/S, and Sensory "9", and as of this writing has produced none. Of course, the customer who spent $1000 on his Prestige is now being asked to not only spend $200 for an upgrade to the new Budapest program, but also to send his unit to the factory for the privilege. The slot in the side of chess computers designed for the purpose of upgrading might just as well be cemented shut for all the good it has been in the history of upgradeability. Last but not least, we do not mean to leave Mephisto out of the upgrading fiasco; their short stint of selling units in the U.S. has already allowed for considerable errant behavior including failure to develop the promised T.V. interface for the Mephisto, and, more importantly, the introduction of the Mephisto III upgrade module which can more accurately be defined as a DOWN grade. It boggles the mind to attempt to picture the state of computer chess today if ALL updated programs were worse than their predecessors.

Despite all of the above, human nature is such that the concept of modularity (as a dangling carrot) was immediately accepted by the chess playing public and Applied Concepts Inc. enjoyed an excellent year of sales in 1979/1980. Every time a new module was introduced, more customers lined up to puchase, but customer enthusiasm for the Modular Game System/Great Game Machine began to wane with the introduction of the Capablanca module and the announced results of the 1981 World Microcomputer Championships in which the Chess Champion Mark V (by SciSys) won the commercial division and the Elite won the experimental division.

Since paranoia is a prerequisite for computer chess manufacturers, the tournament was deluged by claims of cheating by practically everyone involved, and Applied Concepts, after a few unexpected losses, withdrew claiming a defective Capablanca module. Since the Elite was an experimental program at the time, SciSys had the top end market all to itself with its winning Mark V machine, and Christmas season 1981 was fast approaching. Unfortunately for the public, the Mark V, which was so readily available for the tournament, could not be made available to the American public because of one manufacturing problem after another. Wholesale excuses were handed to retailers almost daily, and customers were getting extremely impatient after having waited, in some cases, over three months for delivery.

To SciSys' extreme chagrin, Fidelity (taking advantage of marketing decisons made on 24 hour notice - the industry norm) managed to rush the Elite program into production so quickly that Elites (the Experimental World Champion program in the body of Champion Sensory Challengers) beat Mark V's on to the market by two months and to the surprise of everyone (including Fidelity) sold out all 500 units at $1000 list each. By the time Mark V became established as available in the U.S., Fidelity had already geared up its huge resources to publicize the Champion Sensory Challenger and its "established rating" of 1771 (a rating which, interestingly enough, also showed up on the box of the Sensory Challenger "9" which has a different program running at a different speed - more about this later). The Mark V, a machine which showed so much potential, was laid to rest- not by the public - but by its own maker's inefficiency

Taking liberties with advertising is an art in which chess computer manufacturers are well versed: a prime example is the Voice Sensory Challenger (rated at approximately 1150-1200) ad which proclaimed, "The same engineers who helped win the 'First World Microcomputer Chess Championship'... are proud to announce Fidelity's newest chess product..." It's truthful, of course, but since the Voice Sensory Challenger in no manner, shape, or form resembled the Champion program, is it correct to tie the two programs together? Mark V advertising literature to this day insists that the unit plays 1900; of course, any such estimate can be defended, but so can 1670 which we believe is considerably more accurate. Novag unabashedly proclaims on its Constellation literature, "Rated at 2000 ELO!*" with "Rated by Novag based on tournament and test results." In tiny letters on the bottom of the sheet. Luckily for Novag, the manufacturer is not forced to rate the Elite A/S or Prestige on that same "Novag scale"! I think all will agree that asterisks ought to be banned from all advertising; they always appear to be admitting to some sort of wrongdoing. Mephisto never hesitates to claim that it has the strongest program in the world. In fact, Hegener and Glaser (Mephisto's manufacturer) distributes

literature in Europe which consistently quotes Computer Chess Digest and Dr. Enrique Irazoqui, but always manages to omit results that are detrimental to the Mephisto unit. Indeed, Prestige, the only unit that was substantially stronger than Mephisto when the testing was performed last year, is all but ignored when quotes are made.

Applied Concepts and AVE Microsystems, way back in 1979 when Sargon 2.5 was introduced, insisted on advertising the results of the Paul Masson Chess Championships in which the program finished with a rating of 1641. We are of the opinion that the Sargon 2.5 played only 4 games in that competition... a number well below that necessary to get accurate ratings. In fact, the instruction manuals for these units claimed level 5 (20-40 minutes per move) "approaches the 1800 level." This is an interesting claim, no doubt truthful, and no doubt questionable at the very same time. Naturally, any number can be considered as "approaching" any other number, but the since-determined official rating of 1484 (at tournament time, under tournament conditions) would, by definition, give the program a 1550 or so rating at level 5- but "approaching 1800!"... you be the judge.

In late 1981, Mattel, with its now discontinued Computer Chess, got involved with its ad campaign geared to go head-to-head with Fidelity but not quite indicating which Fidelity machine was being compared in the announcement that their machine would beat the Fidelity computer 62% of the time. As it turns out, Mattel actually tested against the Sensory "8", one of Fidelity's weaker units. Fidelity, not wishing to lose its Christmas business to Mattel, took out full page ads in many major newspapers around the country challenging the toy manufacturer to play its unit against the Champion Sensory Challenger or, better yet, the Elite. There was no response from Mattel; its Computer Chess was cute but simply not in the league of CSC and Elite, but, no doubt, their ad campaign brought in sales, at least for a short time.

Even the official ratings system needs considerably more scrutiny when it comes to computers. As mentioned previously, some unusual ratings results have popped up through the years, possibly the most curious of all is the coincidental (read "almost impossible") 1771 rating given by the U.S. Chess Federation to both the Champion Sensory Challenger and the Sensory Challenger "9". Even more curious is the discrepency between the 1771 officially given to Champion as opposed to what is currently accepted - 1670. Several years ago, just prior to the release of the Champion Sensory Challenger to the public, the Champion was entered by Fidelity in a Federation sponsored tournament in upstate New York. After some 20 odd games, the unit was rated, accurately no doubt, at 1771; however, no effort apparently was exerted in keeping that exact Champion Sensory Challenger computer for later testing against stock units just to assure the skeptics that the public was getting what they thought they were paying for. The one truly puzzling fact here is that a one hundred point improvement COULD result from the doubling of the microprocessor speed to 4MHz, a change that is not noticeable externally. One might hypothesize that the machine entered in that officially rated tournament was running twice the speed of Champions which were later made available to the public. And to add credence to the above thought: shortly thereafter, the first six production Elites were actually Champion Sensory Challenger programs running at 4MHz.

The story behind the mysterious 1771 rating appearing on both the Champion and "9" has never before been revealed but may be of considerable interest to those who follow the ratings fiasco closely. As it turns out, approximately 9 months after Champion Sensory Challenger was introduced, Sensory Challenger "9" hit the market. The Chess Federation received a request by Fidelity to be allowed to use the same 1771 Champion rating (discussed earlier) on "9" literature because, according to Fidelity, the program was "at least as good." Since time was of the essence, the Federation granted the rating, requesting only that Fidelity put the statement about equal strength in writing. This was apparently done, for one will find the infamous 1771 on each and every Sensory "9" box. Prior to granting the 1771 rating for the "9", the Federation NEVER had the unit entered in official tournaments or ANY tournaments, and as of this writing continues to make

the following statement in its selling catalog: "Champion Sensory Challenger... proven in tournaments against man and machine. The same program as in the CC9 (sic)." Apparently, the fact that the program AND clock speed are different has no bearing on anything; but it is our guess that actually entering the computers in well supervised tournaments with adequate checks and balances to avoid questionable results would be infinitely more valuable to the computer chess enthusiast who is considering spending a considerable amount of money. The irony here is that the 1771 given to the "9" by the Federation, solely based upon the manufacturer's word, is quite close to reality but ONLY by coincidence.

On occasions, even the nomenclature used in naming units is somewhat amusing. Milton Bradley has chosen "Grandmaster" as the name for its new chess computer which appears to play in the 1500's not bad, but not 2400 either. And what about Boris, Morphy, Gruenfeld, Capablanca, and Steinitz? There is more than likely a great deal of grave rolling each time a new chess computer is released. Why, would you imagine, haven't we seen a Bobby Module? Better than that... why can't we have a module that PLAYS like Bobby???

It is commonplace when speaking with a given manufacture to hear how difficult it is to manufacture and how easy it is to retail. When you speak with a retailer, they will not hesitate to say how simple life would be if they could manufacture instead of retail. Well, some manufacturers occasionally attempt to have the best of both worlds. Prompted by avarice, no doubt, and with no regard to the retailers that carry their product, at least two manufacturers have attempted to sell directly to the public, usually in a surreptitious manner by forming a separate corporation with a different name. Now, they could sell at competitive prices and make TWICE as much profit as before. Two of the more notable examples of manufacturer/retailer behavior were/are Computer Games of Miami, FL., and Chess-et-al of Dallas, TX. Neither company offered any service other than shipping a unit- untested, of course. Retailer pressure on behalf of both themselves and their customers has usually resulted in the suspension of such behavior, at least for a short time. However, nothing (legal or otherwise) insures that these "instant profit makers" will not continue to sprout up occasionally.

Despite objections by some larger retailers, Fidelity Electronics makes an annual "direct-to-the-public" offering. Last year it was the ill-fated "Consumer Distributor" appeal. All that one needed to become a distributor for Fidelity was to purchase X amount of outdated product. Then, whenever he or his friends wished to purchase a Challenger, "wholesale pricing" was available to them. Just imagine thousands of Amway-like organizers selling obsolete Chess Challenger "7's" to each other. What fun!

This year the generous factory-direct giveaway included the "Special Edition 'Septennial'". A chess computer designed to celebrate Fidelity"s seven years in the commercial computer chess business. The letter accompanying the brochure states, "In recognition of your support these past seven years, we have made a limited Champion edition, called the "Septennial"... and... "This product will not be available through our normal retail outlets, and can only be purchased direct from the factory." No explanation was given as to why "normal" retail outlets would not be allowed to carry this supposed "famed" computer. Here was a machine that claimed the following virtues:

* "Our famed Prestige program, rated over 1900 playing strength (the Prestige model retails for $1,295.00)."
* "3 mghz processor."
* "Built-in CB9 (8160 Book Opening Moves) module ($78.00 retail value)."
* "Housed in the "Champion" hand-rubbed walnut housing, with hand-carved magnetized chess pieces."

"A Christmas offer of orgasmic quality, no doubt." Well, not quite.

"Unbelieveable, Prestige strength for ¼ the price." Not really.

"The company is giving something away for nothing." Not at all.

Let us analyze the offer and conditions. First, the holiday season offering accomplishes two goals: taking business away from the retailer who has supported the manufacturer all year, and presenting "facts" about a product which cannot be substantiated in time to

stop people from being "taken in". Dr. Irazoqui's request for a Septennial for testing purposes after being surprised by its introduction went unheaded. Why? Some of the more respected retailers were not permitted to carry the unit, despite the fact that if it were really as good as claimed, it would have sold briskly. Why? Well, even though the above quotes from Fidelity's Septennial offer are all true, some of them are not quite as precise as they ought be:

* The famed Prestige program was superb in its generation, but since at least four generations of programs have evolved since its introduction, receiving a left-over Prestige program is not quite so incredibly exciting.
* The 3 mghz microprocessor announcement is seemingly quite impressive, but is there also some obligation to mention that the program is only running at 2.4 mghz - 20% slower?
* Now, when one computes the above two factors together, one might be shocked to realize that this "1900 playing strength" really factors out to 1800 or perhaps less, weaker than Prestige Budapest, Prestige, Elite A/S, and the significantly less expensive Constellation and Sensory "9" Budapest.

What a bargain!!! It would appear that allowing retailers to test and sell this limited edition computer would severely curtail Fidelity's ability to unload them, and, after all, what would the manufacturer be able to do with 3000 old Champion Sensory Challenger bodies with old Prestige chips? Perhaps sending them off to Third World countries is a good idea, but they used that one in trying to sell outdated Champion Sensory Challengers direct to the public some time back.

Many "wool-pullers" have attempted to sell computer chess machines, but they do not last very long. Just recently, an ad appeared in the Wall Street Journal proclaiming the virtues of the Chess Challenger "7", indicating that the "7" was the same program as other Fidelity programs but simply was not sensory and therefore could be sold at an extremely low price. The ad also made some reference to the "7's" miraculous ability to challenge experts. Once again both statements are accurate and inaccurate at the same time. Firstly, the "7" indeed is similar in program to such world-renowned duffers as the Mini-Sensory Challenger and Sensory "8", but is FAR from being in the same league with Champion, "9", Elite, Prestige, Super "9", and Elite A/S. As far as "challenging experts"... well, that could be the case assuming the particular expert were blindfolded, immersed 300 feet under the Artic ice caps, and preoccupied with a 250 board simultaneous exhibition.

Advertising of computer chess machines, because it is such a blind item, continues to lead the public astray on occasions. Several retailers and mail-order companies have attempted to push outdated or weak machines as more than they actually were. In general, these companies have survived for several months and then, thankfully, disappeared. A recent edition of Chess Life magazine sort of summarizes the difficulties of uncovering fact from fiction in this industry. I.C.D. Corporation ran an ad proclaiming Mephisto III as "Rewriting Computer Chess History!" Certainly, no other program has EVER performed worse than its preceding one. Fidelity proclaimed its Elite A/S as world champion with no reference to the fact that Elites did not come with the same program. They also announced their "9" as the winner in the commercial division; they did NOT announce that there was only one other entrant - an East German computer (enough said about the quality of the competition?). And, finally, a mysterious ad on the back page by a newcomer in the industry proclaimed that the Novag Constellation, "beat two masters at the U.S. Open! It beat Experts and A players, Too! It sacrifices!!! Rating 1850+!!! simply the finest chessplaying computer available-stronger than Elite and Super 9." Other than the proclivity to add exclamation points, there is more NOT said than said. What is NOT said is that the U.S. Open Constellation was running 50% faster than the unit being sold and may possibly have had a different program. Also NOT stated is which Elite is being compared: Elite (from two years ago) or Elite A/S. And what makes a chess computer "Simply the finest chessplaying computer available?" Does that ACTUALLY mean that you are rated higher than all the others? What about Prestige and Elite A/S?

The most valuable and most vulnerable pawn in the chess game of computer chess is the consumer. The prospective computer chess customer has always been confronted with the same difficulty-that of receiving adequate information and adequate selection. Such an incredibly large number of people have purchased computer chess machines only to find that the propanganda which influenced them to buy was far from reality; the lucky ones were able to get refunds; the unlucky ones will probably never venture their money on a unit again even though the selection and abilities of today's computers are so impressive. However, there is another class of customer that has hesitated to buy a computer chess machine: they are the people who refuse to spend their money now, "because something stronger and better is bound to come out shortly!" Anyone who negates this statement is not being truthful, for we have here a technology that will not cease to improve after you purchase your chess computer. However, as a reason for not purchasing, it is very weak. There are several considerations involved: First, the longer you wait for progress to bring you the "perfect chess computer", the longer you live without a computer. Second, some people tend to believe that their computers are outdated if something stronger comes along even though they have trouble beating their own computer at its first level, but it should be noted that obsolescence in chess computers is limited solely to the computer's inability to beat you at reasonable time levels.

The third class of computer chess customer might be considered "The Collector." He will carefully select a new computer in each generation so as to have a variety of skills and styles to play against, and most collectors enjoy running the computers against each other to analyze for himself the relative strengths and weaknesses of the programs.

It was quite ironic that just as the market was proving that the chess computer had the potential to be more than just a fad, and just as the chess computers were beginning to truly play competitive chess (better than the average member of the United States Chess Federation), and just as chess computers were incorporating truly interesting features (take-back, hints, thinking on opponent's time, sensory surfaces, quick responses, etc.), and just as more and more companies decided to jump into the computer chess marketplace (Conchess, Milton Bradley, Mephisto, Hanimex, etc.), the marketplace began to shrink, slowly at first, and then with increasing speed. The reason was not evident at first, but as time went on, it became more and more obvious: the more complicated the computers became, the more trouble people had operating them. Invariably, a customer would purchase a chess computer at a local department store and find when he/she returned home that the instructions did not adequately cover the topic of how to operate the unit. In addition, the industry has seen it share of customers who believe that instruction manuals are not necessary and, consequently, all human errors are immediately assumed to be computer errors (you see, the customer isn't ALWAYS right). Therefore, in the mind of the consumer, the product was defective, and since the clerk at the store knew nothing of the product, money was refunded or, worse, the unit was exchanged for a second, which, of course, was seen, once again as being defective. Result: "Chess computers are either ALL defective or just too complicated to deal with," the customer would be heard muttering as he threw his hands up on disgust. As these problems multiplied, the department and chain stores, who were so anxious to carry the product in its heyday, one by one, threw up their own hands in disgust and deserted what they considered to be a sinking ship.

It should be duly noted that quality control in the computer chess industry, in general, is a problem. We know of people who had to return 5 or 6 of a given machine to their local store before they were given one which "worked". And, of course, there are documented cases of customers who NEVER received a properly operating unit, but luckily these are the exceptions to the rule. Two instances have been documented whereby a 100% defect rate was found to exist. In other words, every single customer who purchased that model unit had a unit that did not operate properly. Over 50% defect rates are surprisingly common

and there are a myriad of cases in which programs were released to the public with gliches that included failure to castle or accept en passant, an opening book so limited as to allow only one response to king pawn, indicated approximate response times which were underestimated to the extreme (the unit taking 45 minutes to respond at a three minute per response level) and instances of the computer capturing its own pieces or simply blacking out in a lost position. In some of these cases the manufacturer denied that a problem existed until the evidence was so overwhelming that further denials were impossible, but in most cases the individual manufacturers have been extremely anxious to clear up any and all instances of problems, and it has not been all that uncommon that manufacturers went well beyond the call of duty to satisfy a given customer.

The defect rate in the industry as a whole is somewhere in the vicinity of 15%, but don't ever try to suggest that to the companies, for they will freely "admit" that they are struggling because of the "much too high" 2% failure rate. However, the most depressing fact of all is that most of the defective units arrive at the retailer as defective or break within the first 20 minutes of operation. The major problem is, more than likely, that the rush to get new products out onto the market before the competition dies, is of a higher priority than making sure that the units will stand up to normal usage. If each manufacturer were to "test drive" every computer as it came off the production line, even for 5 minutes each, 80% of the problems would be resolved.

It can be easily assumed that the manufacturers, in general, would not be all that delighted with an article such as this, but, quite frankly, despite some ominous undertones here, this industry is no worse than any other, and, in fact, in many ways we have been witness to brave attempts to correct problems at the sake of losing significant sales. We can also say that retailers often deserve to share a significant portion of the burden, for they have been known to inflate ratings as well perhaps because it was in their special interests to "push" one brand of computer over another. Most local department stores, the ones that still care enough to carry the product, apparently do not care enough to learn the units as they should so that the customer might feel at home with the unit. And by far the most important factor contributing to customer unrest is the quality control problem; if the manufacturer will not take the steps necessary to insure reliability, then it is the responsibility of the retailer. As a consumer, we have been conditioned to believe that "factory-sealed cartons" have some saintly, virginal quality to them, but in this industry, you must demand that the unit be THOROUGHLY tested before taking ownership. In that way, your odds of having a properly operating machine are greatly enhanced. And as your last defense, check into the company's reputation, accessability, and return policy. Ask friends or club members about their experiences with a given company: were they given accurate information prior to the sale; was their order handled quickly; if there was a problem with their unit, were they able to contact the company quickly; and was their problem handled quickly and to their satisfaction. If you are unable to gather such information, check to see if the company is a member of the Better Business Bureau and if they participate in arbitration through that organization. Please remember that just the fact that a given company sells some brands of computer chess machines does not make them an expert in the field; ask pointed questions and listen carefully to the answers; in all probability, you will select the right company.

What does the future of commercial computer chess hold in store for us? Perhaps the saying, "They will do it until they get it right!" has some meaning here. It seems indisputable that as more and more computers are produced, their quality will improve- both in quality control and programming. Also evident is the fact that the size of the current market cannot satisfy the goals of the 10 manufacturers which are crowded into it. There will have to be some casualties: even Fidelity is moving into computer printers to buffer itself against possible losses in the computer chess market. Who the casualties will be will be dependent upon the size of the marketplace and the quality of the programming. It seems certain that a unified effort on the part of the manufacturers, retailers, and U.S. Chess Federation to expand the market could go a long way toward promoting chess and computer chess at the same time. Unfortunately, the prognosis for such an effort is poor, for the paranoia index continues to run very high. It is not uncommon to hear one manufacturer or another privately claim that "the other manufacturer has the Federation in its pocket!" In such an atmosphere, it is safe to assume that the ongoing dogfight will result in the survival of, perhaps, three computer chess manufacturers. This could drastically change with the reincarnation of Bobby Fisher or the emergence of Yasser Seirawan as a future World Champion, for it is events such as this that consistently boost the numbers of people that follow chess and, as a result, purchase computerized chess playing machines.

Chess programs for home computers, a field which has been mostly ignored because of the stand-alone manufacturer's grip on the world's better programmers, will continue to get better but apparently will lag behind the self-contained units because of the latter's ability to specialize in chess, and, more importantly, because there is more money to be made in marketing a chess computer than a chess computer program. Not everybody can write a chess program and not everybody wants to. Unfortunately for the personal computer owner wishing to purchase a program, just about everything available is in the class of skill of chess computers from four years ago.

So it is obvious that chess computers will continue to get stronger and, hopefully, easier to operate. The movement is toward sensory machines with the most recent emphasis on magnetic sensory boards, whereby, one need only move the pieces in a very natural manner. The trend also favors larger boards although we do not believe the units with 1" squares or portable units will disappear. Modularity, although pretty much proven to be overstated, will continue to be emphasized by companies because it SELLS machines, and, after all, that is an important factor. Apparently, the future of computer chess, when it comes to the sheer number of people who will purchase new units each year, is not nearly as bright as it once appeared to be, but the people who do purchase are less likely to be the guinea pigs of the industry as long as they deal with established, knowledgeable, and reputable dealers who do the research that the customer could not possibly do. And ironic as it may seem, just this type of dealer support might help to point the industry in the right direction once again. For the sake of our common love of these ingenious little computerized chess players, let us hope so.

So, there you have a not-so-capsulized history of the commercial chess field - blemishes and all. The blemishes seem far worse than they really are for two reasons: one, there are seven years of history wrapped in twelve pages of reporting, and, two, there are truly fine people in this business who have a love for both chess and computer chess and their influence is great in this field. "Let the buyer beware" is an idiom applicable to every industry, and one cannot pretend that it has no meaning here- the past has proven that, but, in spite of it all, computer chess has given millions of people more enjoyment per dollar than just about any other activity in which they could engage. Of course, the older one becomes, the truer the above statement becomes (if you know what I mean!).

Stephen Schwartz
Institutional Computer Development Corporation

An Example Of A Type Of Turing Test

Around 1950 Alan Turing, the famous British mathematician, devised a test method which may be used to decide if a computer program is capable of what might be termed intelligent behavior. That is, have the program participate in an interactive dialogue with a human such as taking on the role of a psychiatrist talking to his patient. If the human is unable to distinguish the computer's performance from a human one, then that is intelligent behavior.

In 1977, as a type of Turing Test, I presented 6 chess positions after twenty moves of play by White and Black. Three were positions from Bobby Fischer's games against a master opponent, while the three others were from computer versus computer play.

My basic premise was that computer games could be distinguished from Fischer's games by their

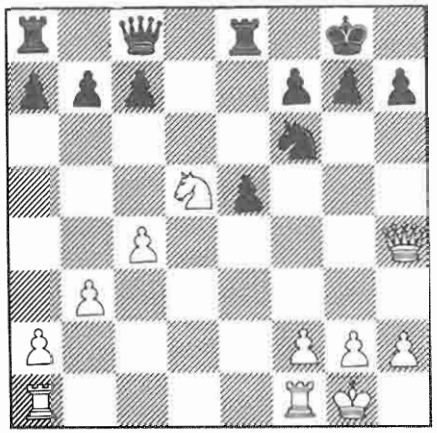
(1) lack of integration of position (entropy)
(2) lack of development of pieces
(3) lack of material equality
(4) advanced simplification through many exchanges.

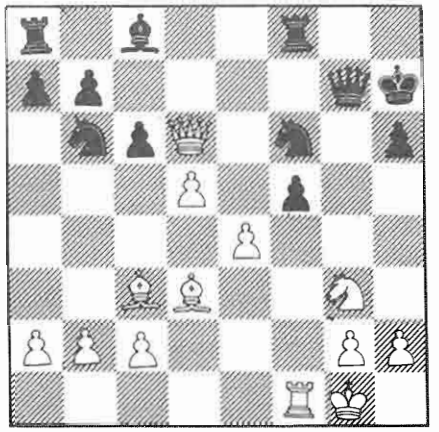
I felt that the last point was particularly evident because at that time computer chess programs did not know what to do with their pieces so they exchanged them.

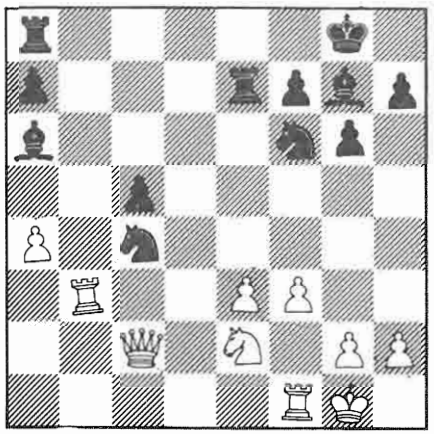
Let us try a similar test now to get an idea of progress there has been in the field in general since that time. This time as a perhaps more neutral test, I shall select the first three games between unique computer opponents from Dr. Irazoqui's "Fall 1982 Tournament" presented in The Computer Chess Digest Annual 1983 and three randomly selected recently published games between different humans with ratings between 1600 and 2100.

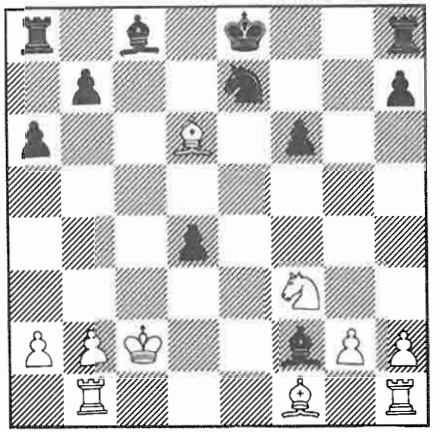
These are presented below, and I'm sure that you'll agree that although there seems to be progress on the first three points (integration of position, development, and material equality), there is a distinct advanced stage of simplification in each of computer games when compared with the human ones.

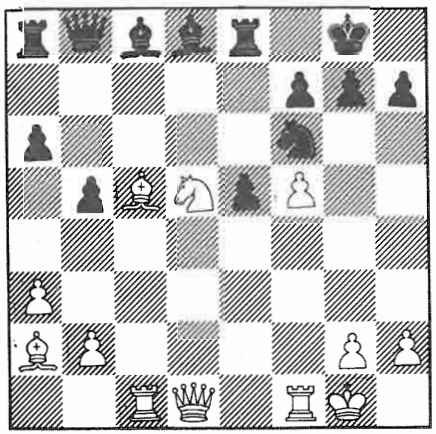
Danny Kopec

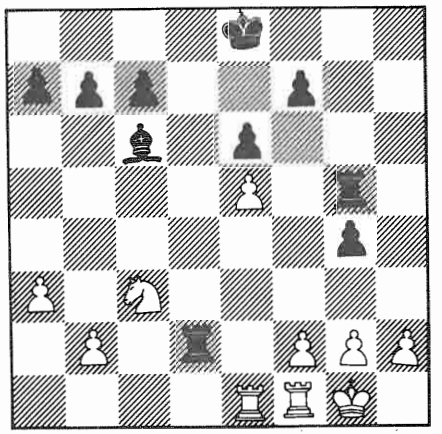












As your chief editor. Dr. Irazoqui, has astutely pointed out, another feature which distinguishes the computer games from human ones is the fact that the rooks are either not developed or wrongly developed in their diagrams. He points out that few humans, however weak, would play Rae1 as occurred enroute to the 6th diagrammed position. Dr. Irazoqui also notes that better piece coordination is present in the human games.
With closer inspection, I would have to agree that this is in fact the case.

SOLUTIONS

1. PRESTIGE - ELITE (Game 1) 2. Van Buskirk - R. Safdie, (CHESS LIFE, Oct. '83, p670) 3. Sasseville - Finta (LE PETIT ROQUE, Sept-Oct., '83) 4. SCISYS MARKV - CONCHESS (Game 113) 5. Hemming - Jordan (C.L., Nov. '83, p.748) 6. MEPHISTO - SC9 (Game 35)

Experiments in Chess Cognition: Comparing the Performance of Individuals and Pairs

Danny Kopec & Winston Yu

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ACKNOWLEDGEMENT

We would like to thank Professor Guy Groen, of the Department of Educational Psychology, McGill University, for interesting discussions and advice regarding our experimental design and the analysis of results. We would also like to thank Professor M. Newborn for proposing this line of research and facilitating its progress, Linda Pilkington for typing and administrative assistance and not in the least, The School of Computer Science, McGill University, for making this research possible.

INTRODUCTION

OSTRICH

In general there are two methods of remedy when a computer can no longer handle the complexity of a given problem. The more common, simpler solution is to switch to a more powerful machine. However this approach is not always feasible, and the fastest computer may not be fast enough for a given task.

The second solution is to employ more than one processor of the same computer family to work on a given task. In the ideal situation, the number of processors employed is inversely proportional to the required computation time. However, the processors must communicate with each other and the subprocesses must be synchronized. Thus as the number of processors increases, the margin of their increase in computation power decreases. Dr. M. Newborn, of McGill University, uses eight Data General Nova computers in parallel for his chess program OSTRICH (Newborn, 1982). At the same time each Nova computer is searching one lookahead subtree. The master processor receives results from all the other processors and then selects the best one.

The Bratko - Kopec Experiment

The status of today's top computer chess programs, at just below the master level is primarily a result of their ability to efficiently search the lookahead tree to compute their moves (Kopec and Bratko, 1982, Kopec, Irazoqui and Bratko, 1983). On the other hand their chess specific knowledge is very limited. The experimental work reported here is based upon a discrimination of two fundamentally different classes of moves in chess:

(1) tactical moves in which a lack of chess knowledge may be compensated for by additional computation.
(2) positional moves where a lack of chess knowledge cannot be compensated for.

Tactical moves include:

(a) checkmate or gain of material and/or
(b) a distinct improvement in terms of positional ends (e.g. mobility) and/or
(c) the defense to specific threats in term of (a) and (b) above.

One type of positional move is called a 'lever'. A lever is a pawn move which offers (a) an exchange with another pawn, (b) leads to an ultimate improvement in the pawn structure of the side playing it and/or (c) damages the opponent's pawn structure.

In the Bratko - Kopec experiment (ibid.), 35 human chess-player subjects and 17 computer chess programs were tested on 24 chess positions (12 tactical (T), and 12 lever (L) positions). The experiment provided quantitative evidence fully supporting the hypothesis that computer programs perform better in type T positions than in type L positions. Computer programs also performed better in T positions than humans of the same rating.

THE EXPERIMENT

The Experimental Objective

This experiment is an extension of Bratko-Kopec experiment, though here only human chessplayer subjects were tested. The object of the experiment was to determine whether two human subjects (of approximately the same rating) can perform better than one human subject on a set of test positions whose solutions are exclusively T and L moves.

The Experimental Design

There are 58 positions (28 T, and 28 L) in this experiment, (sources are listed in the Appendix A). Twenty-two of the 58 positions were taken from the Bratko-Kopec experiment (see Kopec and Bratko, 1982, for the actual positions, their discussion and solutions) with three new positions added to comprise the test set for Part 2 of this experiment.

The experiment is divided into 3 parts.

In Part 1 each subject had 8 practice positions. In Part 2 and Part 3 each subject and each pair of subjects were tested on 25 positions.

Each subject's performance on the last 5 positions of Part 1 was scored for pairing purposes only. Subjects were paired in score order from highest to lowest. All subjects were paired after having taken 8 practice positions (Part 1).

The pairs were divided into two groups, A and B. Each group had approximately the same number of subjects. The instructions for Part 2 were read and distributed to all subjects. All subjects in group A had higher scores than any subjects in group B on Part 1 (the last 5 positions of the 8 administered for practice) of the experiment.

In Part 2 Group A took the test in pairs. Both members of each pair were encouraged to discuss each test stimulus position together thereby discouraging domination by either partner through-out the test set. At the same time Group B was administered Part 1 with no discussion of positions by subjects allowed.

In the third part of the experiment, Group A took the test individually while Group B took the test in pairs, i.e. the tasks of the two groups were reversed (see Appendix B for Time Sequence Flow Diagram).

The first 5 of the 25 positions in Parts 2 and 3 were for practice purposes only with the last twenty positions being considered for scoring purposes.

We chose to let Group A (stronger subjects) take Part 2 of the experiment in pairs first and then Part 3 individually. Since the performance of a subject may degrade (due to fatigue) as the experiment goes on. The strong (2000) and intermediate (1600-1999) subjects' results were considered more valuable than the results of novice subjects (1600) whose expected scores were in the 0-4 range. Their performance would effectively serve as a control to the performance of the intermediate and strong subjects.

Scoring Function

As described earlier performance on the last 5 positions of Part 1 (8 practice positions) was used only for pairing purposes. In Parts 2 and 3, only the last 20 positions were scored. Nearly all the test positions were selected from the point of view that there is only one correct move. Scoring was done just as in the earlier Bratko-Kopec experiment (Kopec & Bratko, 1982) with 1 point for correct first choice, ½ for correct second choice, ⅓ for third, ¼ for fourth. Again subjects were encouraged via the test instructions and verbally to write down as many choices as they may have considered up to four since this could only aid their total scores. However this experiment differed in that now there were 5 practice positions, 10 type T positions and 10 type L positions for scoring purposes; as opposed to the 12 T positions and 12 L positions without practice in the earlier versions of the experiment.

Results of the Experiment

Summary

The main objective of this experiment, to discover whether pairs perform better than individuals, was satisfied with the overall conclusion that a pair of subjects will score better than either subject performing individually.

The improvement in pair's scores was mainly due to an improvement in the L-factor of their scores, though throughout the experiment the T-factor also improved slightly. (See Tables 1 and 2 which indicates that L scores for pairs mproved over L scores for individuals in each of 5 rating catagories.) Tables 3 and 4 indicate that all pairs, whether low-rated, intermediate, or high-rated tended to benefit from co-operation.

Performance of individuals was consistent throughout with our apriori hypothesis based on previous experimental work. This test format has also proven itself to be a reliable method of measuring chess rating and strength.

We have tested 44 subjects, two of which completed only Parts 1 and 2 (individual tests) of the experiment, leaving us with the complete test results of 42 subjects. The distribution of 44 individual scores on T and L within six rating categories is given in Table 1. The distribution of 21 subject pairs is given in Table 2. The rating allocated for a subject pair is the average of their individual ratings.

Individual Results

Rating Range	Mean T	Mean L	Mean TS	mean 10(T-L)/S	No. of Subjects	S. deviation of TS
1000-1599	1.88	1.29	3.17	0.73	8	2.07
1600-1799	3.25	2.68	5.93	0.48	12	2.39
1800-1999	4.01	4.64	8.65	-0.57	11	2.54
2000-2199	4.40	4.24	8.63	0.14	11	2.45
2200-2399	7.00	8.50	15.50	-15.00	1	0.00
2400 +	8.00	9.00	17.00	-10.00	1	0.00
Overall mean	4.63	4.61	9.24	-1.09	44	

Table 1 Individual's scores

Pair Results

Rating Range	Mean T	Mean L	Mean TS	mean 10(T-L)/S	No. of Subjects	S. deviation of TS
1000-1599	2.67	3.61	6.28	-3.14	3	0.77
1600-1799	3.06	4.04	7.09	-1.09	9	2.35
1800-1999	6.30	4.83	11.14	4.90	3	1.16
2000-2199	6.87	6.90	13.85	0.14	5	0.99
2200-2399	7.00	10.00	17.00	-30.00	1	0.00
Overall mean	5.20	5.88	11.07	-5.84	21	

Table 2 Pair's scores

Note 1: Two subjects did not do the test in pairs, thus we can only include their individual test results in Table 1.

Note 2: The number of subjects in Table 2 refers to pairs.

Note 3: The statistical information list in this report is computed by the Pascal program (on VAX) listed in Appendix F and STATPACK on MUSIC.

"Mean T' "Mean L" scores in Tables 1 and 2 are out of ten, and "Mean TS" scores are out of 20. The porportional deviation "(T-L)S" (computed to determine whether there are differences between performance on type T and type L positions for subjects) is multiplied by 10 for scaling purposes.

The following three bar charts illustrate the average performance of individuals and pairs in terms of T scores, L scores and TS scores respectively. The height of the cross-hatched bar graph represents the average of the pairs' scores within each of the six rating categories. The height of the clear bar graph represents the average of the individuals' scores within each of the six rating categories.

Rating range	Improvement on T ∅	Improvement on L ∅	Improvement on TS ∅
1000-1599	42.22%	179.57%	98.24%
1600-1799	-5.98%	50.76%	19.69%
1800-1999	57.01%	4.06%	28.71
2000-2199	58.54%	62.74%	60.50%
2200-2399	0.00%	17.65%	9.68%

Table 3 Percentage of improvement within each rating category

Rating range	Mean ind. TS	Mean pair TS	Mean Improved TS
1000-1599	3.17	6.28	3.11
1600-1799	5.93	7.09	1.17
1800-1999	8.65	11.14	2.48
2000-2199	8.63	13.85	5.22
2200-2399	15.50	17.00	1.50

Table 4 Improvement of TS score within each rating category

RATING vs. SCORES HYPOTHESIS

From the Bratko-Kopec experiment, we composed by extrapolation a rating-score table for this experiment. Given a rating category, one could expect scores to fall within the ranges indicated in the following table.

Rating	Score (TS)
1300 - 1599	0 - 4
1600 - 1799	5 - 6
1800 - 1999	7 - 8
2000 - 2199	9 - 12
2200 - 2399	13 - 16
2400 +	17 - 20

Table 5 Hypothesis ratings vs. scores

From the test results listed in Tables 1 and 2, we constructed the following table which shows the effective corresponding number of rating points pairs' scores over individuals' scores within each rating category.

Rating category	Mean improve. in scores (TS)	Mean improvement in Rating
1300 - 1599	2.5 -- 5.5	1300 - 1599 -- 1650
1600 - 1799	6.0 -- 7.0	1600 - 1799 -- 1800
1800 - 1999	80 -- 11.0	1800 - 1999 -- 2100
2000 - 2199	11.0 -- 16.0	2000 - 2199 -- 2350
2200 - 2399	15.0 -- 16.5	2200 - 2399 -- 2375*

*This rating category had only one pair of subjects.

Table 6 Effective pairs improvement in terms of rating.

Example: If the average rating of two subjects falls somewhere in the 1600 to 1799 range, then they are likely to perform like an 1800 rated subject when working as a pair.

Conclusion

Based on the results of this experiment, we can reliably approximate how many rating points a pair of human chess player subjects will gain over their individual rating performance. The improvement in rating performance for pairs within the first rating category ranges from 100 to as much as 350 points, with an average improvement approaching 200 points (Table 6, on previous page).

Discussions with cognitive psychologists led to the suggestion that our experiment may have included built-in bias. That is, pairs' scores may have been superior to individuals' scores simply because one member of the pair was finding the correct move in each or nearly all of the 20 scored test positions, and the other pair member would then comply with the first member's choice. Thus to determine whether pairs' performances were likely to be a result of real cooperation or something else, we re-analyzed the answers of each pair member on the individual test positions (the same position for each person) taking the maximum (most credit given) to form a composite score. If these "hypothetical pairs' scores" proved to be at least as high as the real pairs' scores (see Appendix C) then the above experimental bias could not be disproved.

However the further analysis of our data satisfactorily discounts such a bias. Given the apriori probability that a pair will score higher than the higher individual score of that pair is 0.5, then the conditional probability of our result, that pairs' scores were higher than individuals' scores in 13 out of 19 cases is computed by $(10/20)/(13/19) = 0.73$ which indicates that based on our data, cooperation is likely to occur at least 73% of the time.

In 10 out of 13 cases where pairs' scores were higher than individuals' scores (see Appendix C) the pairs' scores (P) were also higher than the maximum of the individual scores (MP). The probability of this happening by chance is derived from the computation:

$$p(10) = \binom{13}{10} * (10/20)^{**}10 * (10/20)^{**}3$$

which comes to 0.03, safely within good experimental confidence bounds.

Relationship to Computer Performance Over Time

In the Introduction part of this report, we mentioned that there are two methods to increase the computation power, namely: (a) by employing more processors or (b) by switching to a more powerful processor. In this project we have investigated the performance of human chess players working in pairs as compared to a dual processor computer system.

Further work is needed to investigate how human chess players would perform when given different periods of time to solve chess problems on the same order of difficulty. This work is presently being canceled out. For example, each player is tested on performance with 30 seconds per position, 1 minute per position, 2 minutes per position, 4 minutes per position and 8 minutes per position (though not necessarily in this order). This "time sequence experiment" should be able to illustrate a corresponding change in rating performance for a given time period for humans and computers.

We predict that computer chess programs will improve their performance on tactical positions if given more time. Since proper lever positions are considered to require specific chess knowledge, more time would not do much to enhance the performance of computer programs on them. We note that the branching factor increases more rapidly as the search gets deeper (bigger search tree). Therefore we cannot expect the strength of computer chess programs to be doubled as the given time is doubled. On the other hand, human chess players do not perform a linearly deeper search when given more time. This further work will illustrate how homan chess players can combine their chess knowledge and short term memory when given different periods of time.

DIAGRAMS OF POSITIONS

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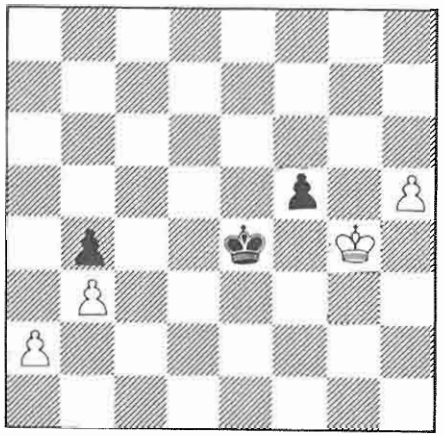

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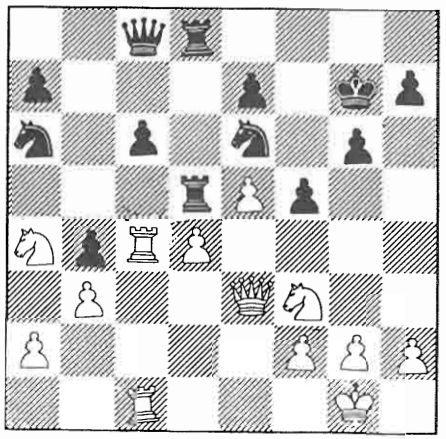

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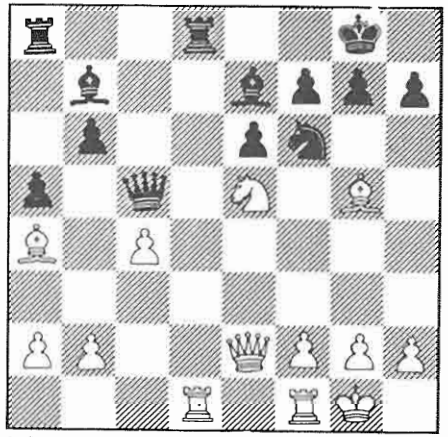

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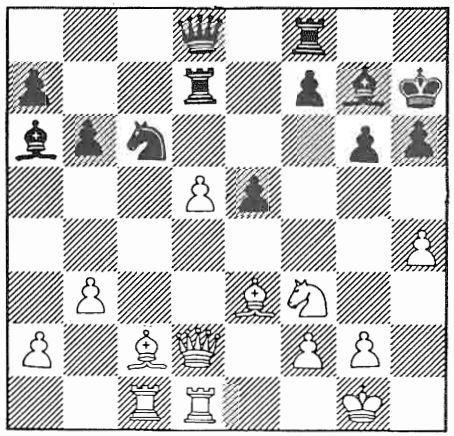

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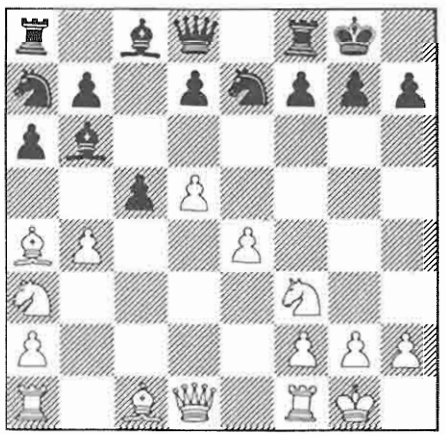
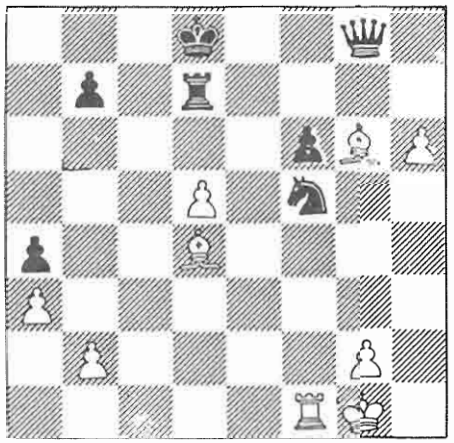


6. (W)

7. (W)



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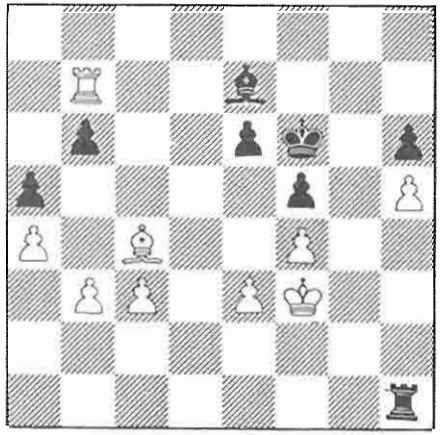

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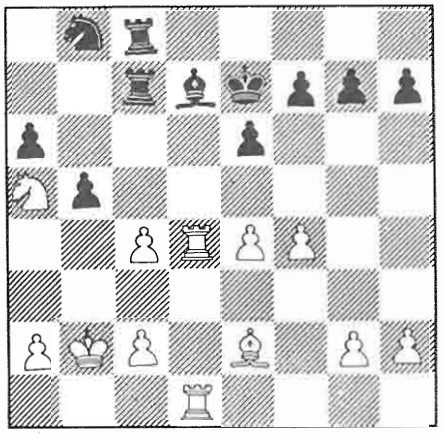

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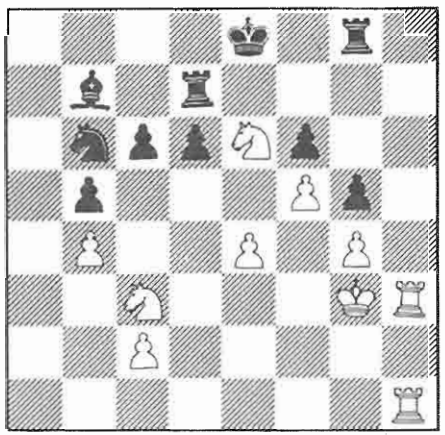

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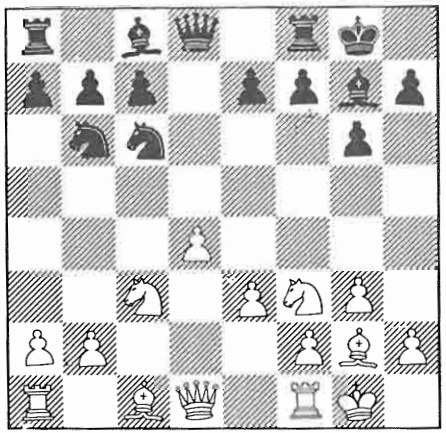
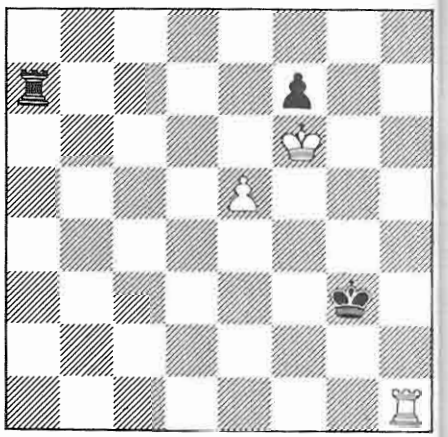


13. (B)

14. (B)

15. (W)



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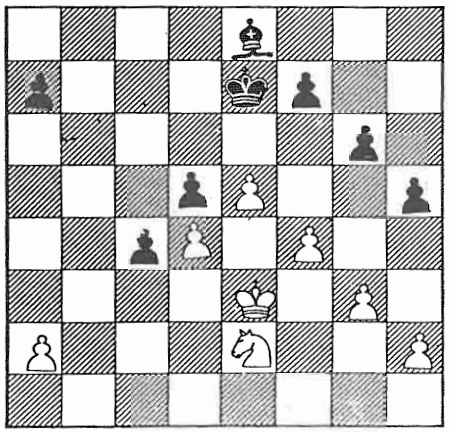

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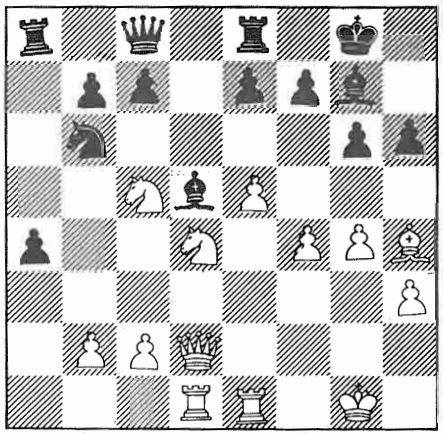

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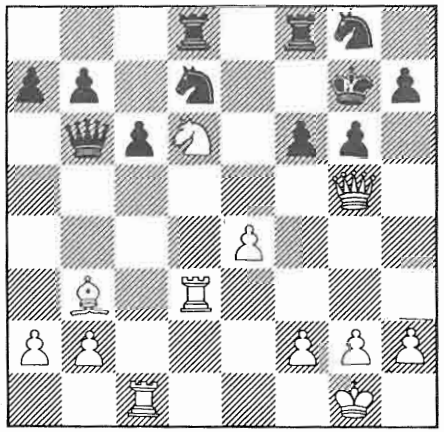

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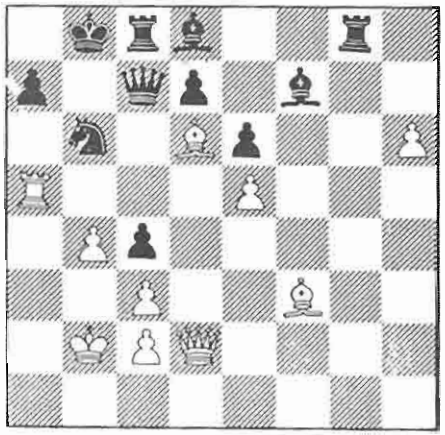
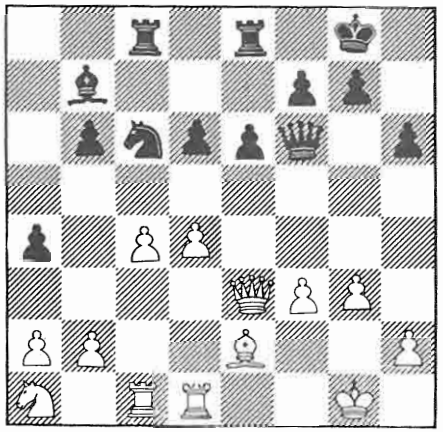


20. (W)

21. (W)

22. (B)



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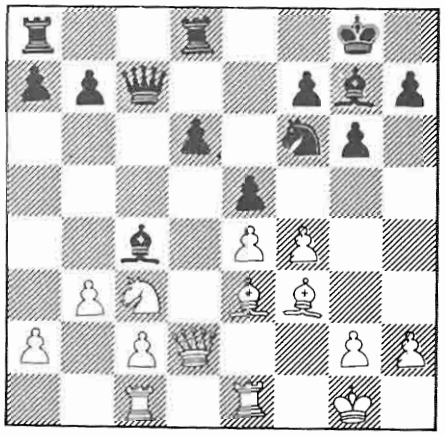
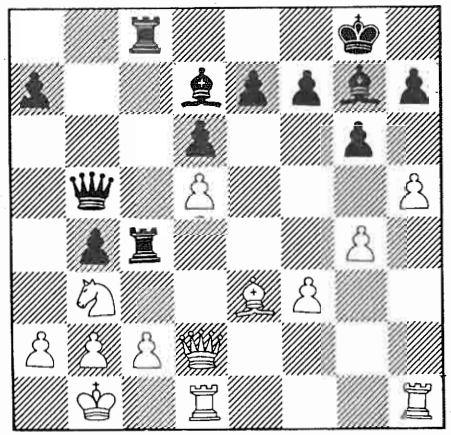


24. (B)



25. (W)

APPENDIX E
Answer Sheet

NAME _____ _____
(last) (first) Rating

NAME _____ _____
(last) (first) Nationality

Position Number	(Side To Move)	Preferred Move	2nd Choice	3rd Choice	4th Choice
1.	(B)				
2.	(W)				
3.	(B)				
4.	(W)				
5.	(W)				
6.	(W)				
7.	(W)				
8.	(W)				
9.	(W)				
10.	(W)				
11.	(B)				
12.	(W)				
13.	(B)				
14.	(B)				
15.	(W)				
16.	(B)				
17.	(W)				
18.	(W)				
19.	(W)				
20.	(W)				
21.	(W)				
22.	(B)				
23.	(B)				
24.	(B)				
25.	(W)				

APPENDIX A

MASTER SHEET
19 TACTICAL (T) POSITIONS (Additional)

TYPE	PLAYERS	BEST MOVE	SOURCE	SIDE TO MOVE
T	11. Kopec-N. Ocipoff	Qxd4	Pan Amer Intcol. 74	(W)
T	12. McKay-Kopec	...Nxf3+	CPHI P.72	(B)
T	13. Kmoch-Van Scheltinga	Kh3	BCE Diag 55	(W)
T	14. Kopec-McKay	h7	CPHI P.62 1980	(W)
T	15. Jansa-Bilek	Na1	TBM #75	(W)
T	16. Kollberg-Jansa	...Rxf2	TBM #29	(B)
T	17. Ree-Jansa	...Rc5	TBM #33	(B)
T	18. Hort-Ribli	Kg2	TBM #96	(W?
T	19. Hort-Duckstein	Ba6	TBM #78	(W)
T	20. Kopec-Wagner	Qxf5/Rf6	7 Brd. Bldfld U.III '79	(W)

T	21. Portisch-Huebner	...Ne4 +	Best Games P.130, G4	(B)
T	22. Alekhine-Lasker	Nf5 +	MTM P.31 before 25.Nf5 +	(W)
T	23. Bogolyubov-Alekhine	...b4	MTM P.40 before 29...b4	(B)
T	24. Vasilchuk-Bobolovitch	Nh6	Pachman D27	(W)
T	25. Weeden-Kleboe	Bxf6	CPHI P.55	(W?
T	26. Kopec-C. McNab	Bb6 +	CPHI P.167	(W)
T	27. Hort-Wade	...Kg4	TBM #170	(B)
T	28. Alekhinep-Wolf	Qe3	MTM	(W)
T	29. Bessor-Hort	...b5	TBM #49	(B)

T = Tactical position **L = Lever position**

Abbreviation for sources:
CPHI = "The Chessplayer's Home Improvement Course"
TBM = "The Best Move"
MTM = "Meet The Masters"

Source	Author(s)
1. The Best Move	Vlastimil Hort & Vlastimil Jansa
2. Modern Chess Tactics	Ludek Pachman
3. Meet the Masters	Max Euwe
4. The Chessplayer's Home Improvement Course	Kopec et. al (Pergamon Press, forthcoming)

19 LEVER (L) POSITIONS (Additional)

TYPE	PLAYERS	BEST MOVE	SOURCE	SIDE TO MOVE
L	11. Lasker-Capablanca	e5	P.P.D.140	(W)
L	11. Tartacover-Lasker	Be3/b4	P.P.D.175	(W)
L	13. Fuderer-Tartacover	d6	P.P.D.149	(W)
L	14. Lasker-Dr. Bogatyrchuk	Kc3	P.P.D.145	(W)
L	15. Alekhine-Yates	f5	P.P.D.65	(W)
L	16. Watson-Kopec	...b5	Phillips & Drew, 1982	(B)
L	17. Spassky-Fischer	e6	B.G.	(W)
L	18. Browne-Weinstein	a4	B.G. p. 83	(W)
L	19. Furman-Ribli	...c5	B.G. p. 162	(W)
L	20. Sapi-Ribli	...e5	B.G. p. 147	(B)
L	21. Reti-Alekhine	...h5	MTM p.43	(B)
L	22. Byrne-Kotov	f4	P.P.D. 177	(W)
L	23. Anderrson-Portisch	b4	B.G. p. 100	(W)
L	24. Rauzer-Botvinnik	...d5	MTM p. 147	(B)
L	25. Kopec-Ocipoff	h5	CPHI	(W)
L	26. Davis-Kopec	...c5	Ciba-Geigy Open, 1980	(B)
L	27. Yusatake-Kopec	...d5	New England Open, 1983	(B)
L	28. Kaplan-Kopec	...e5	Continental Open, 1975	(B)
L	29. N.N.-Kotov	...d5	CPHI	(B)

T = Tactical position **L = Lever position**

Abbreviation for sources:
B.G. = "Best Games of the Young Grandmasters"
CPHI = "The Chessplayer's Home Improvement Course"
P.P.D. = "Pawn Power", Diagram No.
MTM = "Meet the Masters"

Source	Author(s)
1. Pawn Power	Hans Kmoch
2. Informator No. 18	Alexander Matanovic, (Editor)
3. The Best Move	Vlastimil Hort & Vlastimil Jansa
4. Modern Chess Tactics	Ludek Pachman
5. Meet the Masters	Max Euwe
6. The Cheesplayer's Home Improve-Course	Kopec et. al (Pergamon Press, forthcoming)
7. Best Games of the Young Grandmasters	Craig Pritchett & Danny Kopec

Events In Order Of Time Sequence

1.0 All subjects receive instructions with declaration to be signed and 8 practice positions.
2.0 All players are matched into pairs based upon the last half of their scores on practice positions.
3.0 Paired players are divided into two groups, group A and group B.
4.0 Players in group A will receive instructions and do paired test (25 positions), the last 5 of which will be graded as practice positions before the actual test (position 6-25) starts. (Note I)
4.1 Players in group B will receive instructions and do individual tests. (Note I)
5.0 Fifteen minutes break.
6.0 Players in group A will receive instructions and do individual tests. (Note II)
6.1 Players in group B will do paired test (25 positions), the first 5 of which will be graded as practice positions before the actual test (position 6-25) starts. (Note II)
7.0 Solutions to test positions (58 in total) starting with event 1.0, are discussed with subjects.

NOTES
I Events 4.0 and 4.1 will be carried out in parallel.
II Events 6.0 and 6.1 will be carried out in parallel.
III The order of test positions in event 4 and event 6 is randomized.
IV All stimulus positions whether administered in practice or in the actual experiment, for pairs or for individuals, will be allowed 2 minutes.

EVENT	# OF TESTS	TIME
1	8	16
2		15
3		10
4	25	50
5		15
6	25	50
	58	156mutes

TIME: Monday Apr. 18, 1983 7pm - 10pm
Friday Apr. 22, 1983 2pm - 5pm
LOCATION: Computer Science lecture room and lounge
REWARDS: $5 or $10/subject
NUMBER OF SUBJECTS: 40 to 50 rated subjects

APPENDIX B

Name	Rating	Individual Scores (T, L, TS)	Pair Scores (T, L, TS, MP)	Result
1. Duchoeny	(1801)	(6.00 4.50 10.50)		
Beaudry	(1797)	(4.50 3.50 8.00)	(1.50 2.50 4.00 11.50)	I
2. Fata	(1980)	(2.33 6.00 8.33)		
Ruggeri	(1469)	(3.00 2.33 5.33)	(3.50 1.50 5.00 9.33)	I
3. Boulay	(1355)	(2.00 1.50 3.50)	(2.00 2.50 5.50 4.50)	P
4. Maison	(1600)	(2.00 0.00 2.00)	(2.00 4.00 6.00 3.50)	P
Sirois	(1320)	(1.50 0.00 1.50)		
5. Moser	(1700)	(4.00 4.00 8.00)		
Strothotte	(1800)	(1.50 3.50 5.00)	(1.00 5.00 6.00 12.50)	I
6. Michaud	(1812)	(4.00 3.00 7.00)		
Demers	(1681)	(2.00 2.00 4.00)	(2.50 4.00 6.50 10.50)	I
7. Kurtz	(2050)	(6.50 6.15 12.66)	(2.00 4.50 6.50 13.80	S
Kowalski	(1500)	(3.00 3.50 6.50)		
8. M. Arsenault	(1820)	(5.00 6.00 11.00)		
Chauvet	(1638)	(6.00 1.00 7.00)	(3.00 3.50 6.50 13.50	I
9. Geoffrey	(1715)	(0.00 2.50 2.50)	(3.00 4.33 7.33 2.50)	P
Beaudoin	(1460)	(0.00 0.00 0.00)		
10. Sxwaronek	(1739)	(4.00 2.50 6.50)	(3.50 4.33 7.85 8.00)	P
D. Arsenault	(1815)	(3.00 3.33 6.33)		
11. Dupuis	(2042)	(3.50 2.50 6.00)	(4.00 5.00 9.00 8.50)	P
Williams M.	(1500)	(2.50 1.00 3.50)		
12. Proulx	(1780)	(5.00 6.00 11.00)		
Morin	(1885)	(3.00 3.15 6.15)	(5.66 4.00 9.66 12.80)	I
13. Wang	(1900)	2.00 8.50 10.50)	(6.25 5.00 11.25 12.00)	P
Sack	(1800)	(4.00 4.00 8.00)		
14. Martinez	(1806)	(3.00 4.00 7.00)	(7.00 5.50 12.50 9.50)	P
15. Joannisse	(1850)	(5.33 3.74 9.10)	(6.50 6.00 12.50 12.25)	P
Gregorion	(1670)	(3.00 2.80 5.90)		
16. Pineault	(2059)	(3.00 3.00 6.00)	(6.00 6.50 12.50 10.50)	P
Sasseville	(2088)	(2.90 3.00 5.90)		
17. Rousseau	(2105)	(2.33 7.00 9.33)	(6.00 7.00 13.00 12.80)	P
Roy	(2023)	(5.50 2.33 7.80)		
18. Zurowski	(2129)	(5.50 3.50 9.00)	(7.00 7.00 14.00 10.50)	P
19. Quance	(1945)	(6.50 7.20 13.60)	(7.85 6.75 14.50 17.33)	P
20. Nadeau	(2120)	(3.90 5.33 9.20)	(8.00 7.25 15.25 12.66)	P
Williams, L	(2173)	(5.90 3.33 9.20)		
21. Spraggett, K	(2538)	(8.00 9.00 17.00)	(7.00 10.00 17.00 17.00)	S
Levtchouk	(2209)	(7.00 8.50 15.50)		

Results of 42 Individuals and 21 pairs result in ascending of pair TS.

Note: P = pair has higher TS.
I = pair has lower TS than one of the members.
S = pair TS is same as one of the member's TS.
MP = take themaximum score on each test position for a pair's answers on their individual test.

APPENDIX C

Subject pairing chart.
Pairs (Name, Rating, Pretest scores)

1. Spraggett	(2542, 4-⅓)	- Levtchouk	(2209, 4)
2. Quance	(1870, 3-⅓)	- Finta	(2102,2)
3. Kowalski	(1500, 2-⅓)	- Kurtz	(2113, 2)
4. Beaudry	(1797, 2)	- Duchoeny	(1793, 2)
5. Chauvet	(1679, 2)	- M. Arsenault	(1780, 2)
6. Proulx	(1800, 2)	- Morin	(1900, 1-¾)
7. Ruggeri	(1550, 2)	- Fata	(1849, 1-½)
8. Demers	(1750, 1-½)	- Michaud	(1770, 1-½)
9. Roy	(2034, 1-½)	- Rousseau	(2126, 1)
10. Zurowski	(2129, 1-½)	- Roos	(2150, ⅓)
11. Martinez	(1728, 1-⅓)	- Desforges	(1975, 1)
12. J. Jacques	(1860, 1)	- Gregorion	(1670, 1)
13. Szwaronek	(1750, 1)	- D. Arsenault	(1815, 1)
14. Smith	(1450, 1)	- Boulay	(1421, 1)
15. Maison	(1500, ½)	- Sirois	(1350, ½)
16. Beaudoin	(1460, 0)	- Geoffrey	(1700, 0)
17. Sack	(1400, 0)*	- Wang	(1986)
18. Moser	(1600, 0)**	- Strothotte	(1815, 0)
19. R. Jacques	(1500, ½)	- Leclare**	
20. Dupuis	(2042)	- M. Williams	(1475)
21. Pineault	(2059)	- Sasseville	(2088)
22. Nadeau	2120)	- L. Williams	(2173)

These pretest scores were used for purposes of pairing. This was done by matching performances on the last five of these pretest positions in score order from high to low, thus ignoring the first three as practice.

Note:

TS - Total pair's score based on the last 20 positions.

T - Tactical positions based on the 10 positions.

L - Lever positions based on the 10 positions.

S - Pair's score based on 25 positions (including 2 practice positions).

PS - Practice score based on 8 positions.

* - Ingo rating 130, approximately 1400 FQC.

** - Offical rating is not available, estimated rating only.

*** - Dummy pair due to odd number of subjects. Results of this pair will not be counted.

APPENDIX D

Discussion of New Positions

1 (B) Black has the duo-forming lever-type expansion ...b5, and should not delay it as occurred in actual play with 1. ...0-0? when 2.a4 made ...b5 nearly impossible for the rest of the game. After 1. ...b5 Black need not fear the pin 2.Qe2 since he has adequate resources with 2. ...Nxd5.

2 (W) Only the surprising 1.Kh3 discovered by Botvinnik and missed in Kmoch-Van-Scheltinga, Amsterdam, 1936, (Basic Chess Endings, #55) wins, e.g. 1. ...f4 2.h6 f3 3.h7 f2 4.Kg2.

3 (B) The lever ...c5 which 1) gets rid of Black's backward c-pawn 2) seals off the hole on c5 from White's pieces and 3) opens the d-file for Black's doubled rooks, is called for here.

4 (W) When there is a forcing sequence of moves good players are able to find them. After 1.Bxf6 Bxf6 2.Nd7 Qb4 (if 2. ...Qg5 3.f4 Qg6 4.Bc2 Qh6-5.Nxb6 Bd4+ 6.Rxd4 etc.) 3.b3 White's N on d7 actually disrupts Black's position while the simple threat is 4.Qe3 to which Black has no satisfactory reply.

5 (W) The lever 1.h5 is best, loosening up g6 and Black's K-side. The Q-sacrifice 1.dxc6!? is not really sufficiently clear to be played, i.e. 1. ...Rxd2 2.Rxd2 Qa8 etc.

6 (B) Both knights are effectively trapped, however Black's can desperado itself with 1. ...Nxf3+ 2.gxf3 (2.Qxf3? Qxb5) Qg5! when play continued: 3.Nxg6+ hxg6 with Black better due to the split pawns on Wh K-side.

7 (B) A famous Botvinnik game where he favorably burst open the center with 1. ...d5. If (a) 1.bxc4 de recovers the piece with the better game. (b) 1.Nxd5 Bxd5 2.exd5 e4 3.Be2 or Nxd5 or (c) 1.fe Nxd4 2.Bxe4 dxe4 and 3. ...Qxe5 with advantage.

8 (W) This is a unique case where its best to defend fully and properly for one more move and then consummate the attack. Therefore 1.Na1! (a very unusual retreat) and then the straightforward threat of Qh2 followed by hg, Qh7+, and Bh6 is too strong. However on the more ordinary 1.Nd4?! Black has defensive resources with 1. ...Bxd4 and 2. ...Qxd5.

9 (W) Here there are a number of attacking concepts including 1.Nd6+ (?), 1. Qd6 (also not best), and the positional 1. a5, but 1. b4 is clearly sharpest, with many threats, e.g. 1. ...cb 2. cb Nxb4 3. Ba2 etc.

10 (B) The lever 1. ...d5 has a paradoxical effect in that it forces open the position for Black's pieces while appearing to shut in the Queen's bishop, e.g. 1. cd ed 2. Q-any Nxd4 or 1. c5 bc 2. Rxc5 Nxd4 again. On 1. ...e5 White survives longer after 2. d5.

11 (W) Alekhine finished this famous attacking game against Lasker with 1. Nf5+ Kh8 2. Qxg6! resigns, since if hxg6 3. Rh3+ is mate in one.

12 (W) It is easy to see that the lever 1. e6 splits Black's position in half while shutting his queen out of the game. However his latent King's bishop is suddenly very active. Spasssky played Qc3 against Fischer's threatened and ...Nc4, ...b6, and ...c5 and while this may still happen, 1. e6!? is White's best chance to seek active counter play for a pawn.

13 (W) This endgame lever position (1. f5) is carried over from the earlier Bratko - Kopec experiment. Once White's knight wins access to f4 it is clear that he is winning, e.g. 1. ...g5 2. h4 f6 3. Ngl etc.

14 (B) The continuation here is from what has been deemed the "Greatest Game of All Time" (Bogolyubov - Alekhine). Alekhine continued I. ...b4 2. Rxa8 bxc3 3. Rxe8 c2!! 4. Rxf8+ Kh7 and the new Black queen was decisive.

15 (B) Black has the "duo-busting" lever ...e5! which virtually forces 2. fe when after Be6 he was better despite being two pawns down.

16 (W) White was very pleased to find the combination 1. Qxf5!! exf5 2. Rxd5 leaving Black with five shatttered pawns in the endgame (especially as this was one of seven games played by White in a blindfold exhibition). 1. Rf6 was also possible since on Bxf6 2. Qxf6+ Kc7 3. Nxd5+ is very strong.

17 (W) White has been down a Q for two bishops and two pawns for some moves, and thus he can remain with 1. Bxf5!?; however 1. Bb6+! virtually forcing the interfering Ke7 followed by 2. h7 Qh8 3. Rel+ Kd6 4. Bxf5 Re7 (also forced; time control) is much stronger. Now White realized that after the exchange of rooks the two bishops and two pawns would overpower the Black king and queen. Thus 5. Rxe7 Kxe7 6. Bc5+ Kf7 7. d6 and White soon won.

18 (W) The ram action 1. d6 disrupts communications between Black's two flanks stymying the development of his queen's bishop and queen's rook.

19 (W) White should not play 1. f4? leaving the e5 square as a beautiful "hole" for Black's pieces after ...fe. Therefore White should play 1. Be3 or 1. b4 supporting the lever c5.

20 (W) This is a remarkable exception where the three White Queen moves in the first nine moves were the best may to confound the development of Black's pieces.

21 (W) Lasker produced this famous "sweeper sealer twist" against Capablanca (St. Peterburg, 1914) with 1. e5! Q...fe or ...de 2. Ne4 follows decisively.

22 (W) The obvious move is 1. Qd4 threatening 2. Qxb6+ but after 1. ...Qxd6 (forced) 2. exd6 Bg6 Black has resources. Immediately decisive is 1. h7 Rh8 2. Qd4 - Qxd6 3. exd6 Rxh7 4. Qe4.

23 (B) Clearly drawing is 1. ...Kg4 since after 2. Rh7 Black has Ra6+ 3. Kxf7 Ra7+ and 5. ...Kf5; but not I. ...Kf4? 2. Rh4+ and 3. Rh7. A few strong players suggested 1. ...Ra5 though 2. Kf5 gives White winning chances.

24 (B) Black has a number of moves which may possibly lead to equality. Most direct is the lever 1. ...e5 so that on 2. d5 Ne7 3. e4 c6 etc.

25 (W) White should not be too greedy and fall into 1. Rxb6 Rhb6+ 2. Kf2 Rxe3. Thus best is 1. Kg2 first, and then 2. Rxb6.

As mentioned earlier in this report, all test stimulus positions were chosen while trying to maintain a one to one ratio between T and L. The work reported by Kopec, Irazoqui and Bratko, (1982) indicates that as chess players improve and become strong (over 2000) we can expect a corresponding improvement in their L scores. This general result was also seen in the performance of our subjects here, both for pairs and individuals. In fact the improvement in the scores of pairs over individuals is mostly as a result of improvement in L scores, (see Table 3), though T scores also improved substantially. The further analysis of positions and post-mortem discussion with some subjects suggested that perhaps some of the L test stimulus positions were too sharp, tending too much towards T positions. On the other hand T positions were classified, involving a wide variety of types of moves from Openings, middle games and endings not necessarily resulting in the immediate win of material or checkmate. Thus T positions were not as crisp or clear as those used in the earlier Bratko-Kopec experiment, although in nearly all positions it was evident that there was only one best move. Thus perhaps for the process of selecting test stimulus positions two heads may also have been better than one!

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Computers For Solving Chess Problems

As chess computers continue to evolve, their programs have become increasingly sophisticated. Consequently, many mate solving algorithms have benefited from these improvements.

Although they've come a long way over the years, today's commercial chess computers still lack the versatility needed to solve more than one type of problem— the orthodox directmate (e.g. White mates in 2). Since the demand for a stronger tournament playing program greatly exceeds the demand for one more comprehensive and more proficient at problem solving, it is doubtful that such a specilized program will be featured in a micro computer in the near future.

There are, however, a few programs written by chess problem composers, that can solve several types of problems and stipulations; and some even help the human in composing compositions! One of the best programs available is the Mate 4F, written by Mika Korhonen from Finland. The Mate 4F can solve directmates, helpmates, and selfmates all up to 8 moves, including set play*. Unfortunately, this program, and most others like it, run only on an Apple II or Apple II+ (64K) computer.

The only chess computers reviewed in this article are those current models that meet the requirement of being equipped with a special "mate mode" or level that incorporates at least the first of two

essential features for problem solving: (1) solves all chess problems (except when retrograde analysis is required) only within the stipulated number of moves; and (2) will verify the soundness or correctness of a problem by displaying all possible "cooks" (extra unintended solutions), and "duals" (alternative continuations, including mating moves); and confirm the solution by signaling the absense of any cooks.

The only current machines that meet this requirement are: Fidelity's Prestige, Elite A/S (EAS), and Super "9" (SU9); Scisys Philidor/Mark VI module, Novag's Constellation, and Milton Bradley's Grandmaster.

Since the Scisys Mark V became the first micro computer fitted with the ability to execute both parts of the criterion (above) in the fall of 1981, only Fidelity has followed with an equally efficient and "absolute" mate finding algorithm. It first appeared on the Prestige, which was released in October, 1982. However, the mate solving level (B6) was defective, and not corrected until the first 400 or so units were sold (Prestiges with serial numbers approximately between 400 and 500 stand a 50-50 chance of having a defective B6 level that's not too different from the non-iterative fixed depth level).

This year Fidelity came out with the Elite A/S and SU9, which like old wine in a new bottle, are identical to the Prestige in features and functions for mate solving, and differ only in the speed of their microprocessors and housing.

The same thing is true for Sci Sys Philidor/Mark VI module. The only difference between it and its predecessor the Mark V, is the time it takes to solve problems. Philidor is substantially faster.

The Constellation and the Grandmaster are the only two computers reviewed here that aren't programmed to search for cooks. This can be downplayed as something of minor importance to the average chessplayer, but it is a factor which is unacceptable to problem composers, those who "participate" in published solving contests, and cheat by letting their computers do the solving, and general problem enthusiasts. Therefore, the Constellation and Grandmaster can be eliminated as choices for the best state-of-the-art problem solving machines on the market. As for the Constellation, this does not mean that it is not good for solving most problems. It is usually the fastest computer for working out "game-like" problems where being 100% accurate is unnecessary. Since it has a solve mate option that limits the depth of search, the Constellation can solve virtually all problems that have been cured of cooks. However, in a few rare cases, a mate problem, completely sound, will be solved a move beyond the stipulation despite entering the position and move stipulation correctly.

Set play is where in the initial position, if it were black's turn to move, some of the moves would allow White to mate in the stipulated number of moves.

Discovering the many intricacies of each computer is a time consuming and very difficult task. It involves extensive testing by using a wide variety of chess problems. Chess compositions are usually grouped into two general categories: composed positions, and combination or game-like positions. In order to evaluate the performance of all 6 computers, a large number of problems from both categories had to be used as a test. This test, or survey of problems is by no means statistically valid, since the sample hardly represents a majority of all possible configurations. But it will give a general rule of thumb of how well each computer does in solving problems of varying magnitudes.

Bob Sostack

The primary objective of my survey was to estimate the average solving times of the computers, and to give practical results of their overall performances. Differences only in solving time can be attributed to six main variables: (1) type and complexity of the problem; (2) mate solving algorithm; (3) memory capacity of the program; (4) placement and number of built-in heuristics; (5) type of processor, and (6) speed of processor.

Since computers solve problems only by brute force, and not by recognizing themes and signposts like a top notch human solver would, then a different standard must be set to grade computer proficiency. Degrees in difficulty based on the number of possible variations is the only way to differentiate the machines since they will eventually solve all the test problems.

The survey ranged from 2-movers to 10-movers, and was evenly divided between composed and game-like problems. Each stipulation (e.g. mate in 4) was divided into 3 settings: (1) miniatures, which are positions totaling 7 pieces or less; (2) meredith, or positions involving between 8 and 12 pieces; and (3) positions with a minimum of 13 pieces. Every computer was given at least 10 problems from each setting in both composed and non-composed categories. A total of 300 problems were used. A few of the more interesting problems are shown here for the readers to try for themselves or on their computers. Keep in mind that all of the problems were solved under the "mate mode" and not an "infinite" or tournament level.

Results

Of the 300 problems tested, the Prestige was the fastest solver in the "composed problems" group, solving problems faster than the other 5 machines 84% of the time. It won out in every division except the 6 and 7 move miniature and meredith problems, where the Philidor/MkVI was surprisingly faster.

In the "game-like" or tactical group, the Constellation was devastating—winning in all divisions, and faster than the others 93% of the time (279 out of 300 problems!) The Grandmaster finished last, and was the slowest solver with every example. Here's how they all finished:

Composed Problems

1. Prestige
2. Elite A/S
3. Philidor/Mk VI
4. Super "9"
5. Constellation
6. Grandmaster

Game-Like/Tactical Problems

1. Constellation
2. Prestige
3. Elite A/S
4. Super "9"
5. Philidor/Mk VI
6. Grandmaster

Quirks

Every computer on the market contains at least a few "bugs" or mistakes in its program. Some have been overlooked by the programmers, and others might have been disregarded as being too minor and occurring too infrequently to warrant the additional cost of correcting them. Here is just a sample of all the bugs found by computer owners: The Fidelity program, as found in the Prestige, EAS, and SU9 can't solve a simple mate in 1 (yes, one!) if the following conditions exist: Black is to move and is in check, and the checking White piece can be captured by a Black pawn promoting to a Knight and mating on the move.

Example:

White: Kf3, Pg2, Rel
Black: Ke5, Pd3, Pf2, Pf4, Pg3, Ph5
Mate in 1. Key 1... feN mate!

Whenever these positions arise, only the 3 Fidelity machines will not consider a pawn capture-underpromotion. They will promote to a queen and accept a possible stalemate, or make another move and miss the mate in one.

The Novag Constellation has a peculiar glitch that won't allow it to complete this simple mate in 2:

White Kh6, Ra8, Bc8, Nb8
Black Kh8, Pa2, Pb2, Pc2, Pd2, Pf2, Pg2, Ph2
Key 1. Nc6, any, 2. B-mates

The machine will indicate the right move, but then it "freezes" up must be shut off. And on one problem the Constellation overstepped the stipulation by one move.

End-Game Studies

The best computers in the world are about as likely to solve a long and detailed prize winning end-game study as they are to beat Anatoly Karpov in a match. Of course this is likely to change in the future, but not with today's level of technology.

Two major obstacles have to be overcome for computers to be successful in this field. The first is the "horizon effect", in which the computers' assessment of the position is limited to the depth of its search. This prevents the program from reaching any long range positions averaging 20-50 ply. The second obstacle is computer knowledge of theoritical end-game techniques (or lack of it), and it begins when a position first becomes a theoritical win or draw. For example, won endings that are currently beyond the scope of computers include King, Bishop, and Knight vs. King; King and two Knights vs. King and Pawn; King and Queen vs. King, Rook and Pawn, etc. Also, drawn endings such as K + R vs. K + R; K + two minor pieces vs. K + one minor piece, and countless others that would unnecessarily be played out to at least 50 moves.

It may be several years before we see computers consistently solve end-game compositions, but sizeable changes will be necessary, like selective search programs combined with more comprehensive end-game algorithms before real improvements can be seen.

Recommendations

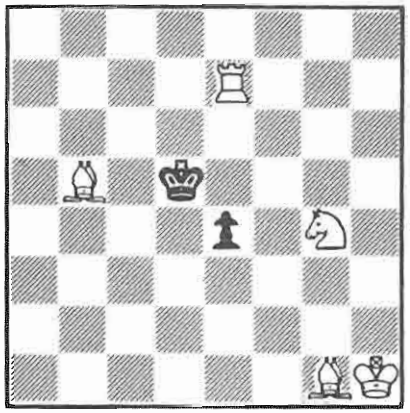
The serious problem composer or problem enthusiast is primarily concerned with accuracy of solution. Of the four machines that fully meet the criteria of accurate solving, the only essential differences between them (other than solving time) are expandability, and price.

Expandability: The Prestige seems to have the most potential for upgrading with more RAM (14K) than the others, but there's no indication that this will be used for new types of problems.

The Elite A/S is the only other hope for a problem solving upgrade since SciSys has all but cancelled any future plans to upgrade the Philidor. Such an upgrade by Fidelity would be for both the Prestige and EAS.

Price: The best problem solver for the money is the Super 9 which lists for $260, followed by the Elite A/S ($450), the Philidor/Mk VI at $517 (mainframe with MkV lists for $398, and Philidor module for $119, and last is the Prestige ($1,295).

	Prestige	Elite A/S	Philidor MkVI	SU9	Constellation	Grandmaster
1. Solves mate up to a maximum of 'x' moves in practice. Maximum number of moves a mate can be found in any position when computer is operating on the mate solving level.	11*	11	7	11	8	5
2. Solves mate up to a maximum of 'x' moves in theory. Revised from 1983 CCD due to change in mate finder algorithm. None of the Fidelity programs has ever displayed the finding of a forced mate beyond 11 moves.	16	16	7	16	12	5
3. Predicts or announces the number of moves to mate after problem is solved.	Yes	Yes	Yes	Yes	No	No
4. Displays main line of solution with out having to change levels or other options.	Yes	Yes	Yes	Yes	No	No
5. Displays depth of search while computing in the problem solving mode.	Yes	Yes	No	Yes	No	No
6. Modular capacity for possible future expansion of problem types (e.g. helpmates, selfmates).	Yes	Yes	Yes	No	Yes	No
7. Allows human to "play out" solution with Black pieces while the computer automatically reduces the stipulation by one move, after each move is played out.	No	No	Yes	No	Yes	Yes
8. Digital clock display that keeps track of computing time.	Yes	Yes	Yes	Yes	No	N0
9. Searches for alternate solutions (cooks).	Yes	Yes	Yes	Yes	No	No



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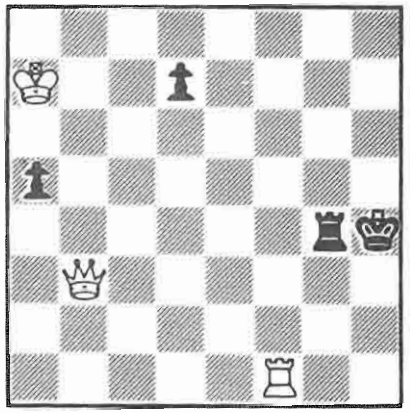

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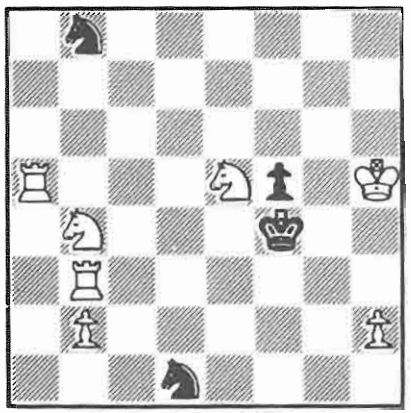

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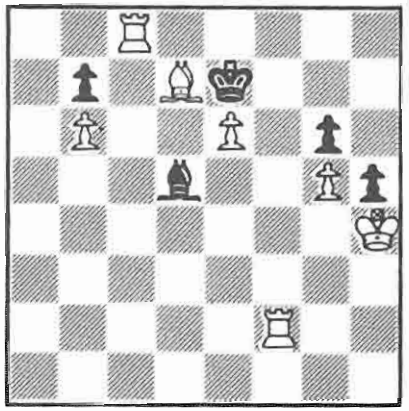


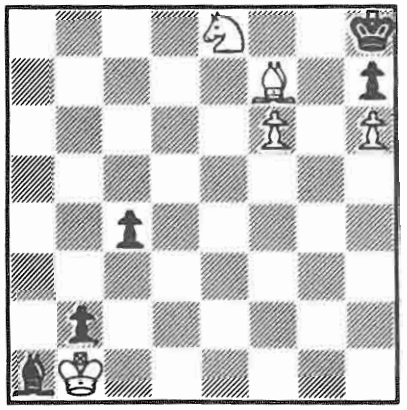
4. C #5

C = Composed problem T/G = Tactical/Game-like problem

Solutions

1. Bb6
2. Qf7
3. Nc4
4. Rd2
5. Be6
6. Qd8+
7. Bc6
8. Bf7
9. Qd6
10. Bf5
11. Qh8
12. Rg2
13. Qa7+
14. Qd8+
15. d7
16. Qg1
17. Nf5+
18. Qg4+
19. Rf4
20. Rg1
21. Rh8+
22. Rh6
23. h8B
24. Rd5+

Bob Sostack



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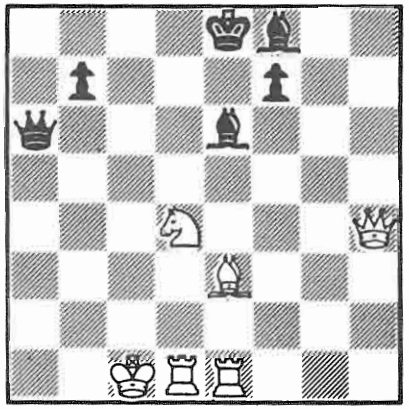

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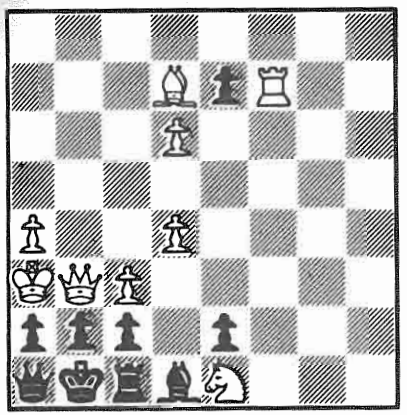

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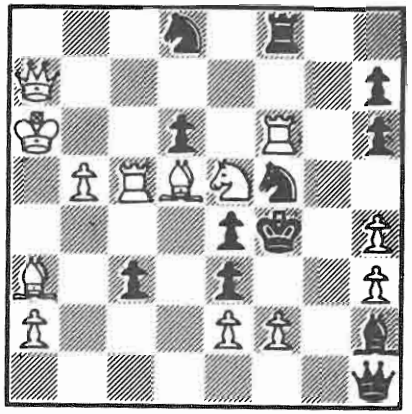

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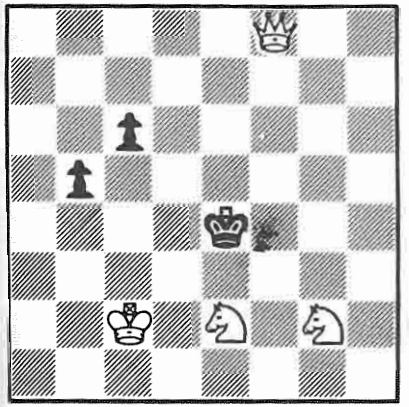

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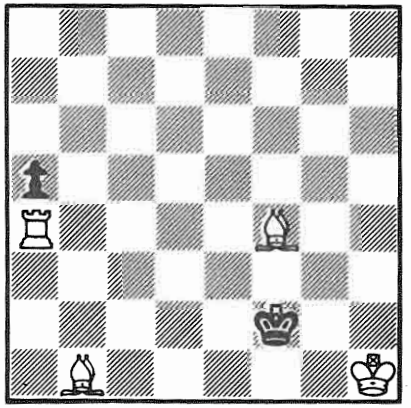

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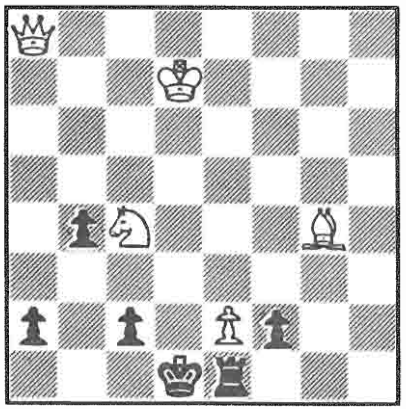

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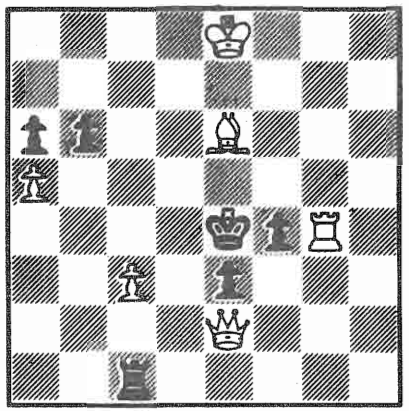

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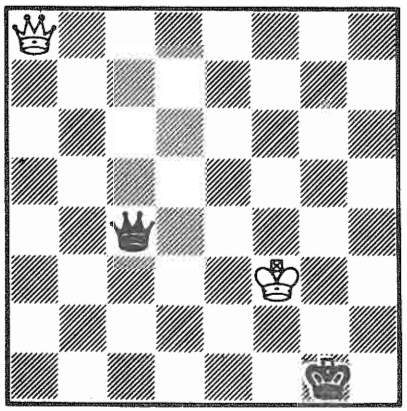

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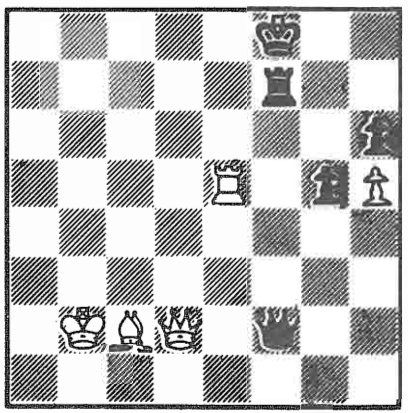

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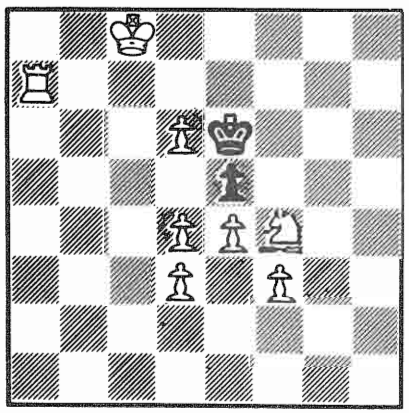

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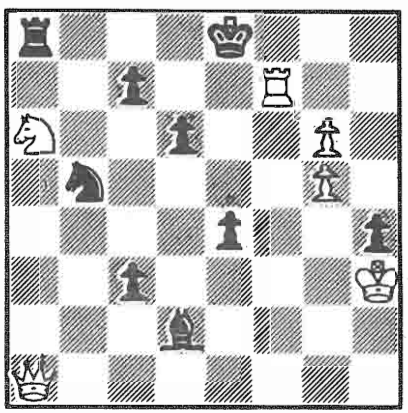

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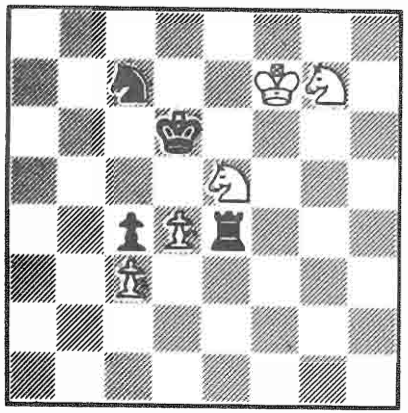

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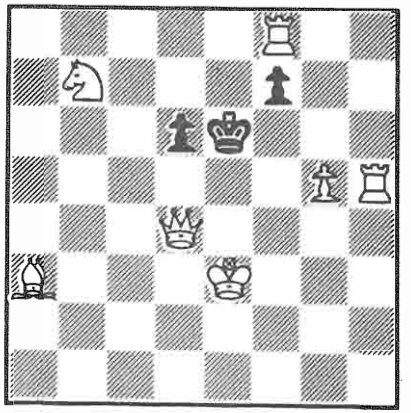

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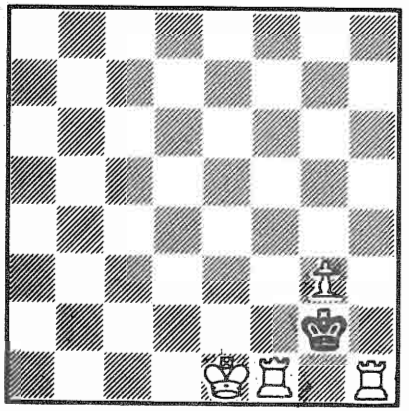

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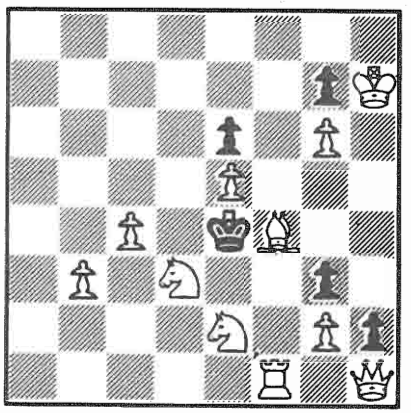

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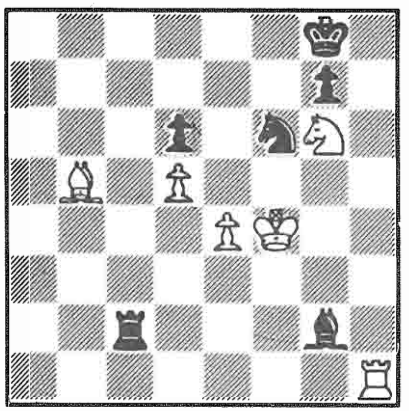

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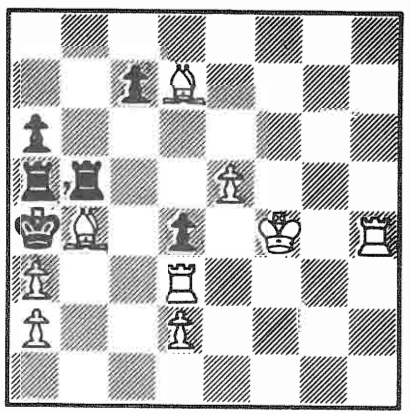

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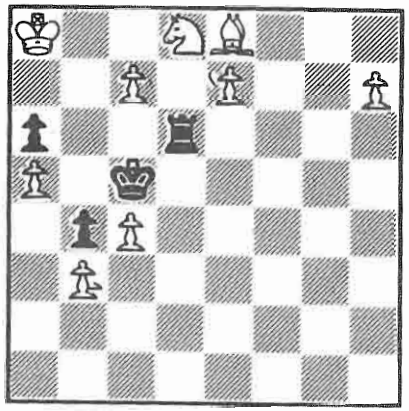

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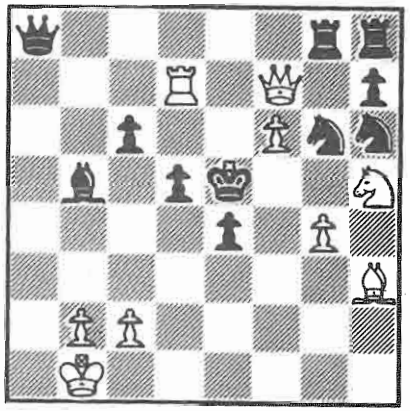

24. T/G #5

REVIEWS

EXPLORER

Scisys people have a real talent for design, as Explorer shows once again. This incredibly cute, pocket-size, self-contained, battery-powered electronic device, amazingly enough plays a fun and relatively competent game of chess, provided it does not reach the endgame. It has a varied opening book and its agressive middle-game could be rated at about 1600. Moreover, if you are down or even in a lost position when reaching the ending, Explorer will be kind enough to let you win. Seriously, the endgame is the only major weakness of this otherwise precious little chess companion.

After 40 or 50 hours of use, its batteries still work. This, together with its diminutive size, its beauty and generally good level of performance, makes Explorer the ideal portable chess computer and, at the price, a bargain.

A thief could come to my place and take some of my stronger chess computers. But Explorer? Over my dead body!

ELITE A/S

This is, in my opinion, the best looking chess computer available today. It comes with an ever so slightly improved version of the old Prestige Program and incorporates all of its features, plus some of its own. Extremely convenient to use, aesthetically pleasing, reasonably priced and one of the strongest machines in the market, I find Elite A/S a package difficult to resist.

Regarding its playing ability, I have nothing much to add to Prestige's review in 1982's Annual. The most significant difference is the decreased clock speed, which makes Elite A/S about 30 to 40 points weaker and slightly less consistent in its performance. Nonetheless, it is second only to both Prestiges in overall strength, second to Prestige-B in playing quality, and it costs about one third.

I freely admit a personal weakness of mine toward Elite A/S, an excellent machine that is, I believe, a most satisfying chess computer. When updated with the Budapest program (the introduction of Elite A/S-B has been delayed for reasons I do not quite understand), it will be just as good as Prestige-B in playing style, while only slightly weaker. Highly recommended.

GRANDMASTER

A materialization of a technical-fiction nightmare. Grandmaster's (what a bad joke) playing style is best described as being sharp as a mushroom. After seeing it loose 10 to nothing to the old SC 9, I refused to pollute my ears any longer with all the noises this device produces fooling around while trying to push its pieces.

Today, a very cold Christmas day, I imagine this Darth Vader's ultimate weapon being put by its owners where it really belongs: a nice, homy, blazing fireplace.

SUPERSTAR

The best finished and, in my opinion, handsomest chess computer under $200, Superstar would have been the clear best-buy only one year ago. Today it is still competitive, but not quite as good as Constellation or the new Sensory 9.

Its playing style seems to be reminiscent of Steinitz's (the program, mind you), since it tries to play an eminently positional game, showing in this respect a better understanding than most chess programs. This seems particularly true in endgames other than king and pawn endings, where it played, sometimes, in a quite convincing way. But its sometimes better positional play doesn't seem to compensate for its handicap in tactical ability when compared to Sensory 9-B and, particularly, Constellation.

Positional understanding tends to be, among chess computers, as superficial as an acre. Therefore, a positional playing machine seems to be, at least to some extent, a contradiction in terms, even if sometimes such a device will give you the illusion of a better than usual strategical conception of the game.

I don't want to sound negative about Superstar. It plays a competent game of chess and offers a good performance/price ratio. If it were tactically faster and more aggressive in playing style, Superstar should be an unbeatable value.

SUPER 9

Take Elite A/S's brain, Champion's clock speed, Sensory 9's housing, add a display and you'll get a Frankensteinized chess computer: Super 9. Not exactly the most beautiful machine available. Considerably more expensive than Sensory 9-B and Constellation, and also slightly weaker, it has instead all the enjoyable features that the other two machines lack. Nevertheless, even though it offers a very decent value, I find it quite difficult to accept compromises in strength in order to favor features. I mean to say that my reaction towards Super 9 is rather lukewarm. And boy, is it ugly!

CONSTELLATION

This disconcerting product has been, in my opinion, the most significant chess computer to reach the market during 1983 because, among other things, its astonishingly good performance/price ratio forced the other manufacturers to improve their machines without raising the price. Sensory 9, the product to beat during 1982 in the best-buy category, has been replaced by Constellation in this always important battlefield.

I normally think of Constellation as an agressive and five times less expensive Elite. They are equally fast when it comes to finding a correct tactical stroke, roughly of the same strength, and true brute-force champions.

About equal positionally and more active than the old Sensory 9, Constellation truly shines in open, tactical games, making by comparison its strategical inconsistencies all the more irritating. Without doubt, the very competent, kind and stubborn David Kittinger belongs to the "speed is everything" school of thinking, and his program shows it every single time. By being tactically better and positionally weaker than most human players, Constellation doesn't seem to really care about who it is playing against. For instance, at the U.S. open it scored 50% against its 75 highest rated human opponents and only 36% against the seven lowest rated ones. It really doesn't care: it plays some very nice games, some rather poor ones, exaggerating a characteristic inherent to chess computers. At speed chess, it is better than anything else in the market, with the possible exception of Prestige-B. All things considered, Constellation, along with Sensory 9-B, should be considered the best buy.

A quick comparison between these two computers could be interesting, although, by now, rather academic. Constellation has a better opening book, one that interfaces nicely with its middle-game program. In the endgame, Sensory 9-B seems to be more balanced, since Constellation, somewhat stronger in rook endings, doesn't have the slightest idea of how to play a king and pawn endgame.

Overall, Sensory 9-B is positionally better, equally active and just as strong at 40 moves in 2 hours, which makes it probably the better choice for someone inclined to play slow games, since its playing style is more coherent, more human-like than Constellation's. On the other hand, Constellation is much stronger at speed and, because of its tactical ability, a more exciting chess opponent.

As you can see, I am using subjective categories, which probably means I am quite unable to recommend one over the other.

Why did I say that this comparison was a rather academic one? I recently received from Novag a 3.75 Mhz Constellation. Almost twice as fast, with a slightly improved program, its price won't go up by more than 5% to 10%. In other words, for around $200 you will be able to get the very best speed player and one that is, at 40/2, as strong as Prestige-B. And I mean strong, not good.

But don't hold your breath. The faster Constellation will not reach the market until, probably, Spring 1984. Anyway, the issue of which chess computer is the best-buy will be then crystal-clear.

SENSORY 9-B

During October 1983, Fidelity Electronics introduced this updated version of their one year old Sensory 9. Faster (2 as opposed to 1.5 Mhz) and with an improved program, the 9-B is about 80 points stronger, twice as fast tactically, more active and a better positional player. And I thought the 9 was a value difficult to improve upon! Being so good, it projects a large shadow over Fidelity's own Super 9, almost reaching Elite A/S. In comparative terms, it is just as good positionally as either of them, while being slightly faster than Super 9. Compared with Prestige-B, it is twice as slow tactically and not quite as dynamic and human-like. But the price is not the same either.

Elsewhere I compared Constellation and Sensory 9-B. Both represent incredibily good values and without any doubt in my mind they are the best buys in the market.

MEPHISTO III

Because selective programs try to duplicate the human way of thinking to a higher degree than full-width ones, I find them, initially, both intriguing an exciting. After the good level of performance achieved by Mephisto II, I expected the new program with a great deal of impatience and curiosity.

It finally came during late Summer, and the units I received began immediately two 10-game matches against Constellation and Elite A/S. After 16 games, Mephisto III was losing 7½ to ½ to both opponents and the only exciting thing about the games was to guess when this new program was going to blunder. It did not seem to make any sense, so I called Germany to find out what was going on. "It is impossible", "We are not fools", "Your two modules must be defective, we'll ship new ones immediately to you" were the answers I got. All right, I interrupted the matches and waited. For a week, two weeks. A month! Two months later, I got them and, according to the manufacturer, they had been improving and debugging the program in the meantime.

Anyway, the modules I received did not have the regular production opening book, but the limited one used to play in official tournaments. That made testing quite difficult, since this version of Mephisto III can't play more than 4-game matches without repeating a previously played game. One more peculiarity: this particular opening book tends to book-in the opponent through opening traps, as it happened sometimes during the matches, but to no advantage.

To put it simply, Mephisto III blunders. It is positionally more refined than Mephisto II, it is tactically faster and more coherent, it is also a better endgame player. But being much more selective (it looks ahead typically one or two ply full-width and 8 to 20 selectively), it has a definite tendecy to overlook a tactical stroke and loose immediately, even after achieving a winning position, as it happened quite often.

I suspect this program has been developed for the fast 68000 microporcessor that played at the Budapest and A.C.M tournaments. A 16 bit processor running at 10 mhz is much faster than the one used in Mephisto III. The latter doesn't look deeply enough into the position and then it overlooks tactical threats.

Interesting as it is, particularly for future 68000 based machines, this program has been a major disappointment under the conditions it was tested in. In its actual marketed form, Mephisto III is not better than Mephisto II and costs twice as much as the definitely stronger Constellation and Sensory 9-B.

PRESTIGE-B

Identical in hardware to the original Prestige, the "B" version comes with the same program entered at the Budapest and A.C.M. tournaments. As compared to the older one, it is only about 30 points stronger, something I would hardly call a breakthrough. This small improvement in strength should be attributed to the increased code efficiency, which makes the new program 25 to 30% faster. Per se, it is not a very exciting improvement and it would be difficult to justify the outrageous price ($200) asked for the update to the new program. For this amount of money one can buy a complete chess computer, and a very competent one at that. Incidentally, there is something peculiar in this new program that is also present in the new Sensory 9. The move they recommend is sometimes an obvious blunder that, if played, will make you loose the game immediately. Because Prestige assumes this blunder to be the best possible countermove, its ability to "think" on the opponents time is partially wasted. When discussing this problem with Fidelity people, I was told that it wasn't a bug but a "feature". Amazing.

Thankfully, this "feature" doesn't act very often.

There are characteristics, such as playing style, impossible to quantify but decisive when it comes to evaluating chess computers and the amount of enjoyment they provide to the user. In this respect, the new Prestige program is unequalled. It achieves a degree of refinement, correct positional evaluation, human-likeness and agressive style of playing simply better than its closest competitors by an order of magnitude. I think *refined* is the key word.

But is it so much better in these non-quantifiable categories as to justify its incredible high price? With all the prudence and subtlety that made yours truly famous, the answer is: yes, by far!

For someone fortunate enough to own a Ferrari, or even a Porsche, it would be foolish to pretend he had got a best-buy. He simply got the best, period. A best-buy would be, probably, something Japanese. But if I could afford it (Steve, are you listening?), I would run and buy a red Ferrari.

Going back to the brown Prestige, it is worth mentioning that late production units come with a 3.6 Mhz clock. Improved reliability seems to be the justification for this 10% decrease in speed, quite irrelevant strength-wise.

Anyway, Prestige-B has been the most satisfying chess computer I ever tested. It is also the only one that systematically outperformed all its opponents, winning every single match it has played so far.

Enrique Irazoqui

Games Fall '83 Tournament

1. CONSTELLATION
SENSORY 9-B

1	E2E3	C7C5
2	G1F3	D7D6
3	D2D4	C5D4
4	D1D4	B8C6
5	F1B5	D8D7
6	D4D3	G7G6*
7	0-0	F8G7
8	F1D1	G8F6
9	B1C3	0-0
10	C3D5	F6G4
11	D3A3	A8B8
12	A3A4	G8H8
13	F3G5	A7A6
14	B5E2	B7B5
15	A4A3	C6D4
16	E2G4	D7G4
17	F2F3	G4H4
18	A3D3	D4C6
19	G2G3	H4H5
20	D5E7	C6E7
21	D3D6	B8B7
22	D6A6	H7H6
23	D1D8	H6G5
24	D8F8+	G7F8
25	G3G4	H5H3
26	A6A3	F8G7
27	A3D3	B7D7
28	C3E2	E7C6
29	C1E3	C6D4
30	E3D4	G7D4+
31	G1H1	D4B2
32	A1B1	B2E5
33	E2F2	E5F4
34	F2G2	H3G2+
35	H1G2	D7D2+

0 1

*First move out of book.

2. SENSORY 9-B
CONSTELLATION

1	D2D4	G8F6
2	C2C4	E7E6
3	B1C3	F8B4
4	E2E3	0-0
5	G1F3	D7D5
6	F1D3	B7B6
7	0-0	B4C3*
8	B2C3*	C8B7
9	C4D5	E6D5
10	C1A3	F8E8
11	D1C2	B8D7
12	A1B1	F6E4
13	C3C4	C7C6
14	C4D5	C6D5
15	F1C1	A8C8
16	C2B2	D8F6
17	A3B4	F6E6
18	C1C8	E8C8
19	B2A3	B7C6
20	A3A7	C8A8
21	A7C7	D7F6
22	F3E5	C6E8
23	F2F3	A8C8
24	C7B7	E4C3
25	B4C3	C8C3
26	B1B6	E6C8
27	B7C8	C3C8
28	G1F2	C8C7
29	F2E2	G8F8
30	E3E4	C7A7
31	B7B2	F8E7
32	E2D2	E7E6
33	D2C3	A7C7+
34	C3B3	C7B7+
35	B3C2	B7C7+
36	C2B1	C7A7
37	B2B4	E6E7
38	B1B2	H7H6
39	A2A3	E7D8
40	B2A2	D8C7
41	H2H3	C7D8
42	G2G3	D8C7
43	H3H4	F6H5
44	G3G4	F7F6
45	G4H5	F6E5
46	D4E5	E8F7
47	A2B2	D5E4
48	D3E4	F7H5
49	E5E6	C7D6
50	B4B6+	D6E7
51	B6B5	G7G6
52	E4D5	G6G5
53	H4G5	H6G5
54	B5B4	A7A5
55	B4D4	E7F6
56	D4D1	A5C5
57	B2B3	C5A5
58	B3B4	A5A6
59	D1E1	A6A7
60	A3A4	H5G6
61	A4A5	G6F5
62	E1E3	A7C7
63	A5A6	G5G4
64	F3G4	F5G4
65	B4B5	C7E7
66	B5B6	E7E8
67	A6A7	

1 0

3. CONSTELLATION
SENSORY 9-B

1	C2C4	E7E5
2	G2G3	F8C5*
3	F1G2*	G8F6
4	B1C3	0-0
5	G1F3	D7D6
6	D2D4	C5D4
7	F3D4	C5D4
8	D1D4	F8E8
9	0-0	B8C6
10	D4F4	C8G4
11	E2E3	E8E5
12	C3D5	G4E2
13	F1E1	F6H5
14	F4H4	D8H4
15	G3H4	E2C4
16	D5C7	A8C8
17	B2B3	C8C7
18	B3C4	C6A5
19	C1B2	E5E6
20	B2D4	C7C4
21	D4A7	C4H4
22	A1C1	E6E8
23	C1C7	H4G4
24	E1C1	G4B4
25	G2D5	B4G4+
26	G1F1	H5F6
27	D5F7+	G8F8
28	F7E8	F6E8
29	C7D7	G4A4
30	C1C2	A5C6
31	A7B6	A4A8
32	F2F4	C6B4
33	C2G2	A8A2
34	G2A2	B4A2
35	F4F5	G7G6
36	F5G6	H7G6
37	H2H4	A2C3
38	D7B7	C3E4
39	F1G2	D6D5
40	G2F3	E8D6
41	B7D7	F8E8
42	D7C7	D6F5
43	F3G4	E4D6
44	G4G5	D6C4
45	B6C5	C4E3
46	C5E3	F5E3
47	G5G6	D5D4
48	H4H5	E3G4
49	G6F5	D4D3
50	F5E6	E8D8
51	C7D7+	

1 0

4. SENSORY 9-B
CONSTELLATION

1	C2C4	C7C5
2	B1C3	G8F6
3	G2G3	D7D5
4	C4D5	F6D5
5	F1G2	D5C3
6	B2C3*	G7G6
7	A1B1	B8C6*
8	G2C6	B7C6
9	D1A4	D8D6
10	C1B2	F8G7
11	G1F3	0-0
12	B2A3	D6D5
13	C3C4	D5E4
14	D2D3	G7C3+

15	E1D1	F8D8
16	A4C2	C3F6
17	A3C5	E4F5
18	C5E3	F5H5
19	C2A4	C8G4
20	A4C6	D8D3+
21	D1E1	A8C8
22	C6B7	D3A3
23	B1B5	E7E5
24	B5C5	C8D8
25	C5D5	D8D5
26	C4D5	A3A2
27	F3D2	G4F5
28	G3G4	H5G4
29	B7B8+	G8G7
30	B8A7	A2A7
	0	1

5. CONSTELLATION SENSORY 9-B

1	E2E4	E7E5
2	G1F3	B8C6
3	F1C4	G8F6
4	F3G5	D7D5
5	E4D5	C6A5
6	C4B5+	C7C6
7	D5C6	B7C6
8	B5E2	H7H6
9	G5F3	E5E4
10	F3E5	F8D6
11	F2F4	E4F3
12	E5F3*	0-0
13	D2D4	F8E8*
14	B1C3	C8E6
15	0-0	A8B8
16	B2B3	F6G4
17	H2H3	D6B4
18	C3B1	G4F6
19	A2A3	B4D6
20	B1C3	F6H5
21	B3B4	A5B7
22	F1E1	D6G3
23	E1F1	G3D6
24	F1F2	D6G3
25	F2F1	
	½	½

6. SENSORY 9-B CONSTELLATION

1	G1F3	G8F6
2	G2G3	G7G6
3	B1B4	F8G7*
4	C1B2	D7D5
5	F1G2*	C8F5
6	F3H4	F5C8
7	H4F3	B8A6
8	B4B5	A6C5
9	0-0	0-0
10	B1A3	C5A4
11	B2E5	C8G4
12	C2C4	A4B6
13	A1C1	C7C5
14	B5C6	B7C6
15	F3D4	A8C8
16	H2H3	G4D7
17	C4C5	B6A8
18	D1A4	F6E4
19	E5G7	G8G7
20	D2D3	E4F6
21	A4A7	E7E5
22	D4F3	A8C7
23	A7A5	C8A8
24	A5B4	D8B8
25	A3C2	B8C8
26	F3E5	D7H3
27	G2H3	C8H3
28	B4B7	C7E6
29	D3D4	A8A2
30	B7C6	A2C2
31	C1C2	E6D4
32	C6A4	D4C2
33	A4C2	F8E8
34	E5F3	H3G4
35	F1B1	G4E4
36	B1B2	E4C2
37	B2C2	H7H5
38	C5C6	E8C8
39	F3D4	G7F8
40	C6C7	F8E7
41	D4C6+	E707
42	C6B8+	D7D6
43	C2C6+	D6E7
44	B8A6	F6E8
45	G1G2	D5D4
46	C6C4	E7E6
47	E2E4	D4D3
48	C4D4	E8C7
49	A6C5+	E6F6
50	C5D3	
	½	½

7. CONSTELLATION SENSORY 9-B

1	E2E4	E7E5
2	G1F3	B8C6
3	F1B5	A7A6
4	B5A4	G8F6
5	A4C6	D7C6*
6	D2D3	F8D6
7	B1C3*	0-0
8	0-0	C8E6
9	D3D4	E5D4
10	D1D4	C6C5
11	D4D1	F6G4
12	D1E2	D8F6
13	C3D5	E6D5
14	E4D5	A8E8
15	E2C4	F6F5
16	A1B1	B7B5
17	C4B3	C5C4
18	B3C3	F5D5
19	F1E1	D6C5
20	E1E8	F8E8
21	C1F4	C5F2+
22	G1F1	D5E4
23	C3D2	C4C3
24	B2C3	E4C4+
25	D2D3	C4F4
26	H2H3	F2E3
27	H3G4	F4H6
28	D3D7	G8F8
29	B1E1	H6H1+
30	F1E2	H1G2
31	E2D3	C7C5
32	D7E8+	F8E8
33	E1E3+	E808
34	G4G5	C5C4+
35	D3D4	G2G4+
36	D4C5	G4F4
37	E3E2	
	0	1

8. SENSORY 9-B CONSTELLATION

1	D2D4	D7D5
2	C2C4	D5C4
3	G1F3	E7E6
4	E2E3	E7E6
5	F1C4	C7C5
6	0-0	A7A6
7	D1E2	B7B5
8	C4B3	B8C6
9	F1D1*	C5C4
10	B3C2	C6B4*
11	B2B3	B4C2
12	E2C2	C4B3
13	C2B3	C8B7
14	B1D2	F8D6
15	C1A3	A8C8
16	A3D6	D8D6
17	A1C1	0-0
18	F3E5	D6D5
19	D2F3	F6E4
20	F3H4	D5B3
21	A2B3	E4C3
22	C1A1	C3D1
23	A1D1	F8D8
24	G1F1	C8C3
25	D1D3	C3D3
26	E5D3	B7D5
27	B3B4	G7G5
28	H4F3	D5F3
29	G2F3	D8C8
30	D3C5	C8C3
31	H2H4	G5H4
32	F1G2	E6E5
33	D4E5	A6A5
34	G2H3	A5B4
35	C5B3	C6C3
36	B3D4	B4B3
37	D4B5	C3C1
38	E5E6	
	0	1

9. CONSTELLATION SENSORY 9-B

1	D2D4	G8F6
2	C2C4	E7E6
3	G1F3	B7B6
4	E2E3	C8B7
5	F1D3	F8E7
6	B1C3*	D7D5
7	C4D5	E6D5*
8	0-0	0-0
9	D1C2	B2A3
10	E3E4	A6D3
11	C2D3	D5E4
12	C3E4	C7C5
13	C1G5	B8C6
14	E4F6+	E7F6
15	G5F6	D8F6
16	D4C5	B6C5
17	A1C1	A8B8
18	B2B3	F8D8
19	D3E3	C6B4
20	C1C5	B4A2
21	C5C7	A7A6
22	F3G5	D8F8
23	F1D1	F6F5
24	G5F3	F8D8
25	F3D4	F5F6
26	C7E7	A2B4
27	D1E1	G8F8
28	E3E4	B4D5
29	E7E5	D5E7
30	E5E7	F6G6
31	E4G6	F7G6
32	D4C6	D8E8
33	C6B8	E8E7
34	E1E7	F8E7
	1	0

10. SENSORY 9-B CONSTELLATION

1	E2E4	E7E5
2	G1F3	B8C6
3	F1B5	A7A6
4	B5A4	G8F6
5	0-0	F8E7
6	F1E1	B7B5
7	A4B3	D7D6
8	D2D3*	C6A5*
9	C1D2	A5B3
10	A2B3	C8B7
11	C2C4	C7C5
12	B1C3	B5B4
13	C3D5	F6D5
14	E4D5	0-0
15	D1E2	E7F6
16	E2E3	A6A5
17	E3E4	F8E8
18	E4G4	D8B6
19	D2E3	G7G6
20	E3H6	F6H8
21	G4D7	A8D8
22	D7A4	D8A8
23	F3G5	B6C7
24	E1E3	C7D8
25	E3F3	F7F5
26	A4B5	A8B8
27	B5A4	H8F6
28	F3G3	D8E7
29	G5E6	B8A8
30	A1E1	F6H4
31	G3F3	E8C8
32	G1F1	B7C6
33	D5C6	E7E6
34	F3H3	G6G5
35	G2G3	F5F4
36	H3H4	G5H4
37	G3F4	E6H6
38	F4E5	H6F4
39	E1E4	F4H2
40	E5E6	C8F8
41	E4G4+	G8H8
42	F2F4	F8G8
43	G4G5	H2F4+
	0	1

11. PRESTIGE-B CONSTELLATION

1	G1F3	G8F6
2	G2G3	G7G6
3	B2B4	F8G7*
4	C1B2	D7D5
5	F1G2*	C8F5
6	F3H4	F5C8
7	H4F3	B8A6
8	B4B5	A6C5
9	0-0	0-0
10	A2A4	C8F5
11	F3H4	F5D7
12	B1C3	F6E4
13	E2E3	E4C3
14	B2C3	G7C3
15	D2C3	E7E6
16	C3C4	G6G5
17	C4D5	C5A4
18	D5E6	D7B5
19	E6F7+	F8F7
20	G2D5	B5F1
21	D5F7+	G8F7
22	D1F1	A4B2
23	F1B5	G5H4
24	B5B2	H4G3
25	H2G3	D8D5
26	A1A4	H7H5
27	A4F4+	F7G8
28	E3E4	D5C6
29	B2B3+	G8H8
30	F4F7	C6G6
31	B3B7	G6F7
32	B7A8+	H8G7
33	A8A7	F7C4
34	A7A3	C4C2
35	E3G5+	G7F8
36	E4E5	C2D1+
37	G1G2	D1D5+
38	F2F3	D5A2+
39	G2G1	A2F7
40	F3F4	C7C5
41	E5E6	F7E6
42	G5C5+	F8G8
43	C5H5	G8G7
44	G1F2	E6B6+
45	F2G2	B6B2+
46	G2H3	B2F2
47	H5E5+	G7F7
48	F4F5	F2B6
49	E5E6+	B6E6
50	F5E6+	F7E6
51	H3G4	E6E5
52	G4G5	E5E4
53	G3G4	E4E5
54	G4H6	E5E6
55	G4G5	E6E7
56	G5G6	E7F8
57	H6H7	
	1	0

12. PRESTIGE-B CONSTELLATION

1	E2E3	E8E6
2	D2D4	D7D5
3	B1D2	C7C5
4	E4D5	E6D5
5	G1F3	B8C6
6	F1B5	F8D6
7	B5C6*	B2C3*
8	0-0	C5D4
9	F1E1+	C8E6
10	F3D4	D6H2+
11	G1H1	H2E5
12	D4C6	D8H4+
13	H1G1	H4H2+
14	G1F1	E5D6
15	D2F3	H2H1+
16	F1E2	H1G2
17	E1G1	G2H3
18	G1G7	G8F6
19	D1D4	H3F5
20	D4A4	E6D7
21	F3D4	F5H5+
22	E2E1	H5H1+
23	E1E2	F6H5
24	D4F5	H5G7
25	F5D6+	E8F8
26	C2C3	D5D4
27	C3D4	D7C6
28	A4A3	F8G8
	0	1

13. PRESTIGE-B CONSTELLATION

1	E2E4	E7E5
2	F2F4	E5F4
3	G1F3	F8E7
4	F1C4	E7H4+
5	E1F1*	B8C6*
6	D2D4	D8F6
7	E4E5	F6H6
8	B1C3	C6B4
9	A2A3	B4A6
10	F3H4	H6H4
11	D1F3	A6B8
12	C1F4	H4D8
13	F3D5	D8E7
14	F1G1	A7A6
15	D5E4	A8A7
16	C3D5	E7D8
17	E5E6	D7E6
18	F4C7	G8F6
19	E4h4	E6D5
20	C7D8	E8D8
21	C4D5	
	1	0

14. CONSTELLATION PRESTIGE-B

1	E2E4	E7E5
2	G1F3	B8C6
3	F1C4	G8F6
4	F3G5	D7D5
5	E4D5	C6A5
6	C4B5+	C7C6
7	D5C6	B7C6
8	B5E2	H7H6
9	G5F3	E5E4
10	F3E5	F8D6
11	F2F4	E4F3
12	E5F3*	0-0
13	D2D4	C6C5
14	B1C3	C5D4*
15	F3D4	C8B7
16	0-0	D8C7
17	C1H6	D6E5
18	H6G5	E5H2+
19	G1H1	F6H7
20	G5H4	H2E5
21	D4B5	C7C5
22	H4F2	C5C6
23	E2F3	C6H6+
24	F3H5	H6F4
25	H5F7+	F8F7
26	D1H5	A7A6
27	B5A3	A8F8
28	A1E1	E5C3
29	B2C3	F4A4
30	H1G1	A4A3
	0 1	

15. PRESTIGE-B CONSTELLATION

1	E2E4	C7C5
2	G1F3	D7D6
3	D2D4	C5D4
4	F3D4	G8F6
5	B1C3	A7A6
6	C1G5	E7E6
7	F2F4	F8E7
8	D1F3	0-0*
9	0-0-0*	E6E5
10	F4E5	D6E5
11	D4E6	C8E6
12	D1D8	F8D8
13	F1D3	B8C6
14	C1B1	F6G4
15	G5E7	C6E7
16	F3G3	E7C6
17	C3D5	A8C8
18	D3E2	G4H6
19	H1D1	F7F5
20	G3B3	F5E4
21	B3B7	H6F5
22	D5C7	D8D1+
23	E2D1	E6D7
24	B7B3+	G8H8
25	C7A6	C8D8
26	C2C4	D7E6
27	B3A4	E6C4
28	D1C2	C4D3
29	A4C6	D3C2+
30	C6C3	F5E3
31	C2C1	D8D1
32	A6C5	D1C1+
33	B1C1	E3G2
34	C5E4	G7G6
35	B2B4	G2E3
36	A2A4	E3D5
37	B4B5	D5B6
38	A4A5	B6C4
39	A5A6	H8G7
40	A6A7	C4B6
41	C1D2	GFF7
42	E4G5+	F7E7
43	G5H7	E7D6
44	H7F8	G6G5
45	F8G6	E5E4
46	D2E3	D6C7
47	E3E4	C7B7
48	G6E7	B6A4
49	E7D5	B7A7
50	E4F5	G5G4
51	F5G4	A4B6
52	D5B6	A7B6
	1 0	

16. CONSTELLATION PRESTIGE-B

1	E2E4	C7C6
2	D2D4	D7D5
3	E4D5	C6D5
4	C2C4	G8F6
5	B1C3	G7G6
6	D1B3	F8G7
7	C4D5	0-0
8	G1F3*	B8D7*
9	C1G5	D7B6
10	F1C4	B6C4
11	B3C4	D8B6
12	C3A4	B6A5+
13	A4C3	A5B6
14	G5F6	G7F6
15	C3A4	B6A5+
16	A4C3	A5B6
17	B2B3	C8G4
18	F3E5	A8C8
19	C4A4	C8C3
20	E5G4	F6D4
21	0-0	F7F5
22	A1D1	D4G7
23	G4E3	F5F4
24	D5D6	F4E3
25	D6E7	E3E2
26	E7F8=Q	G7F8
27	A4E4	E2F1=Q+
28	D1F1	B6C6
29	E4D4	B7B6
30	F1D1	C3C1
31	H2H3	C6C5
32	D4G4	G8H8
33	G4F3	H7H6
34	A2A4	F8G7
35	F3A8+	H8H7
36	D1C1	C5C1+
37	G1H2	C1C7+
38	G2G3	C7C2
39	H2G2	C2B3
40	A8A7	B3D5+
41	F2F3	D5D2+
42	G2F1	D2H2
43	A7B6	H2G3
44	F1E2	G3G3+
45	B6F2	G2H3
46	F2E3	H3H2+
47	E2F1	H2D6
48	E3E4	D6D1+
49	F1G2	D1D2+
50	G2F1	D2B2
51	E4C6	H6H5
52	C6E4	B2D2
53	E4C4	G7D4
54	C4F7+	H7H6
55	F7F8+	D4G7
56	F8E8	H5H4
57	E8E4	D2G5
58	F3F4	G5G3
59	A4A5	G3A3
60	F4F5	A3H3+
61	F1E2	G6F5
62	E4F4+	H6G6
63	E2F2	H3G4
64	F4D6+	G6H5
65	D6D4	B4D4+
66	D6D4	B4D4+
	0 1	

17. PRESTIGE-B CONSTELLATION

1	B2B4	E7E5
2	C1B2	F7F6
3	B4B5	D7D5*
4	E2E3	F8D6
5	B1C3*	C8E6
6	D2D4	G8E7
7	G1H3	0-0
8	D4E5	D6E5
9	F1D3	D8D6
10	D1H5	G7G6
11	H5H4	E7F5
12	D3F5	E6F5
13	H4A4	D6C5
14	A4B3	F5H3
15	G2H3	F8F7
16	C3A4	C5E7
17	0-0-0	C7C6
18	B5C6	B7C6
19	B2A3	E5D6
20	A3D6	E7D6
21	C2C4	D5C4
22	D1D6	C4B3
23	A2B3	A7A5
24	A4C5	G6G5
25	H1D1	G8G7
26	C1D2	F7E7
27	D2E2	E7E5
28	C5E6+	G7G6
29	F1F4	G5F4
30	D1G1+	G6H6
31	E6F4	E5F5
32	G1G8	A4A4
33	B3A4	C6C5
34	D6D8	A8A4
35	D8B8	A4A2+
36	E2F3	C5C4
37	B8B6	A2A1
38	G8C8	A1C1
39	B6C6	C1F1+
40	F3G4	F5G5+
41	G4H4	G5F5
42	C6C4	F1E1
43	H4G4	F5G5+
44	G4F3	E1F1+
45	F3E4	F1H1
46	C8C6	G5E5+
47	E4F3	H1H2
48	C6F6+	
	1 0	

18. CONSTELLATION PRESTIGE-B

1	C2C4	C7C5
2	B1C3	B8C6
3	G1F3	G8G6
4	D2D4	C5D4
5	F3D4	F8G7
6	E2E3*	G8F6
7	F1E2	0-0*
8	0-0	E7E5
9	D4B5	D8A5
10	B5D6	B7B6
11	C3D5	F6D5
12	C4D5	C6B4
13	C1D2	A5D5
14	D6E4	C5E7
15	E2C4	C8B7
16	D1B3	B4A6
17	B3A4	A6C5
18	E4C5	B6C5
19	B2B4	C5B4
20	D2B4	D7D6
21	A1B1	F8D8
22	E3E4	A8C8
23	C4E2	B7A8
24	E2G4	C8B8
25	A4A3	B8B6
26	B4A5	B6B1
27	F1B1	C8F8
28	A5B4	F8D8
29	B4D6	E7D6
30	A3D6	D8D6
31	B8B8+	G7F8
32	B8A8	D6A6
33	D5D6	A6D6
34	A8A7	D6C6
35	H2H3	C6C1+
36	F2F3	F8H6
38	H3H4	H6F4+
39	H2H3	F7F5
40	A7A8+	G8G7
41	A8A7+	G8G7
42	E4F5	H7H5
43	A7A8+	G8G7
44	F5F6+	G7F6
45	G4D7	C2C1
46	G2G3	F4E3
47	A2A4	C1H1+
48	H3G2	H1G1+
49	G2H3	G1H1+
50	H3G2	H1G1+
51	G2H2	E3F2
52	A8C8	F6E7
53	D7B4	G1G3
54	C8C2	G3F3
55	H2G2	F3F4
56	C2F2	F4H4
57	F2C2	H4B4
58	C2C7+	E7E6
59	G2F3	G6G5
60	F3E3	H5H4
61	C7B7	B4B3+
62	E3E4	B6B4+
63	E4E3	B4B3+
64	E3F2	B3A3
65	B7B6+	E6F7
66	B5C4+	F7G7
67	C4B3	G5G4
68	E2G2	E5E4
69	B6B4	G7F6
70	G2F2	G4G3+
71	F2G2	F6G5
72	G2H3	E4E3
73	B4B5+	G5F6
74	B5B6+	F6G5
75	B6B5+	G5F6
76	B3C2	E3E2
77	B5B6+	F6E5
78	B6B1	A3A2
79	C2D3	A2D2
80	D3C4	G3G2
81	B1E1	E5D4
82	C4E2	D2E2
83	E1G1	D4E3
84	G1G2	E2G2
85	H3G2	E3D4
	½ ½	

19. PRESTIGE-B CONSTELLATION

1	F2F4	D7D5
2	G1F3	F8G7*
3	E2E3	F8G7*
4	F1E2	G8F6
5	0-0	B8C6
6	D2D4*	C8F5
7	F3E5	C6B4
8	E5D3	B4D3
9	C2D3	0-0
10	D1B3	D8B8
11	B1A3	C7C6
12	C1D2	F5G4
13	E2G4	F6G4
14	D1B3+	G8H8
15	H2H3	G5H6
16	A1C1	H6F5
17	F1F2	F5D4
18	E3D4	G7D4
19	G1F1	D4F2
20	F1F2	F7F6
21	F2G1	E7E5
22	F4E5	F6E5
23	D2E3	F8F7
24	E3F2	A8F8
25	C1F1	F8G7
26	A3C2	A8F8
27	C2E1	F7F5
28	E1F3	B7B6
29	F1E1	F8E8
30	B3C2	C6C5
31	B2B4	C5B4
32	F2D4	G7F6
33	C2E2	F6C6
34	D4E5	C6A4
35	E2D2	E8E7
36	E1E2	A7A6
37	D2E3	A4B5
38	E2E1	B4B3
39	A2A4	B5B4
40	G1H2	B6B5
41	A4B5	B3B2
42	E1B1	A6B5
43	E3D4	B4D4
44	E5D4	G8F7
45	B1B2	E7B7
46	D4C5	D5D4
47	C5D4	B5B4
48	F3D2	F7E6
49	D2E4	B7B5
50	B2B3	F5F8
51	D4C5	F8B8
52	D3D4	E6D5
53	E4D6	B5C5
54	D4C5	D5C5
55	D6E4+	C5C4
56	E4D2+	C4B5
57	B3E3	B8D8
58	D2F3	D8D7
59	H2G3	B5A4
60	F3E5	D7D5
61	E5C4	A4B5
62	C4B2	D5D2
63	E3E5+	B5C6
64	B2C4	D2D4
65	C4A5+	C6B6
66	G3F3	D4D3+
67	F3E4	D3C3
68	E4D4	B6A6
69	A5C4	C3C2
70	E5A5+	A6B7
71	G2G4	C2C3
72	A5B5+	B7A6
73	B5B4	C3H3
74	B4B6+	A6A7
75	B6F6	H3H2
76	D4E5	H2H1
77	C4D6	H1G1
78	F6F7+	A7B6
79	D6E4	G1G4
	½ ½	

20. CONSTELLATION PRESTIGE-B

1	E2E4	E7E5
2	G1F3	G8F6
3	D2D4	E5D4
4	E4E5*	F6E4
5	D1D4	D7D5

6	E5D6	E4D6
7	F1D3	B8C6
8	D4F4	F8E7
9	0-0	0-0
10	B1C3	C8E6
11	F1D1	E7F6
12	F3G5	F6G5
13	F4G5	C6B4
14	G5F4	B4D3
15	C2D3	E6F5
16	C1E3	D8D7
17	C3E4	F8D8
18	D1E1	D7B5
19	E4D6	C7D6
20	D3D4	F5D3
21	B2B3	A8C8
22	E3D2	C8C2
23	E1C1	B5A6
24	C1C2	D3C2
25	A1E1	C2G6
26	E1E7	A6A2
27	F4E3	A2A1 +
28	D2E1	G8F8
29	G1H1	A8A6
30	H1G1	A6B6
31	B3B4	D8B8
32	F2F4	G6F5
33	E1H4	B6B4
34	E7C7	B8E8
35	H4E7 +	F8G8
36	G1F1	A7A5
37	F1F2	A5A4
38	E2G3	A4A3
39	E3C1	A3A2
40	C1A1	B4B1
41	C7C1	B8D3 +
42	G3H4	D3E2
43	H2H3	E2E7 +
44	H4G3	E7E3 +
45	G3H2	E3F4 +
46	H2H1	E8E2
47	C1E1	E2E1 +
48	A1E1	F4E4
49	E1A5	E4B1 +
50	H1H2	H7H6
	0	1

21. CONSTELLATION SUPERSTAR

1	C2C4	E7E6
2	G1F3*	D7D5
3	D2D4	G8F6
4	C4D5	E6D5*
5	B1D2	F8D6
6	E2E3	0-0
7	F1D3	B8C6
8	0-0	C8E6
9	E3E4	C6B4
10	D3B1	D5E4
11	C3E4	F6E4
12	B1E4	E6C4
13	F1E1	D8B8
14	B2B3	C4D5
15	C1B2	F8E8
16	F3E5	D5E4
17	E1E4	C7C6
18	D1E2	F7F6
19	E5F3	E8E4
20	E2E4	B8E8
21	F3D2	E8D7
22	E4F3	D7C7
23	F3H5	G7G6
24	H5H4	A8E8
25	D2E4	D6H2 +
26	G1H1	E8E4
27	H4E4	H2D6
28	A2A3	B4D5
29	E4E6 +	G8G7
30	A1E1	D5F4
31	E6C4	B7B5
32	C4C2	C6C5
33	C2E4	A7A5
34	E1C1	C5C4
35	B3C4	B5C4
36	C1C2	F4D3
37	E4D5	D3B2
38	C2B2	G7H6
39	B2B7	C7C8
40	D5E4	C8F5
41	E4F5	G6F5
42	B7B6	D6A3
43	B6F6 +	H6G5
44	F6C6	G5F4
45	C6C4	F4E4
46	C4C7	E4D4
47	C7H7	A3B4
48	G2G3	D4D3
49	H1G2	D3E4
50	H7H5	E4E5
51	G3G4	E5F4
52	G4G5	F4E5
53	F2F4 +	E5E6
54	H5H6 +	E6D5
55	H6F6	D5E4
56	G5G6	B4C3
57	G6G7	C3F6
58	G7G8 = Q	
	1	0

22. SUPERSTAR CONSTELLATION

1	D2D4	D7D5
2	C2C4	D5C4
3	G1F3	G8F6
4	E2E3	E7E6
5	F1C4	C7C5
6	0-0	A7A6
7	A2A4	F8E7*
8	D1E2	0-0
9	F1D1	C5D4
10	F3D4*	D8C7
11	B1C3	E6E5
12	D4F3	E5E4
13	F3D4	E7D6
14	H2H3	F8D8
15	C1D2	B8C6
16	D4C6	B7C6
17	A1C1	A8B8
18	C1C2	A6A5
19	B2B3	C8B7
20	F2F3	C6C5
21	F3F4	B7C6
22	C3B5	C6B5
23	C4B5	D6E7
24	F4F5	D8D6
25	D2D3	D6D1 +
26	E2D1	C7G3
27	D1E1	G3G5
28	C3E5	B8C8
29	E1F2	C8D8
30	E5C7	D8D1 +
31	B5F1	F6D5
32	C7A5	G5E3
33	C2E2	E3F2 +
34	G1F2	E4E3 +
35	F2G1	E7H4
36	G2G4	H7H6
37	E2C2	D5F4
38	C2C4	H4G3
39	C4F4	G3F4
40	G1G2	G8F8
41	F1C4	F4E5
42	G2F3	E5D4
43	A5B6	D1D2
44	H3H4	D2F2 +
45	F3E4	E3E2
46	B6A5	F8E7
47	H4H5	F2G2
48	E4F3	G2F2 +
49	F3E4	F2G2
50	E4F3	G2H2
51	A5E1	E7F6
52	A4A5	H2H3 +
53	F3E2	F6G5
54	C4F7	G5G4
55	A5A6	H3H2 +
56	E2D3	H2A2
57	F7C4	G4F5
58	C4B5	G7G5
59	B5A4	D4G1
60	D3C4	A2E2
61	A6A7	E2E4 +
62	C4C3	E4E3 +
63	C3D2	E3D3 +
64	D2D3	C5C4 +
65	D3C4	G1A7
66	E1C3	G5G4
67	C3D2	G4G3
68	A4D7 +	F5F6
69	D7C6	F6G7
70	D2C3 +	G7F8
71	B3B4	A7E3
72	C3E5	E3F2
73	C6D5	F2E1
74	C4C5	E1F2 +
75	C5C6	F8E7
76	B4B5	G3G2
77	D5G2	
	1	0

23. CONSTELLATION SUPERSTAR

1	E2E4	E7E6
2	D2D4	D7D5
3	B1D2	C7C5
4	E4D5	C5D4*
5	F1B5 +	C8D7
6	D5E6	F7E6
7	D1G4	D7B5
8	G4H5 +	G7G6
9	H5B5 +	D8D7
10	B5E2	F8G7
11	G1F3	G8E7
12	0-0	0-0
13	F1E1	F8F6
14	D2B3	B8C6
15	B3C5	D7D5
16	C5E6	A8C8
17	C1G5	F6F7
18	E6G7	G8G7
19	E2D2	C8E8
20	C2C3	D4D3
21	E1E3	E8D8
22	A1E1	D8D7
23	F3E5	C6E5
24	E3E5	D5D6
25	E5E6	D6C5
26	G5E7	F7E7
27	E6E7 +	D7E7
28	E1E7 +	C5E7
29	D2D3	E7E1 +
30	D3F1	E1D2
31	F1B1	D2D5
32	F2F4	D5C5 +
33	G1H1	C5D5
34	H2H3	G7F6
35	H1H2	B7B6
36	H2G3	D5E6
37	G3F2	E6D6
38	F2F3	D6D5 +
39	F3F2	D5D2 +
40	F2F3	D2D5 +
41	B1E4	D5A2
42	E4E5 +	F6F7
43	E5C7 +	F7G8
44	C7D8 +	G8F7
45	D8D7 +	F7G8
46	D7E8 +	G8G8
47	E8E7 +	A2F7
48	E7F7 +	G7F7
49	C3C4	F7E6
50	B2B4	A7A5
51	B4A5	B6A5
52	F3E4	A5A4
53	E4D3	E6D6
54	D3C3	D6C5
55	G2G4	A4A3
56	F4F5	G6F5
57	G4F5	C5D6
58	F5F6	A3A2
59	C3B2	A2A1 = Q +
60	B2A1	D6E6
61	C4C5	E6F6
62	A1B2	F6E5
63	B2B3	E5D5
64	B3B4	D5C6
65	H3H4	H7H6
66	B4C4	H6H5
67	C4B4	C6C7
68	B4B5	C7D7
69	B5B6	D7E6
70	C5C6	E6F5
71	C6C7	F5G4
72	C7C8 = Q +	
	1	0

1	D2D4	F7F5
2	G2G3	G8F6
3	F1G2	E7E6*
4	G1F3	F8E7
5	0-0	0-0
6	C2C4	C7C5
7	D4C5*	B8C6
8	C1E3	F6E4
9	B1C3	D8A5
10	B2C3	D8A5
11	D1D3	E7F6
12	F1C1	F8F7
13	F3G5	F6G5
14	E3G5	H7H6
15	G5F4	A5C5
16	F4D6	C5A5
17	C1D1	F7F6
18	E2E4	F5E4
19	G2E4	C6E5
20	D6E5	A5E5
21	A1B1	E5C5
22	D1D2	C5C7
23	D2B2	A8B8
24	E4H7 +	G8H8
25	F2F4	B7B6
26	G1H1	C8A6
27	B2B4	B8C8
28	D3C2	A6C4
29	H7E4	D7D5
30	E4G2	C7C5
31	B1E1	C4F1
32	B4B3	F1G2 +
33	C2G2	C5C4
34	B2E2	C4E2
35	E1E2	H8H7
36	H1G2	H7G6
37	B3A3	C8C7
38	G2F3	C7D7
39	F3E3	F6F8
40	E3D4	G6F5
41	E2E5 +	F5F6
42	A3A4	F8C8
43	A4A3	C8C4 +
44	D4E3	D7C7
45	E3D2	G7G5
46	D2D3	G5F4
47	E5H5	C7H7
48	G3F4	C4F4
49	D3E3	E6E5
50	A3A6	F4F1
51	A6A3	F1C1
52	E3D3	C1D1 +
53	D3E3	D1B1
54	E3D3	B1B2
55	C3C4	D5D4
56	A3A6	F6E6
57	H2H3	B2G2
58	C4C5	G2G3 +
59	D3D2	G3G2 +
60	D2D3	H7F7
61	C5B6	F7F3 +
62	D3C4	F3C3 +
63	C4B4	G2B2 +
64	B4A4	B2A2 +
65	A4B5	C3B3 +
66	B5C4	B3C3 +
67	C4B5	A2B2 +
68	B5A4	A7B6
69	H5H6 +	E6D5
70	A6B6	B2A2 +
71	A4B4	A2B2 +
72	B4A4	B2A2 +
73	A4B4	A2B2 +
74	B4A4	B2B6
75	H6B6	C3H3
	0	1

25. CONSTELLATION SUPERSTAR

1	E2E4	G7G6
2	D2D4	F8G7
3	G1F3	D7D6
4	F1C4*	G8F6*
5	B1C3	0-0
6	0-0	C7C5
7	D4C5	D6C5
8	C1F4	B8C6
9	D1B1	C8G4
10	F3E5	C6E5
11	F4E5	F6E4
12	E5G7	E4D2
13	G7F8	D2B1
14	F8E7	D8E7
15	C3D5	E7D6
16	A1B1	B7B5
17	D5E3	B5C4
18	E3G4	D6E6
19	F2F3	H7H5
20	G4F2	A8E8
21	F1D1	H8F8
22	F2E4	F7F5
23	E4C3	F8F7
24	G1F1	E6E5
25	H2H3	E8E7
26	D1D8	H5H4
27	B1D1	A7A6
28	D8A8	E5E6
29	A8H8	G6G5
30	F3F4	E6E3
31	F4G5	E3G5
32	H8H7 +	F7G6
33	H7H8	G5F4 +
34	F1G1	E7B7
35	C3D5	F4E4
36	H8G8 +	G6F7
37	G8D8	E4C2
38	D5E3	C2E4
39	E3F5	E4F5
40	D1F1	F5F1 +
41	G1F1	B7B2
42	D8D7 +	F7E6
43	D7H7	B2A2
44	H7H6 +	E6D5
45	H6H5 +	D5E4
46	H5H4 +	E4E3
47	G2G4	C4C3
48	H4H5	E3D4
49	F1E1	A2A1 +
50	E1E2	C3C2
51	H5H7	C2C1 = Q
	0	1

26. SUPERSTAR CONSTELLATION

1	C2C4	C7C5
2	G1F3	G8F6
3	D2D4	C5D4
4	F3D4	E7E5*
5	D4F3*	B8C6
6	B1C3	F8C5
7	C1E3	C5E3
8	F2E3	D8A5
9	F3H4	F6E4
10	D1D3	A5B4
11	A1B1	E4C5
12	D3D5	C5A4
13	A3A3	A4C3
14	D5D3	B4A5
15	D3C3	A5C3
16	B2C3	D7D6
17	H4F3	0-0
18	B1D1	F8D8
19	F3G5	F7F5
20	G2G3	H7H6
21	G5F3	C8E6
22	F1H3	A8C8
23	E3E4	C6E7
24	E4F5	E6F5
25	H3F5	E7F5
26	D1B1	B7B6
27	F3D2	F5E3
28	H2H4	E3C2+
29	E1D1	C2E3+
30	D1E1	D8F8
31	H5H4	E3C4
32	D2C4	C8C4
33	E1D2	D6D5
34	H1F1	C4A4
35	F1F8+	G8F8
36	B1B5	A4A5
37	B5A5	B6A5
38	D2D3	F8E7
39	C3C4	D5D4
40	D3E4	E7D6
41	E4F5	A5A4
42	F5G6	E5E4
43	G6G7	D4D3
44	E2D3	E4D3
45	G7H6	D3D2
46	H6G5	D2D1=Q
	0	1

27. CONSTELLATION SUPERSTAR

1	E2E4	C7C6
2	D2D4	D7D5
3	B1C3	D5E4
4	C3E4*	G8F6
5	E4F6	G7F6
6	G1F3	F8G7*
7	F1E2	C8F5
8	C1F4	D8A5+
9	F4D2	A5B6
10	D2C3	B8D7
11	E2D3	F5D3
12	D1D3	0-0-0
13	0-0	E7E5
14	A2A3	E5D4
15	C3D4	C6C5
16	D4E3	D7E5
17	D3F5+	E5D7
18	B2B4	G7F8
19	F5H5	B6C7
20	H5F7	C5B4
21	A3B4	F8B4
22	A1A7	C7D6
23	F1B1	B7B6
24	F7C4+	C8B8
25	A7D7	D6D7
26	C4B4	B6B5
27	C2C4	H8E8
28	B4B5+	D7B5
29	B1B5+	B8C8
30	B5D5	D8D5
31	C4D5	E8D8
32	G2G4	D8D5
33	E3D4	D5D6
34	G1G2	C8D7
35	G2G3	D7E6
36	H2H4	F6F5
37	F3G5+	E6D5
38	D4E3	H7H6
39	G5F7	D6G6
40	F7H6	F5G4
41	H4H5	G6C6
42	H6F5	C6C4
43	H5H6	D5E6
44	F5D4+	E6F6
45	G3H4	C4C7
46	H4G4	
	1	0

28. SUPERSTAR CONSTELLATION

1	E2E4	C7C5
2	C2C3	D7D5
3	E4D5	D8D5
4	D2D4	E7E6
5	G1F3	G8F6*
6	C1E3*	B8C6
7	D4C5	D5D1+
8	E1D1	F6G4
9	B2B4	F8E7
10	B1D2	B8C6
11	F1D3	E6E5
12	D1C2	A7A6
13	A1D1	C8E6
14	A2A4	F8C8
15	H2H3	G4E3
16	F2E3	B7B6
17	D3E4	F7F6
18	C5B6	A8B8
19	B4B5	A6B5
20	A4B5	C6B4+
21	C2B2	B4A2
22	C3C4	A2B4
23	B6B7	C8C5
24	B2A3	B4D3
25	E4D3	C5B5+
26	C4C5	E7C5+
27	A3A4	B5B7
28	D3A6	B8A8
29	D2C4	A8A6+
30	C4A5	E6B3+
	0	1

29. CONSTELLATION SUPERSTAR

1	E2E4	E7E5
2	G1F3	G8F6
3	F3E5	D7D6
4	E5F3	F6E4
5	D2D4	F8E7
6	F1D3*	D6D5
7	0-0	B8C6
8	F1E1	C8G4
9	D3E4	D5E4
10	E1E4	G4F3
11	G2F3	F7F5
12	E4F4	0-0
13	C2C3	G7G5*
14	B3B7	C6A5
15	B7B5	C7C6
16	B5D3	G5F4
17	C1F4	E7D6
18	F4D6	D8D6
19	G1H1	A8E8
20	B1A3	F5F4
21	B2B4	F8G8
22	A3C2	A5B7
23	B4B5	C6B5
24	A1D1	D6D7
25	D1G1	G8G1+
26	H1G1	B7C5
27	D3F1	D7C6
28	C2E1	C5A4
29	C1G2	A4C3
	0	1

30. SUPERSTAR CONSTELLATION

1	E2E4	E7E5
2	G1F3	F7F5
3	F3E5*	G8F6*
4	D2D4	D7D6
5	E5C4	F5E4
6	B1C3	C8F5
7	G2G4	F5G6
8	F1G2	F6E6
9	D4D5	E6E7
10	D1E2	G8F6
11	G4G5	F6D7
12	C3E4	D7C5
13	F2F3	B8D7
14	0-0	G6F7
15	B2B4	C5E4
16	E2E4	F7G6
17	E4E7+	F8E7
18	F1F2	0-0
19	F2E2	A8E8
20	A2A4	E7D8
21	E2E8	F8E8
22	C2C3	G6D3
23	C4A5	E8E1+
24	G1F2	E1E2+
25	F2G3	E2E1
26	H2H4	D3A6
27	B4B5	A6B5
28	A4B5	D7C5
29	C1B2	E1A1
30	B2A1	C7C6
31	A5B7	C5B7
32	D5C6	B7C5
33	C3C4	A7A5
34	F3F4	A5A4
35	A1D4	A4A3
36	D4C5	A4A3
37	G2D5+	G8H8
38	C6C7	
	0	1

31. PRESTIGE-B SENSORY 9-B

1	C2C4	C7C5
2	B1C3	B8C6
3	G2G3	G7G6
4	F1G2	F8G7
5	G1F3	G8F6
6	0-0	0-0
7	D2D4	C5D4
8	F3D4	C6D4
9	D1D4	D7D6
10	D4D3	A7A6
11	C1G5*	C8F5*
12	E2E4	F5G4
13	G5E3	D8A5
14	F2F3	G4D7
15	A1B1	A8C8
16	B2B4	A5E5
17	B1C1	B7B5
18	C4C5	D6C5
19	E3C5	D7C6
20	F3F4	E5C7
21	C3D5	C6D5
22	E4D5	C7D7
23	F4F5	F6G4
24	D3A3	G6F5
25	A3A6	G7B2
26	C1E1	B2E5
27	E1E2	C8A8
28	A6C6	D7C6
29	D5C6	F5F4
30	G3F4	E5D6
31	C5D6	E7D6
32	F1D1	A8D8
33	D1D5	H7H6
34	G2F3	G4F6
35	D5B5	D8E8
36	A2A4	E8E2
37	F3E2	G8G7
38	E2F3	F8E8
39	G1G2	E8C8
40	A4A5	G7G6
41	B5B7	D6D5
42	B4B5	C8G8
43	A5A6	F6E4
44	B7D7	G6F5+
45	G2F1	F5F4
46	D7F7+	F4E5
47	F3E4	D5E4
48	B5B6	G8D8
49	A6A7	
	1	0

32. SENSORY 9-B PRESTIGE-B

1	D2D4	D7D5
2	C2C4	D5C4
3	G1F3	G8F6
4	E2E3	E7E6
5	F1C4	C7C5
6	0-0	A7A6
7	D1E2	B7B5
8	C4B3	C8B7
9	F1D1	B8D7
10	B1C3	D8B8
11	F3E5	F8D6
12	E5D7	F6D7
13	E2H5*	D7F6*
14	H5H3	C5C4
15	B3C2	0-0
16	E3E4	E6E5
17	D4D5	B7C8
18	H3G3	B5B4
19	C3E2	C8G4
20	C1G5	B4B3
21	G5F6	B3C2
22	D1C1	H7H5
23	H2H3	G7F6
24	H3G4	B8B2
25	G4H5+	G8H7
26	G3F3	D6B4
27	F3F6	B4D2
28	C1F1	A6A5
29	D5D6	A8D8
30	F6F5+	H7G7
31	D6D7	F8G8
32	G1H1	C2C1=Q
33	A1C1	D1C1
34	E2C1	B2D4
35	H5H6+	G7H6
36	F5F6+	H6H7
37	F6F7+	H7H6
38	F7F6+	H6H7
39	F6H4+	H7G7
40	H4G5+	G7F7
41	G5F5	F7E7
42	H1G1	G8F8
43	F5H7+	F8F7
44	H7H4+	E7D7
45	C1E2	D4D6
46	H4G4+	D7E8
47	G4G8+	E8E7
48	G8G4	D8D7
49	E2C3	E7E8
50	F1B1	D7D8
51	B1B5	D6D4
52	G4G3	D4D6
53	B5D5	D6F6
54	D5E5+	E8F8
55	E5A5	F6F4
56	G3F4	F7F4
57	A5C5	D8D4
58	A2A4	F8E7
59	E4E5	E7E6
60	G2G3	F4G4
61	G1H2	G4G7
62	C3E2	D4D2
63	E2F4+	E6D7
64	H2G2	D2D4
65	G2F3	G7E7
66	F3E3	D4D6
67	E5E6+	D7D8
68	C5C4	E7A7
69	E3E4	D6A6
70	E4E5	A6A4
71	C4A4	A7A4
72	F4G6	A4A3
73	G6H4	D8E8
74	F2F3	A3A1
75	F3F4	A8G1
76	E5F6	G1F1
77	H4F5	F1E1
78	F5G7+	E8F8
79	G3G4	E1E4
80	F4F5	E4E3
81	G4G5	E3E4
82	E6E7+	E4E7
83	G7E6+	F8E8
84	G5G6	E8D7
85	G6G7	E7G7
	1	0

33. PRESTIGE-B SENSORY 9-B

1	E2E4	C7C5
2	G1F3	D7D6
3	D2D4	C5D4
4	F3D4	G8F6
5	B1C3	A7A6
6	C1G5	E7E6
7	F2F4	F8E7
8	D1F3	D8C7
9	0-0-0	B8D7
10	G2G4	B7B5
11	G5F6	D7F6
12	G4G5	F6D7
13	A2A3	C8B7*
14	F1E2*	0-0
15	H2H4	F8C8
16	H4H5	D7C5
17	H5H6	G7G6
18	F3E3	E6E5
19	F4E5	D6E5
20	C3D5	B7D5
21	D4B5	E7G5
22	B5C7	G5E3+
23	C1B1	D5E4
24	C7A8	C8A8
25	H1H3	E3D4
26	E2C4	A8B8
27	B2B4	E4F5
28	H3F3	A6A5
29	B1C1	A5B4
30	A3B4	B8B4
31	C4A2	F5E4
32	F3G3	B4B2

33	A2B1	C5E6
34	D1D4	B2B1+
35	C1B1	E6D4
36	G3C3	F7F5
37	C3C8+	G8F7
38	C8C7+	F7F6
39	B1B2	E4C2
40	C7H7	F6G5
41	H7E7	G5H6
	0	1

34. SENSORY 9-B PRESTIGE-B

1	D2D4	D7D5
2	C2C4	E7E6
3	B1C3	G8F6
4	C1G5	F8E7
5	E2E3	0-0
6	G1F3	B8D7
7	A1C1	C7C6
8	F1D3	D5C4
9	F3D4	F6D5
10	G5E7	D8E7
11	0-0	D5C3
12	C1C3	E6E5
13	D4D5*	D7B6
14	D5C6	B7C6
15	D1B1	B6C4
16	C3C4	C8A6
17	C4E4	A6F1
18	E4E5	E7F6
19	G1F1	F6D6
20	E5H5	G7G6
21	H5H4	C6C5
22	F1E1	A8B8
23	B1C2	F8D8
24	B2B3	B8B4
25	E3E4	F7F6
26	A2A3	B4B7
27	C2C4+	G8H8
28	C4C2	B7D7
29	A3A4	H8G7
30	H4H3	D6B8
31	H3H4	D7D1+
32	E1E2	B8D6
33	G2G4	H7H6
34	H4H3	D6A6+
35	C2C4	A6C4
36	B3C4	D1D3
37	H3G3	D3A3
38	F3D2	A3A4
39	H2H4	A4A2
40	G3D3	D8D3
41	E2D3	A2A3+
42	D3E2	A3H3
43	D2F3	A7A5
44	F3E1	H3C3
45	G4G5	H6G5
46	H4G5	F6G5
47	E4E5	A4A4
48	E2D2	C3C4
49	D2D3	C4D4+
50	D3C2	D4D5
51	E1F3	A4A3
52	F3G5	D5E5
	0	1

35. PRESTIGE-B SENSORY 9-B

1	G1F3	D7D5
2	G2G3	C7C5
3	F1G2	B8C6
4	0-0	E7E6
5	D2D3	G8F6
6	B1D2	F8E7
7	E2E4	0-0
8	F1E1	B7B5
9	E4E5	F5D7
10	D2F1	A7A5
11	H2H4	B5B4
12	C1F4	C8A6
13	G3G4	C6D4*
14	F3D4	C5D4
15	G4G5	A8C8
16	A1C1*	A5A4
17	D1H5	A6B7
18	F1G3	D8C7
19	G3E2	C7C5
20	C2C3	D4C3
21	B2C3	C5A5
22	C3B4	E7B4
23	E1F1	B7A6
24	D3D4	B4A3
25	C1C8	F8C8
26	F1A1	A5B4
27	F4E3	C8C2
28	E2F4	B4B2
29	H5D1	A6C4
30	A1B1	B2C3
31	B1B7	D7F8
32	F4H3	C4E2
33	D1B1	F8G6
34	H3F4	G6H4
35	F4E2	G6H4
36	B1B5	C3E1+
37	G2F1	H4F3+
38	G1G2	H3F4+
39	G2G1	F4H3+
40	G1G2	F3H4+
41	G2G1	
	½	½

36. SENSORY 9-B PRESTIGE-B

1	E2E4	C7C5
2	G1F3	D7D6
3	D2D4	C5D4
4	F3D4	G8F6
5	B1C3	B8C6
6	C1G5	E7E6
7	D1D2	A7A6
8	0-0-0	C8D7
9	F2F4	F8E7
10	D4F3	B7B5
11	G5F6	G7F6
12	F4F5	D8B6
13	D2H6*	B5B4*
14	C3B1	E6F5
15	H6B7	0-0-0
16	E4F5	D7F5
17	G7F7	B6B7
18	F7C4	A6A5
19	C4D5	F5D7
20	F1C4	C6E5
21	D5B7+	C8B7
22	B1D2	B7C7
23	F3D4	E5C4
24	D2C4	H8G8
25	G2G3	B8B5
26	H1E1	E7F8
27	D4B3	A5A4
28	B3D4	F8H6
29	C1B1	H6F8
30	D4E6+	D7E8
31	E1E6	G5G6
32	A2A3	B4A3
33	C4A3	F6F5
34	E6E2	D8B8
35	D1D5	F8G7
36	C2C4	G7E5
37	D5A5	F5F4
38	G3F4	E5F4
39	A5F5	F4E5
40	F5F7+	C7C6
41	F7H7	G6G1+
42	B1A2	G1E1
43	E2D2	E1D1
44	D2C2	D1C1
45	C2F2	C1F1
	½	½

37. PRESTIGE-B SENSORY 9-B

1	B2B4	E7E5*
2	C1B2	F8B4
3	B2E5	G8F6
4	C2C4	B8C6
5	E5C3*	B4C3
6	B1C3	0-0
7	G1F3	F8E8
8	E2E3	D7D6
9	F1E2	C8F5
10	D1B3	A8B8
11	0-0	F6G4
12	D2D4	A7A6
13	H2H3	G4F6
14	D4D5	C6E5
15	F3D4	F5G6
16	F2F4	E5D3
17	F4F5	D3C5
18	B3D1	E8E3
19	D1C1	E3E2
20	C3E2	G6H5
21	G2G4	H5G4
22	H3G4	F6G4
23	A1B1	D8H4
24	D4F3	H4H3
25	C1F4	B8E8
26	F4G3	H3H6
27	G3G4	E8E2
28	F5F6	G7G6
29	G4C8+	H6F8
30	C8F8+	G8F8
31	F1F2	E2E8
32	F2B2	H7H5
33	G1H2	E8E3
34	B1F1	B7B6
35	B2G2	E3C3
36	F3D2	C3C2
37	A2A3	C5D3
38	H2H3	G6G5
39	G2G5	C2D2
40	G5H5	F8E8
41	F1F3	D3F2+
42	H3H4	F2D3
43	H5H8+	E8D7
44	H4G3	D3E5
45	F3C3	B6B5
46	C4C5	D6C5
47	C3C5	D2D3+
48	G3F4	E5G6+
49	F4E4	D3A3
50	H8H7	A3A4+
51	E4F5	D7D6
52	C5C3	D6D5
53	H7F7	G6E5
54	F7E7	A4E4
55	C3C5+	D5C5
56	E7E5+	E4E5+
57	F5E5	
	1	0

38. SENSORY 9-B PRESTIGE-B

1	E2E4	E7E6
2	D2D4	D7D5
3	B1C3	F8B4
4	E4E5	C7C5
5	A2A3	B4C3+
6	B2C3	G8E7
7	A3A4	B8C6
8	G1F3	D8A5
9	C1D2	C8D7
10	F1E2	C5C4
11	F3G5	C6D8*
12	D1B1	D7A4
13	0-0	B7B5
14	E2H5	H7H6
15	G5F3	0-0
16	F1E1	D8C6
17	B1C1	A5C7
18	A1B1	E7F5
19	D2F4	A7A5
20	G1H1	B5B4
21	F4D2	C7E7
22	B1A1	A4B5
23	A1B1	A5A4
24	C3B4	C6D4
25	F3D4	F5D4
26	C1D1	F7F6
27	D2H6	F6E5
28	E1E5	D4F5
29	H6D2	A4A3
30	D1G4	E7F6
31	E5E1	F6D4
32	D2E3	D4G4
33	H5G4	A8A6
34	G4F5	F8F5
35	E3D4	F5F8
36	C2C3	F8A8
37	H2H3	A3A2
38	B1A1	G8F7
39	H1G1	G7G6
40	G1F1	F7E7
41	F1E2	E7E8
42	E2D2	E8F7
43	D2C2	B5D7
44	C2B2	F7E7
	½	½

39. PRESTIGE-B SENSORY 9-B

1	D2D4	G8F6
2	C2C4	E7E6
3	B1C3	F8B4
4	D1E2	B7B6*
5	E2E4	C8B7
6	E4E5*	F6E4
7	G1F3	E4C3
8	B2C3	B4A5
9	F1E2	B8C6
10	0-0	C6E7
11	C1E3	0-0
12	E2D3	B7F3
13	G2F3	E7G6
14	G1H1	D7D6
15	D3E4	D6E5
16	D4E5	A8C8
17	F1G1	G6E5
18	E4H7+	G8H8
19	E3D4	D8F6
20	H7E4	C7C5
21	D4E5	F6E5
22	A1C1	C8D8
23	A2A4	D5F4
24	C2E2	F7F5
25	E4C6	D8D6
26	C6B5	D6D2
27	E2E3	F4E3
28	F2E3	D2D3
29	G1G3	D3E3
30	F3F4	E3E4
31	C1F1	F8D8
32	G3F3	D8D2
33	F1C1	H8G8
34	H2H3	G8F7
35	B5A6	E6E5
36	F4E5	G7G6
37	A6B7	E4E5
38	E3G3	F5F4
39	G3F3	G6G5
40	H3H4	E5E7
41	B7C6	F7F6
42	H4G5+	F6G5
43	C1G1+	G5F5
44	G1F1	E7H7+
45	H1G1	H7H4
46	F1E1	H4H6
47	C6E4+	F5G5
48	E1F1	H6H4
49	F1F2	D2D1+
50	F2F1	H4G4+
51	G1H2	D1F1
52	F3F1	A5C3
53	F1F3	G4H4+
54	H2G2	C3D4
55	F3B3	H4H8
56	E4F3	G5F5
57	G2F1	H8H2
58	F1E1	H2C2
59	F3D5	D4E3
60	B3A3	C2H2
61	D5F3	F5E5
62	A3D3	E3D4
63	D3A3	E5F6
64	E1D1	F6F5
65	A4A5	D4E5
66	A5B6	A7B6
67	A3A7	E5C3
68	A7D7	H2F2
69	D7D3	C3D4
70	D3B3	F2B2
71	B3B2	D4B2
72	D1D2	F5G5
73	D2E1	B2G7
74	E1F2	G7D4+
	½	½

40. SENSORY 9-B PRESTIGE-B

1	G1F3	C7C5
2	G2G3	B8C6
3	F1G2	G7G6
4	0-0*	D7D5*
5	C2C3	E7E5
6	D2D4	E5E4
7	F3E5	C6E5
8	D4E5	F8G7
9	C3C4	G7E5
10	C4D5	B8C6
11	B1D2	D8D5
12	D2E4	D5D1
13	F1D1	F6E4
14	D1D5	E5D4
15	G2E4	C8E6
16	D5D6	E8E7
17	C1F4	G6G5
18	D6D4	C5D4
19	F4G5+	F7F6
20	G5D2	A8D8
21	A1C1	B7B6
22	G1G2	E7F7
23	H2H3	D8C8
24	C1C8	H8C8
25	E4H7	F6F5
26	G3G4	C8C2
27	D2F4	C2B2
28	G4F5	E6D5+
29	G2G3	B2E2
30	H7G6+	F7F6
31	A2A3	D4D3
32	G6H5	E2A2
33	F4D6	F6F5
34	H3H4	D3D2
35	H5G4+	F5E4
36	F2F3+	E4E3
37	F3F4	A2A1
38	D6B4	A1G1+
39	G3H3	E3F2
40	G4C8	D5F3
41	B4C5+	B6C5
42	F4F5	G8H8+ +
	0	1

41. SENSORY 9-B SUPERSTAR

1	D2D4	G7G6
2	G2G3*	F8G7*
3	F1G2	D7D6
4	G1F3	G8F6
5	0-0	0-0
6	B1C3	C7C5
7	D4C5	D6C5
8	E2E4	B8C6
9	C1E3	B7B6
10	D1E2	C8B7
11	A1D1	D8E8
12	C3D5	F6D5
13	E4D5	C6B4
14	C2C4	B4A2
15	E3F4	A7A6
16	D1E1	A8A7
17	F4D6	E8A4
18	E2E7	A4C4
19	F3E5	C4B4
20	E5C6	B7C6
21	E7A7	C6B5
22	D6F8	G7F8
23	A7B6	B5F1
24	B6B4	A2B4
25	G1F1	F8D6
26	F2F4	G8G7
27	E1E8	B4D3
28	B2B3	G7F6
29	G2E4	D3B4
30	F1E2	H7H5
31	E2E3	D6C7
32	E4G2	C7D6
33	H2H4	B4C2+
34	E3E4	C2D4
35	E1A1	D4F5
36	E4F3	F5D4+
37	F3E3	D4B3
38	A8A6	F6E7
39	E3D3	B3D4
40	D3C4	F7F5
41	A6A7+	E7F6
42	A7A2	F6F7
43	G2F1	D4F3
44	F1E2	F3G1
45	E2D1	G1H3
46	A2H2	H3F4
47	G3F4	

1 0

42. SUPERSTAR SENSORY 9-B

1	C2C4	E7E5
2	B1C3	B8C6
3	G1F3	G8F6
4	D2D4*	E5D4
5	F3D4	F8B4
6	A2A3	B4C3*
7	B2C3	0-0
8	D1A4	F6E4
9	C1E3	D8F6
10	A4C2	F8E8
11	D4B5	F6D8
12	F2F3	E4F6
13	E3G5	E8E6
14	G5F6	E6F6
15	C2E4	D7D6
16	0-0-0	C6A5
17	E2E3	F6E6
18	E4D3	E6E5
19	B5D4	E5C5
20	D3B1	D8E7
21	F1D3	E7E3+
22	C1B2	A5C4+
23	B2A1	C5A5
24	D4C2	E3C5
25	D3C4	C5C4
26	B1B4	C4B4
27	C3B4	A5E5
28	A1B2	D6D5
29	C2D4	C7C6
30	H2H3	C8D7
31	H1E1	E5E1
32	D1E1	G8F8
33	B2C3	B7C6
34	C3D3	C6C5
35	B4C5	B6C5
36	D4C2	F7F6
37	C2E3	A8D8
38	D3D2	D5D4
40	E3C4	D7B5
41	D2D3	D8E8
42	E1E8+	F8E8
43	F3F4	E8D7
44	F4F5	D7C6
45	A3A4	B5A6
46	G2G4	C6D5

0 1

43. SENSORY 9-B SUPERSTAR

1	D2D4	D7D5
2	C2C4	C7C6
3	G1F3	G8F6
4	B1C3	E7E6
5	C4D5*	C6D5*
6	E2E3	B8C6
7	F1D3	F8D6
8	0-0	0-0
9	C3B5	F6E4
10	B5D6	E4D6
11	C1D2	C8D7
12	D1C2	H7H6
13	A1C1	A8C8
14	C2B3	D8C7
15	D2B4	B7B6
16	F3E5	F8D8
17	B3A3	D7E8
18	B4D6	D8D6
19	D3A6	C8D8
20	A6B5	A7A5
21	A3C3	D8C8
22	B5A6	C8D8
23	C3C2	C7A7
24	A6D3	D7E5
25	D4E5	D6C6
26	C2E2	D8C8
27	C1C6	E8C8
28	G1H1	A7C7
29	E2H5	C6B7
30	H1G1	C7C5
31	H5G4	B6B5
32	G4F4	B7C8
33	F1E1	B5B4
34	F4G4	C6B5
35	D3B5	C5B6
36	G4D1	B5C4
37	D1B1	C4C7
38	F2F4	C7C4
39	G1H1	C8C5
40	A2A3	B4A3
41	B2A3	C5B5
42	B1C1	B5B3
43	C1C4	D5C4
44	A3A4	B3A3
45	H1G1	A3A4
46	E1D1	A4A3
47	D1D8+	G8H7
48	G1F2	H7G6
49	F2E2	C4C3
50	E2D3	A5A4
51	D8C8	A3A2
52	G2G4	A2H2
53	C8C3	H2H4
54	D3C4	H4G4
55	C4B4	G6F5
56	B4A4	G7G5
57	A4B5	G5F4
58	E3F4	F5F4
59	C3C4+	F4F5
60	C4C7	G4G7
61	C7C5	G7G8
62	B5C4	G7G4+
63	C4D3	G4F4
64	C5B5	F4F3
65	D3E2	F3G3
66	B5B7	G3G7
67	B7B5	F5E4
68	E2F2	G7G5
69	B5B7	G5F5+
70	F2G3	E4E5

0 1

44. SUPERSTAR SENSORY 9-B

1	D2D4	G8F6
2	C2C4	G7G6
3	B1C3	F8G7
4	E2E4	D7D6
5	G1F3*	0-0
6	F1D3	E7E5*
7	D4E5	D6E5
8	0-0	C8G4
9	H2H3	G4F3
10	D1F3	B8C6
11	F1D1	C6D4
12	F3G3	F6H5
13	G3E3	H5F4
14	C3D5	F4D3
15	E3D3	C7C6
16	D5C3	D8H4
17	C1E3	A8D8
18	E3D4	E5D4
19	C3E2	F8E8
20	F2F4	G6G5
21	D1F1	G5F4
22	F1F4	H4E7
23	A1F1	C6C5
24	F4F7	E7F7
25	F1F7	G8F7
26	G1F2	F7E6
27	E2F4+	E6D6
28	B2B3	E8F8
29	F2F3	D6E5
30	G2G3	G7F6
31	F4D5	D8D7
32	F3E2	F6G7
33	G3G4	G7H6
34	D3G3+	H6F4
35	G3H4	E5E6
36	G4G5	E6E5
37	D5F6	F8F6
38	G5F6	E5E4
39	H4H5	D7D6
40	H5H7+	E4E5
41	F6F7	F4H6
42	H7H6	D4D3+

1 0

45. SENSORY 9-B SUPERSTAR

1	E2E4	G7G6
2	D2D4	F8G7
3	G1F3	D7D6
4	F1C4	G8F6*
5	D1E2	0-0
6	0-0*	C7C5
7	D4C5	D6C5
8	B1C3	B8C6
9	F1D1	F6D7
10	F3D4	C5D4
11	C3D5	E7E5
12	C3D5	E7E5
13	F4D2	D7F6
14	D2B4	F6D5
15	C4D5	F8E8
16	C3C3	D8C7
17	C3D4	E5D4
18	A1C1	C7E5
19	E2F3	E5F6
20	F3F6	G7F6
21	C1C7	C8E6
22	E4D5	A8B8
23	E4D5	A8B8
24	B7B8	E8B8
25	B4A3	B8D8
26	D5D6	G8F8
27	A3C5	F8G7
28	B2B4	H7H5
29	B4B5	D8B8
30	D6D7	D4D3
31	A2A4	B8B7
32	D1D3	B7C7
33	C5E3	F6D8
34	D3D5	G7F6
35	D5D6	F6E5
36	D6A6	C7D7
37	G1F1	D7D1+
38	F1E2	D1A1
39	A6A7	E5E6
40	B5B6	D8F6
41	A4A5	F6E5
42	F2F4	A1A2+
43	E2F3	E5D6
44	B6B7	A2A3
45	A7A8	A3B3
46	A5A6	E6D7
47	A6A7	B3B7
48	A8F8	B7A7
49	F8F7+	D7E6

1 0

46. SUPERSTAR SENSORY 9-B

1	E2E4	E7E5
2	G1F3	B8C6
3	F1C4	G8F6
4	D2D4	E5D4
5	E4E5	D8E7*
6	D1E2	F6G4
7	C1G5	E7C5
8	G5F4	G4F2
9	C4F7+	E8F7
10	E2F2	C5B4+
11	C2C3	D4C3
12	B2C3	B4C4
13	F3D2	C4B5
14	F2F1	B5B2
15	D2B3	F7E8
16	F1E2	B2E3+
17	E1E2	F8E7
18	H1E1	B7B6
19	B1D2	C8B7
20	A1D1	H8F8
21	E1F1	B7A6+
22	C3C4	C6B4
23	D1A1	A6B7
24	F1F2	G7G5
25	F4G3	F8F2+
26	E2F2	A8D8
27	B3D4	E7C5
28	D2B3	C5D4+
29	B3D4	E8E7
30	A2A3	D8F8+
31	F2E3	B4C6
32	D4B5	C6A5
33	B5C7	B7G2
34	C7D5+	E7E6
35	D5C7+	E6E5
36	A1G1	A5C4+
37	E3D4	F8C8
38	E5E6	D7E6
39	G1G2	C4A3
40	G2F2+	F5G6
41	C7E6	G5G4
42	E7F8+	G6G7
43	G3E5+	G7G8
44	F8E6	A7A5
45	E4E5	A3C4
46	E5C7	B6B5
47	C7D8	H7H6
48	F2F8+	G8H7
49	D8A5	C8F8
50	E6F8+	H7G7
51	A5B4	C4E3+
52	D5C6	E3F1
53	B4D6	F1H2
54	C6B5	

½ ½

47. SENSORY 9-B SUPERSTAR

1	E2E4	E7E5
2	G1F3	B8C6
3	F1B5	A7A6
4	B5C6	D7C6
5	0-0	C8G4*
6	D2D3*	F8D6
7	C1E3	G8E7
8	C2C4	G4F3
9	D1F3	C6C5
10	B4C5	D6C5
11	B4C5	D6C5
12	E3C5	B6C5
13	B1D2	E7C6
14	D2B3	D8E7
15	A1B1	0-0
16	F3H3	A8B8
17	F1D1	F8D8
18	H3F3	H7H6
19	F3G3	F7F6
20	B3D2	B8B1
21	D2B1	E7D6
22	B1C3	C6B4
23	G3E3	B4D3
24	C3E2	D8B8
25	H2H3	B8B2
26	D1D3	D6E6
27	D3D8+	G8H7
28	D8D5	B2A2
29	D5C5	A2A1+
30	G1H2	C7C6
31	E3D2	A1A4
32	E2G3	A4A3
33	D2B4	A3D3
34	B4B7	D3D6
35	G3F5	D6D7
36	B7A6	

1 0

48. SUPERSTAR SENSORY 9-B

1	D2D4	G8F6
2	C2C4	E7E6
3	B1C3	F8B4
4	G1F3	B7B6*
5	C1D2*	C8B7
6	A2A3	B4C3
7	D2C3	F6E4
8	A1C1	E4C3
9	C1C3	0-0
10	C4C5	B6C5
11	D4C5	B6C5
12	C5D6	C7D6

13	E2E3	D8B6
14	F1E2	B8C6
15	0-0	A8C8
16	E3E4	C6E5
17	D1C2	E5G4
18	H2H3	G4F6
19	E2D3	C8C3
20	B2C3	B6A5
21	F1B1	B7C6
22	F3D4	A5C5
23	D4C6	C5C6
24	C3C4	F8C8
25	A3A4	F6D7
26	B1B4	D7C5
27	G2G3	C5D3
28	C2D3	A7A5
29	B4B5	C6C7
30	D3C3	G8H8
31	B5A5	C7C6
32	F2F3	C6C7
33	G1F2	C7B6+
34	F2E2	B6G1
35	G3G4	G1G2+
36	E2E3	G2H3
37	A5B5	H3F1
38	B5B7	H8G8
39	C3B3	H7H6
40	B7B8	F1E1+
41	E3D3	C8B8
42	B3B8+	G8H7
43	B8B3	H7G6
44	D3C2	E1F2
45	C2D1	F2F1+
46	D1D2	F1F2+
47	D2C1	F2E1+
48	C1B2	E1F2+
49	B2A3	F2C5+
50	A3A2	C5F2+
51	A2A3	F2C5+
52	B3B4	C5E3+
53	B4B3	E3C5+
	½	½

49. SENSORY 9-B SUPERSTAR

1	C2C4	E7E6
2	G1F3	D7D5
3	G2G3	F8E7
4	C4D5*	E7D6*
5	F1G2	E7B4
6	0-0	G8F6
7	D1A4+	B8C6
8	F3D4	D8D6
9	D4C6	B7C6
10	D2D4	C8D7
11	A2A3	C6C5
12	A4C2	D6A6
13	D4C5	0-0
14	C1F4	A8E8
15	F4C7	E8C8
16	C7D6	F8E8
17	E2E3	A5A4
18	B1C3	B4C3
19	B2C3	H7H6
20	F1B1	D7B5

21	A3A4	B5C4
22	B1B7	A5A6
23	C2B1	C8C6
24	A4A5	F6G4
25	B1B4	G4E5
26	A1B1	E5D3
27	B4A4	E8A8
28	A4A3	A8C8
29	G2H3	C8A8
30	B7B8+	A8B8
31	B1B8	G8H7
32	H3F5+	G7G6
33	F5D7	C6D6
34	C5D6	D3E5
35	D7E8	E5F3+
36	G1H1	F3E5
37	D6D7	E5D7
38	E8D7	
	1	0

50. SUPERSTAR SENSORY 9-B

1	E2E4	C7C5
2	C2C3	D7D5
3	E4D5	D8D5
4	D2D4	E7E6
5	G1F3	B8C6
6	F1D3	C5D4*
7	C3D4	C5D4
8	F3D4	D5G2
9	D3B5+	E8E7
10	D1F3*	G2F3
11	D4F3	C8D7
12	B5D7	E7D7
13	B1C3	F8D6
14	H1G1	G7G6
15	C1E3	G8F6
16	0-0-0	H8C8
17	C1B1	A7A5
18	E3G5	F6D5
19	C3D5	E6D5
20	D1D5	D7E6
21	G1D1	A8A6
22	D5B5	C8B8
23	F3D4+	E6D7
24	B5D5	H7H6
25	G5H6	D7E7
26	D1E1+	E7F6
27	H6G5+	F6G7
28	D5D6	A6D6
29	G5F4	D6D4
30	F4E5+	
	$	0

51. PRESTIGE-B SUPERSTAR

1	F2F4	D7D5*
2	G1F3	G8F6
3	E2E3	C8F5
4	F1E2*	B8D7
5	0-0	C7C5
6	F3H4	G7G6
7	H4F5	G6F5
8	D2D4	F8G7

9	D4C5	D7C5
10	A2A4	C5E4
11	A2A4	C5E4
12	D1D4	E4C3
13	D4C3	A8C8
14	C3B3	D8D7
15	C1D2	F6E4
16	D2B4	0-0
17	A1D1	E4F6
18	C2C4	D5C4
19	D1D7	C4B3
20	D7B7	F6D5
21	B4E7	F8E8
22	E7A3	D5E3
23	E2H5	E3F1
24	H5F7+	G8H8
25	F7E8	F1D2
26	B7D7	D7E4
27	E8H5	E4F6
28	D7G7	H8G7
29	H5E2	C8C6
30	G1F2	F6G4+
31	E2G4	F5G4
32	F2G3	H7H5
33	A4A5	G7F6
34	H2H3	G4H3
35	G3H3	C6C4
36	A3D6	F6F5
37	G2G3	C4A4
38	D6C7	A4A2
39	C7E5	A2A5
40	E5D4	A5D5
41	D4C3	D5D3
42	C3A5	D3D1
43	A5B4	D1B1
44	B4C3	B1C1
45	C3D4	A6A5
46	D4G7	A5A4
47	G7D4	C1C2
48	D4E5	A4A3
49	B2A3	B3B2
50	E5B2	C2B2
	0	1

52. SUPERSTAR PRESTIGE-B

1	D2D4	D7D5
2	G1F3	G8F6
3	C2C4	D5C4*
4	E2E3	B7B5
5	A2A4	B7B5
6	A4B5	C6B5
7	B2B3	C8E6
8	B3C4*	E6C4
9	F1C4	B5C4
10	D1A4+	B8D7
11	F3E5	E7E6
12	E5C4	F8E7
13	0-0	0-0
14	A4C2	D8B8
15	C1B2	F6G4
16	G2G3	F8C8
17	B1D2	B8B5
18	F1C1	B5H5
19	H2H4	H5B5
20	E3E4	A7A5

21	C2D3	D7B6
22	F2F3	G4F6
23	A1B1	E7B4
24	B2A3	B6C4
25	C1C4	C8C4
26	D2C4	A8C8
27	A3B4	A5B4
28	C4E5	B5A5
29	D3D2	F5H5
30	G3G4	H5F6
31	B1B4	H7H5
32	G4G5	F6E8
33	G5G6	F7F6
34	E5D3	E8D6
35	E4E5	F6E5
36	D4E5	D6F5
37	D2E2	C8D8
38	B4C4	A5D5
39	D3E1	F5D4
40	E2A2	D5E5
41	G1F1	E5D5
42	C4D4	D5D4
43	A2E6+	G8H8
44	E6E7	D4D5
45	F1G2	H8G8
46	E1C3	D5D2+
47	G2H3	D2D7+
48	E7D7	D8D7
49	H3G3	D7D6
50	C2B4	G8F8
51	G3F2	D6D4
52	B4C6	D4H4
53	F2G3	H4H1
54	G3F4	H4H4
55	F4G4	H4H3
56	C6D4	H3H2
57	G4H3	H1D1
58	D4D6+	F8E7
59	H3H2	E7E6
	0	1

53. PRESTIGE-B SUPERSTAR

1	B2B4	D7D5*
2	C1B2	A7A5
3	B4B5*	C8D7
4	E2E3	G8F6
5	G1F3	E7E6
6	F1D3	C7C5
7	C2C4	F8D6
8	0-0	0-0
9	D1C2	D5C4
10	D3C4	D5C4
11	B1A3	D8E7
12	F1E1	D5B6
13	C4E2	F8D8
14	E2D3	H7H6
15	F3E5	B6D5
16	A3C4	D7B5
17	C4D6	B5D3
18	E5D3	D8D6
19	E3E4	D5B4
20	C2C3	E7F8
21	D3B4	C5B4

22	C3E3	B8C6
23	D2D4	A8D8
24	E1D1	E6E5
25	D4D5	F8E7
26	E3B3	C6B8
27	A2A3	B8A6
28	A3B4	A5B4
29	B3G3	F7F6
30	G3B3	D8C8
31	D1D2	B7B5
32	B3E3	C8C4
33	A1A5	E7C7
34	A5A1	A6C5
35	F2F3	D6D8
36	A1A2	B4B3
37	A2A1	D8C8
38	A1D1	C8A8
39	D5D6	C7C6
40	D6D7	A8D8
41	B2C3	B5B4
42	A3B2	C4C2
43	D2D6	C6A4
44	D1A1	A4B5
45	A1C1	D8D7
46	C1C2	B3C2
47	D6D7	C5D7
48	E3B3+	G8F8
49	B3C2	F8E7
50	C2B3	D7C5
51	B3D5	B5B6
52	G1H1	B6D6
53	B2C1	D6D5
54	E4D5	E7D6
55	H1G1	C5D3
56	C1D2	D6D5
57	G1F1	B4B3
58	D2C3	D5C4
59	C3A1	B3B2
60	A1B2	D3B2
	0	1

54. SUPERSTAR PRESTIGE-B

1	G1F3	C7C5
2	D2D4*	C5D4*
3	F3D4	E7E5
4	D4F3	E5E4
5	F3D4	D7D5
6	B1C3	G8F6
7	E2E3	B8C6
8	F1B5	C8D7
9	B5C6	B7C6
10	0-0	F8D6
11	F2F3	D8C7
12	H2H3	D6H2+
13	H1G1	0-0
14	F3E4	D5E4
15	C1D2	A8B8
16	B2B3	F8D8
17	D1E2	C6C5
18	D4F5	C7E5
19	G1G4	H7G6
20	A1D1	D7F5
21	F1F5	E5E7
22	E2G2	G3E5

23	C3E4	F6E4
24	G2E4	F7F6
25	E4C4+	G8H8
26	E3E4	D8D4
27	C4E2	E7B7
28	D1E1	D4D8
29	D2A5	D8D6
30	E2C4	D6D4
31	C4E2	D4D6
32	C2C4	D6D7
33	F5F3	B7A6
34	A5C3	E5C3
35	F3C3	B8D8
36	C3F3	D7D2
37	E2F1	A6A2
38	E4E5	D2H2+
39	H1G1	D8D2
40	F3G3	H2F2
41	F1F2	D2F2
42	E5F6	G7F6
	0	1

55. PRESTIGE-B SUPERSTAR

1	G1F3	G7G6
2	G2G3	F8G7*
3	F1G2	D7D6
4	D2D4*	G8F6
5	0-0	0-0
6	B1C3	C7C5
7	D4C5	D6C5
8	D1D8	F8D8
9	E2E4	B8C6
10	C1E3	B7B6
11	E4E5	F6D5
12	C3D5	D8D5
13	F3G5	D5E5
14	G2C6	A8B8
15	E3F4	
	1	0

56. SUPERSTAR PRESTIGE-B

1	D2D4	G8F6
2	C2C4	G7G6
3	B1C3	D7D5
4	G1F3	F8G7
5	C4D5	F6D5
6	E2E4	D5C3*
7	B2C3	0-0
8	F1C4*	B8D7
9	0-0	D7B6
10	C4D3	C8E6
11	C1F4	C7C5
12	D4C5	B6D7
13	C5C6	B7C6
14	D1D2	D7C5
15	D3C2	D8D2
16	F4D2	F8B8
17	D2C3	B8B2
18	E3C5	B2C2
19	C5E7	E6A2
20	E4E5	A2D5
21	A1A5	C2C3
22	E7B4	C3B3

23	B4D6	B3B2
24	F1C1	B2B5
25	A5A3	A7A5
26	F3D4	B5B2
27	F2F3	A8A6
28	G1G1	A5A4
29	H2H3	B2D2
30	D4E2	F7F6
31	D6B4	D2A2
32	A3A2	D5A2
33	E5F6	G7F6
34	F1F2	A4A3
35	F2E3	A2D5
36	E2D4	A3A2
37	C1A1	A6B6
38	B4C3	C6C5
39	D4E2	B6E6 +
40	E3D3	E6E2
41	E3D3	E2G2
42	F6E7	G2G3
43	E7C5	G3F3 +
44	D3D4	D5F7
45	H3H4	F3F4 +
46	D4D3	F4H4
	0	1

57. PRESTIGE-B SUPERSTAR

1	E2E4	C7C6
2	D2D4	D7D5
3	B1C3	D5E4
4	C3E4	G8F6
5	E4F6 +	G7F6
6	C2C3	F8G7*
7	F1D3*	C8D7
8	G1F3	0-0
9	D1C2	H7H6
10	C1F4	G8H8
11	C2D2	H6H5
12	0-0	F6F5
13	F4B8	A8B8
14	D2G5	H8G8
15	G5H5	D8A5
16	F3G5	F8C8
17	H5F7 +	G8H8
18	F7H5	H8G8
19	D3C4	E7E6
20	H5F7 +	G8H8
21	G5E6	G7E5
22	E6G5	G5H2 +
23	G1H1	A5C7
24	F7F6 + +	
	1	0

58. SUPERSTAR PRESTIGE-B

1	E2E4	C7C5
2	C2C3	G8F6
3	E5E4	F6D5
4	F1C4*	D5B6*
5	D2D3	B8C6
6	G1F3	B6C4
7	D3C4	D7D6
8	C1F4	D8B6
9	D1E2	D6E5
10	F3E5	C6E5
11	F4E5	C8F5
12	0-0	A8D8
13	F1D1	D8D1 +
14	E2D1	F7F6
15	E5B8	B6B2
16	B1D2	A7A6
17	D1C1	B2C1
18	A1C1	E8F7
19	B8A7	E7E5
20	D2B3	F5E6
21	B3A5	B7B5
22	C4B5	A6B5
23	C3C4	B5C4
24	A5C4	F8E7
25	A2A3	H8A8
26	A7C5	A8C8
27	C4E5 +	F6D5
28	C5E3	E7A3
	0	1

59. PRESTIGE-B SUPERSTAR

1	E2D4	G7G6
2	D2D4	F8G7
3	G1F3	D7D6
4	F1C4	G8F6*
5	D1E2	0-0
6	0-0	C7C5
7	D4C5*	D6C5
8	F1D1	C8D7
9	E4E5	F6E8
10	B1C3	F6E8
11	E5E6	F7E6
12	C4E6 +	G8H8
13	C1G5	G7C3
14	B2C3	D8G7
15	E6D7	B8D7
16	F3E5	D8A5
17	D8D7	
	1	0

60. SUPERSTAR PRESTIGE-B

1	D2D4	G8F6
2	C2C4	D7D6
3	G1F3*	C8G4
4	B1C3	B8D7
5	E2E4	E7E5*
6	C1E3	F8E7
7	F1E2	C7C5
8	D4E5	D6E5
9	H2H3	G4F3
10	E2F3	D8B6
11	D1C2	B6B4
12	B2B3	0-0
13	0-0	B4A4
14	A1D1	A5A6
15	D1D3	F8D8
16	F1D1	A8C8
17	D1D2	A6C6
18	A2A3	C6A6
19	C2B2	A6E6
20	D2D1	C8C6
21	C3D5	E7D6
22	E3G5	D8C8
23	B2D2	D6F8
24	G5E3	C6A6
25	D5F6	D7F6
26	D2B2	A6D6
27	B2C3	C8D8
28	D3D6	D8D6
29	D1D6	E6D6
30	C3A5	D6D3
31	A5A7	D3B3
32	E3C5	B3C4
33	C5F8	C4C1 +
34	G1H2	C1F4 +
35	G2G3	F4F3
36	F8C5	H7H6
37	A7B7	F6E4
38	B7D5	F3F5
39	D5D3	F5C8
40	C5E3	E4G5
41	E3G5	H6G5
42	D3B3	C8A8
43	A3A4	A8A7
44	H2G2	A7A8 +
45	G2G1	A8D8
46	B3B4	D8D1 +
47	G1G2	D1D5 +
48	G2H2	E5E4
49	A4A5	D5F5
50	H2G2	F5F3 +
51	G2G1	E4E3
52	B4B8z$	G8H7
53	B8B1 +	F7F5
54	B1E1	E3E2
55	E1D2	F3E4
56	D2E1	E4D3
57	F2F4	G5F4
58	G3F4	D3D4 +
59	G1G2	D4E4 +
60	G2G3	E4E3 +
61	G3G2	H7G6
62	A4A3	E3E4 +
63	G2G3	G6H5
64	A6A7	G7G5
65	G3F2	E4D4 +
66	F2G2	D4D5 +
67	G2H2	D5E4
68	G4F5	H5G5
69	A7A8 = Q	E4A8
70	E1E2	
	½	½

61. MEPHISTO III SENSORY 9-B

1	E2E4	E7E5
2	G1F3	B7C6
3	F1B5	A7A6
4	B5A4	E5D4*
5	D2D4	E5D4*
6	0-0	F6E4
7	F1E1	F7F5
8	F3D4	D8F6
9	A4C6*	D7C6
10	F2F3	C6C5
11	D4B3	C5C4
12	B3D2	F8C5 +
13	G1H1	0-0
14	D2E4	F5E4
15	D1D5 +	C8E6
16	D5C5	E4F3
17	B1D2	F3G2 +
18	H1G2	C7C6
19	D2E4	F5F3 +
20	G2G1	F3G4 +
21	E4G3	E6F5
22	C2C3	A8D8
23	C1E3	D8D5
24	C5E7	D5D7
25	E7G5	D7D8
26	G5G4	F5G4
27	E3D4	F8F7
28	A1B1	G8H8
29	D4B6	D8G8
30	E1E4	G4F3
31	E4C4	F3D5
32	C4A4	G8E8
33	B6D4	D5F3
34	A4B4	B7B5
35	B4B3	A6A5
36	B1F1	A5A4
37	B3A3	F7F4
38	H2H3	E8E6
39	G1H2	E6E8
40	B2B3	A4B3
41	A2B3	F4F7
42	A3A7	F7A7
43	D4A7	F3D5
44	A7D4	D5B3
45	G3F5	H8G8
46	D4G7	C6C5
47	H2G3	B3C4
48	F1D1	C4E6
49	F5D6	E8A8
50	D6B5	G8G7
51	D1D6	A8G8
52	D6C6	C6C4
53	B5A3	G7F6 +
54	G3H4	G8D8
55	H4G3	D8D3 +
56	G3F4	D3C3
57	A3B5	C3C1
58	B5D4	C1E1
59	F4G3	E1E4
60	D4E6	E4E6
61	C6C4	
	½	½

62. SENSORY 9-B MEPHISTO III

1	E2E4	C7C5
2	G1F3	E7E6
3	D2D4	C5D4
4	F3D4	G8F6
5	B1D2*	F8C5*
6	D4B3	C5E7
7	E4E5	F6D5
8	F1C4	D5F4
9	0-0	D7D5
10	E5D6	D8D6
11	D2E4	D6E5
12	E4C3	B8C6
13	D1F3	E7G5
14	C1E3	0-0
15	C3E4	F7F6
16	A1D1	E5C7
17	E3C5	C6E5
18	F3C3	E5C4
19	C3C4	B7B6
20	E4G5	F6G5
21	G2G3	B6C5
22	G3F4	F8F4
23	C4C5	C7C5
24	B3C5	F4G4 +
25	G1H1	G4C4
26	B2B4	C4C2
27	A2A3	G8F7
28	C5E4	H7H6
29	B4B5	C2A2
30	D1D3	A8B8
31	F2F3	E6E5
32	D3C3	C8H3
33	E4D6 +	F7G6
34	F1B1	A7A6
35	C3C6	G5G4
36	D6C4 +	G6H7
37	C6A6	B8B5
38	B1D1	G4F3
39	A3A4	B5B3
40	A6A8	F3F2
41	A8F8	H3G4
42	D1F1	G4E2
43	F8F2	E2C4
44	F2A2	C4F1
	0	1

63. MEPHISTO III SENSORY 9-B

1	E2E4	C7C5
2	G1F3	D7D6
3	F1C4	B8C6*
4	D2D4	C5D4
5	F3D4	G8F6
6	D4C6*	B7C6
7	B1C3	C8G4
8	F2F3	G4D7
9	C1E3	G7G6
10	0-0	F8G7
11	D1D3	0-0
12	A1D1	A8B8
13	B2B3	D8A5
14	D3D2	G8H8
15	C3E2	A5D2
16	D1D2	C6C5
17	E4E5	D6E5
18	E3C5	G7G6
19	D2D1	B8E8
20	C5A7	D7F5
21	C2C3	F5C2
22	D1A1	H6G5
23	A2A4	E8D8
24	A4A5	F6D5
25	A5A6	D5E3
26	F1C1	C2F5
27	A7B6	D8C8
28	C4B5	E3C2
29	A6A7	G5C1
30	A1C1	C2A3
31	B5A4	F5D3
32	G1F2	D3B5
33	C1A1	A3C2
34	A1A2	B5E2
35	A7A8 = Q	C8A8
36	F2E2	F8B8
37	B6C5	B8C8
38	B3B4	A8A6
39	B4B5	A6A4
40	A2A4	C8C5
41	E2D2	C2A3
42	A4A3	C5B5
43	A3A7	B5B2 +
44	D2E3	B2G2
45	A7E7	F7F6
46	H2H3	G2B2
47	E7F7	F6F5
48	F7E7	F5F4 +
49	C3D3	B2F2
50	E7E8 +	H8G7
51	D3E4	F2E2 +
52	E4D5	E2E3
53	C3C4	E3F3
54	E8E7 +	G7H6
55	C4C5	F3H3
56	E7F7	H6G5
57	D5C4	H7H5
58	C5C6	H3A3
59	C4D5	A3A5 +
60	D5D6	E4E3
61	F7F8	A5A6
62	D6D5	E4E3
63	C6C7	E3E2
64	F8E8	E2E1 = Q
65	E8E1	A6A8
66	E8E1	A6A8
67	C6D7	F3F2
68	E1F1	G5G4
69	F1F2	H5H4
70	F2G2 +	G4H5
71	G2C2	G6G5
72	C2H2	G5G4
73	H2H1	G4G3
74	H1G1	H5G4
75	C7C8 = Q	A8C8
76	D7C8	H4H3
77	C8D7	H3H2
78	G1H1	G3G2
79	H1H2	G2G1 = Q
	0	1

64. SENSORY 9-B MEPHISTO III

1	D2D4	D7D5
2	C2C4	D5C4
3	G1F3	A7A6
4	E2E3	B7B5
5	F1E2*	E7E6
6	0-0	C8B7*

7	B1C3	G8F6
8	F3E5	F8E7
9	A2A4	C7C6
10	A4B5	C6B5
11	E2F3	D8B6
12	E3E4	B8C6
13	E5C6	B7C6
14	E4E5	F6D5
15	C3D5	E6D5
16	F3G4	0-0
17	G4F5	A8D8
18	D1G4	G7G6
19	C1H6	F8E8
20	F5C2	C6C7
21	G4F4	F7F6
22	F1E1	D8C8
23	E1E3	G6G5
24	F4F3	B6D4
25	A1D1	D4B2
26	F3D5+	G8H8
27	D5F7	F6E5
28	F7H7++	

1 0

65. CONSTELLATION MEPHISTO III

1	D2D4	D7D5
2	C2C4	D5C4
3	G1F3	A7A6
4	E2E3	B7B5
5	F1E2*	E7E6
6	B1C3	F8E7*
7	0-0	G8F6
8	C1D2	C8B7
9	F3E5	C7C5
10	E2F3	D8C7
11	A1C1	C5D4
12	E3D4	0-0
13	F1E1	B7F3
14	D1F3	B8D7
15	D2F4	D7E5
16	D4E5	F6D7
17	F3G3	G7G6
18	E1D1	E7C5
19	D1D2	A8D8
20	C1D1	D7B6
21	C3E4	D8D2
22	E4F6+	G8H8
23	D1D2	F8D8
24	G3H4	H7H5
25	F6H5	C5F2+
26	G1F2	D8D2+
27	F4D2	G6F5
28	H4F6+	H8G8
29	D2H6	C7C5+
30	F2F1	C5F8
31	F6G5+	G8H8
32	H6F8	B6D7
33	G5G7++	

1 0

66. MEPHISTO III CONSTELLATION

1	E2E4	D7D5
2	E4D5	G8F6
3	D2D4	F6D5
4	G1F3	E7E6*
5	G1F3	E7E6*
6	F1D3	C7C5
7	C1E3	C5D4
8	E3D4	B8C6
9	D4F6	D8F6
10	D1C2	C6B4
11	C2A4+	C8D7
12	A4B3	B4D3+
13	E1E2	F6B2+
14	B3B2	D3B2

0 1

67. CONSTELLATION MEPHISTO III

1	F2F4	D7D5
2	G1F3	G7G6
3	D2D4*	F8G7*
4	E2E3	C8F5
5	C2C4	G8F6
6	C4D5	0-0
7	B1D2	D8D5
8	F1C4	D5C6
9	0-0	F6E4
10	D1B3	E7E6
11	F3E5	G7E5
12	F4E5	B8D7
13	C4B5	E4D2
14	C1D2	C6D5
15	F1F5	D5B3
16	A2B3	C7C6
17	B5C6	B7C6
18	F5F3	C6C5
19	B3B4	C5D4
20	E3D4	F8C8
21	D2C3	D7B6
22	B4B5	C8C7
23	C3A5	A8B8
24	F3C3	C7D7
25	A5B6	B8B6
26	C3B3	D7D4
27	A1A7	D4D1+
28	G1F2	D1D5
29	A7A8+	G8G7
30	A8A5	D5E5
31	H2H3	F7F5
32	F2F3	G7F6
33	B3B4	E5C5
34	F3E3	E6E5
35	A5A6	B6E6
36	B5B6	C5C8
37	B6B7	C8B8
38	A6A8	E6E8
39	A8B8	E8B8
40	B2B3	F6E6
41	G2G4	E6D6
42	G4F5	G6F5
43	B4B5	H7H6
44	B3B4	H6H5
45	H3H4	D6E6
46	E3D3	B8D8+
47	D3C4	D8B8
48	B5B6+	E6F7
49	C4D5	E5E4
50	D5D4	F7G7
51	D4E3	G7H7
52	E3F4	H7G7
53	F4G3	G7H7
54	B6B5	H7G7
55	G3F4	G7G6
56	B5B6+	G6G7
57	B4B5	G7F7
58	B6H6	F7G7
59	H6H5	B8B7
60	H5F5	B7E7
61	F5G5+	G7F6
62	G5F5+	F6G7
63	B5B6	E4E3
64	F5G5+	G7H6
65	G5G1	H6H5
66	G1D1	E7E6
67	B6B7	E6B6
68	D1D5+	H5H4
69	D5D7	B6B4+
70	F4E3	H4G5
71	E3D2	G5F5
72	D2D3	B4B1
73	C3C2	B1B6
74	D7E7	F5F6
75	E7H7	F6E5
76	H7D7	E5F5
77	D7G7	F5E5
78	G7H7	E5D5
79	C2D3	D5C6
80	H7H6+	C6B7

½ ½

68. MEPHISTO III CONSTELLATION

1	E2E4	E7E5
2	G1F3	G8F6
3	B1C3	F8B4*
4	F3E5*	D7D6
5	E5F3	B4C3
6	D2C3	F6E4
7	F1B5+	C7C6
8	B5E2	0-0
9	C1E3	F8E8
10	0-0	C8E6
11	D1D4	D6D5
12	D4A4	B7B5
13	A4D4	E4D6
14	A2A4	D6F5
15	D4F4	F5E3
16	F2E3	B5A4
17	F3E5	A4A3
18	A1A3	F7F6
19	E5D3	E6F7
20	F4G3	B8D7
21	A3A6	D7B8
22	A6A4	B8D7
23	A4G4	F7G6
24	C3C4	D7E5
25	D3E5	F6E5
26	G4G6	H7G6
27	G3G6	D8C7
28	E2H5	E8E7
29	C4D5	C6D5
30	C2C3	A8B8
31	F1F2	C7C5
32	G5G5	A7A5
33	H5F3	E5E4
34	F3G4	C5D6
35	F2D2	E7E5
36	G5F4	B8F8
37	F4G3	D6C5
38	D2D4	C5D6
39	C3C4	D6F6
40	G4E2	E5F5
41	G3E1	F6G5
42	E1D2	F5F2
43	G2G3	G5H6
44	H2H4	H6D6
45	G1H1	D6G3
46	C4D5	F2H2++

0 1

69. MEPHISTO III SUPERSTAR

1	E2E4	E7E5
2	G1F3	B8C6
3	F1B5	A7A6
4	B5A4	G8F6
5	D2D4	E5D4*
6	0-0	B7B5
7	A4B3*	F8C5
8	E4E5	F6G4
9	F1E1	D4D3
10	E1F1	D3C2
11	D1C2	D8E7
12	C1G5	F7F6
13	E5F6	G7F6
14	G5F4	C6B4
15	C2D2	D7D6
16	A2A3	B4C6
17	F1E1	G4E5
18	F3H4	C8B7
19	H4F5	E7D8
20	F5G7+	E8E7
21	G7E6	D8D7
22	B1C3	H8E8
23	C3D5+	E7E6
24	D5B6+	E6E7
25	B6D7	E7D7
26	D2C2	C6D4
27	C2H7+	E8E7
28	H7H3+	D7D8
29	F4E5	F6E5
30	A3A4	D4B3
31	H3B3	E7G7
32	G2G3	B5B4
33	A1D1	E5E4
34	B3E6	A8A7
35	E6F5	D8E8
36	D1C1	G7F7
37	F6E6+	F7E7
38	E6H3	E7F7
39	C1C5	D6C5
40	H3H8+	F7F8
41	H8E5+	E8F7
42	E5C7+	F7G8
43	C7C5	A7A8
44	C5B4	

1 0

70. SUPERSTAR MEPHISTO III

1	D2D4	D7D5
2	C2C4	C7C6
3	G1F3	E7E6
4	C4D5*	C6D5
5	B1C3	G8F6
6	C1F4	F8D6
7	F4D6	D8D6*
8	A2A3	B4B6
9	C3A4	B6A5+
10	B2B4	A5C7
11	F1D3	C8G4
12	0-0	F6E4
13	A4C5	G4F3
14	G2F3	E4C5
15	B4C5	0-0
16	D1C2	G7G6
17	G1H1	B8D7
18	A1B1	B7B6
19	F1C1	B6C5
20	D4C5	A8B8
21	C2C3	F7F6
22	C1D1	F6F5
23	F3F4	A7A5
24	C3D4	C7A7
25	B1C1	B8B7
26	D1D2	F8B8
27	F2F3	B7B3
28	E3E4	B3A3
29	E4D5	B8B4
30	D3C4	B4C4
31	D4C4	G8G7
32	D5C6	D7B8
33	C1D1	G7H6
34	D2D7	A7A8
35	C4G8	B8D7
36	G8A8	

1 0

71. MEPHISTO III SUPERSTAR

1	E2E4	G8F6
2	E4E5	F6D5
3	G1F3	D7D6*
4	C2C4*	D5B6
5	D2D4	C8G4
6	F1E2	D6E5
7	C4C5	E5E4
8	F3G5	G4E2
9	D1E2	B6D5
10	G5E4	B8C6
11	C1E3	E7E5
12	D4E5	D5E3
13	E2E3	C6E5
14	E4C3	D8E7
15	0-0	E7C5
16	F1E1	F7F6
17	B1D2	C5E3
18	E1E3	F8C5
19	E3G3	0-0-0
20	D2E4	C5F8
21	A1E1	F6F5
22	E4G5	E5D3
23	E1D1	D3E5
24	D1D8+	C8D8
25	G5E6+	D8D7
26	E6G7	F5F4
27	G3G5	F8D6
28	G7F5	D7C6
29	F5D4+	C6B6
30	F2F3	E5D3
31	C3A4+	B6A6
32	D4E6	H8E8
33	A4C5+	D6C5
34	E6C5+	D3C5
35	G5C5	E8E1+
36	G1F2	E1B1
37	C5C2	A6B5
38	G2G4	C7C5
39	B2B3	B1H1
40	F2G2	H1A1
41	G4G5	B7B6
42	H2H4	A7A6
43	H4H5	B5C6
44	G5G6	H7G6
45	H5G6	A1D1
46	G6G7	D1D8
47	G2H3	D8G8
48	C2G2	A6A5
49	G2G5	C6D6
50	G5G6+	D6E5
51	H3G4	B6B5
52	G6G5+	E5D4
53	G4F4	A5A4
54	B3A4	B5A4
55	F4G3	C5C4
56	G5G4+	D4D3
57	G3F4	C4C3
58	G4G2	C3C2
59	G2G1	G8G7
60	G1E1	D3D2
61	E1H1	C2C1=Q

0 1

72. SUPERSTAR MEPHISTO III

1	C2C4	E7E6
2	G1F3	C7C5
3	D2D4*	D7D5*
4	C4D5	E6D5
5	B1C3	B8C6
6	D4C5	F8C5
7	D1D5	D8B6
8	C3E4	B6B4+
9	F3D2	C5E7
10	A2A3	B4D4
11	D5A2	C8F5
12	E2E3	D4E5
13	F2F4	E7H4+
14	G2G3	E5E7
15	G3H4	F5E4
16	D2E4	E7E4
17	H1G1	E4E7
18	G1G4	F7F5

19	G4G5	H7H6
20	G5G3	0-0-0
21	H4H5	G8F6
22	F1H3	E7D7
23	A2B1	D7D1 +
24	E1F2	F6H5
25	H3F5 +	C8B8
26	G3H3	G7G5
27	F4G5	H6G5
28	E3E4	G5G4
29	H3C3	D1D4 +
30	C1E3	D4E5
31	F3G1	G4G3
32	H2H3	C6D4
33	E3D4	E5D4 +
34	G1H1	D4B6
35	B1C2	H8F8
36	A1C1	A7A6
37	C1G1	B6H6
38	F5G4	H6H8
39	G1D1	D8D1 +
40	C2D1	F8D8
41	D1E1	D8G8
42	B2B3	G8G4
43	H3G4	H5F5 +
44	H1G1	H8H2 +
45	G1F1	H2H1 + +
	0	1

73. PRESTIGE-B
MEPHISTO III

1	C2C4	E7E6
2	B1C3	D7D5
3	E2E3*	G8F6*
4	D2D4	F8B4
5	C4D5	E6D5
6	G1F3	C8F5
7	D1A4 +	B8C6
8	F1A6	D8C8
9	F3E5	F5D7
10	E5D7	B4C3 +
11	B2C3	F6D7
12	C1A3	F7F5
13	A6B5	C6E7
14	A3E7	C7C6
15	B5D3	E8E7
16	D3F5	C8E8
17	A4B4 +	E7F6
18	F5G4	D7B6
19	0-0	F6F7
20	A2A4	E8E4
21	G4H5 +	G7G6
22	H5E2	E4E7
23	B4E7 +	F7E7
24	F1B1	H8B8
25	F2F3	E7F6
26	E3E4	D5E4
27	F3E4	B6D7
28	E4E5 +	F6E7
29	E2D3	D7B6
30	C3C4	E7E6
31	A4A5	B6C8
32	B1F1	C6C5
33	F1F6 +	E6E7
34	D4C5	A7A6
35	A1F1	C8A7
36	D3E4	A7C6
37	E4C6	B7C6
38	F6C6	B8D8
39	C6D6	A8C8
40	D6D8	C8D8
41	F1F6	D8D1 +
42	G1F2	D1D4
43	F6A6	D4C4
44	A6C6	E7D7
45	C6D6	D7C8
	1	0

74. MEPHISTO III
PRESTIGE-B

1	E2E4	E7E6
2	D2D4	D7D5
3	B1C3	F8B4
4	E4D5	E6D5*
5	F1D3	G8F6
6	C1D2*	0-0
7	G1E2	B8C6
8	0-0	C8E6
9	D2G5	B4D6
10	F2F3	H7H6
11	G5H4	C6B4
12	F1E1	C7C5
13	D4C5	D6C5 +
14	H4F2	C5F2 +
15	G1F2	D8B6 +
16	F2F1	B4D3
17	D1D3	A8C8
18	B2B3	B6C5
19	A1D1	F8E8
20	D3D4	E6F5
21	D1D2	C5A3
22	D4F4	F5H7
23	F4D4	A3A5
24	B3B4	A5A3
25	C3D5	F6D5
26	D4D5	A3B4
27	C2C3	B4B6
28	D5B3	B6C7
29	F1G1	C7C5 +
30	G1F1	C8C7
31	D2D4	C5E5
32	H2H3	C7E7
33	A2A4	E5E3
34	B3C4	H7F5
35	C4D5	E7E5
36	D5D6	H6H5
37	F3F4	E5E7
38	D6D5	F5E4
39	D5C4	E4F3
40	G2F3	E3F3 +
41	F1G1	E7E6
42	D4D5	E6E2
43	E1E2	F3E2
44	C4E2	E8E2
45	D5D8 +	G8H7
46	D8D7	B7B6
47	D7A7	E2E3
48	A7F7	E3H3
49	C3C4	H3G3 +
50	G1F2	G3A3
51	F7A7	H5H4
52	F2G2	A3G3 +
53	G2H1	G3F3
54	A7F7	H7G8
55	F7B7	F3F4
56	B7B6	F4C4
57	A4A5	C4A4
58	A5A6	G7G5
59	H1G2	G5G4
60	B6H6	G4G3
61	G2H3	G8F8
62	H6H4	G3G2
63	H4A4	G2G1 =
64	A6A7	G1H1 +
65	H3G3	H1A8
	½	½

75. PRESTIGE-B
MEPHISTO III

1	E2E4	C7C5
2	G1F3	E7E6
3	D2D4	C5D4
4	F3D4	G8F6
5	B1C3	B8C6
6	D4B5	D7D6
7	C1G5*	A7A6*
8	B5D4	F8E7
9	F1E2	D8A5
10	D4C6	B7C6
11	G5D2	A5B6
12	A1B1	0-0
13	D2E3	B6B4
14	A2A3	B4B7
15	0-0	D6D5
16	E4E5	F6E8
17	E2D3	F7F6
18	F2F4	B7C7
19	C3A4	C6C5
20	C2C3	F6E5
21	F4E5	C7E5
22	F1F8 +	E7F8
23	D1F3	F8D6
24	F3H3	E8F6
25	A4B6	A8B8
26	B6C8	B8C8
27	E3F4	E5F4
28	H3E6 +	G8F8
29	E6C8 +	F8F7
30	C8H3	F5G4
31	D3A6	G4H3
32	G2H3	
	1	0

76. MEPHISTO III
PRESTIGE-B

1	E2E4	C7C5
2	G1F3	B8C6
3	F1B5	G7G6
4	B5C6	G7G6
5	0-0*	F8G7
6	D2D3	G8H6
7	C1H6	G7H6
8	B1C3	C8G4
9	H2H3	G4E6
10	D3D4	C5D4
11	D1D4	D8D4
12	F3D4	E6C4
13	F1D1	0-0-0
14	E4E5	H6F4
15	D4F3	F7F6
16	D1E1	F6E5
17	G2G3	F4D2
18	F3D2	D8D2
19	A1C1	H8F8
20	C3E4	D2D4
21	B2B3	C4D5
22	E4C5	B7B6
23	C2C4	B6C5
24	C4D5	D4D5
25	E1E4	C8C7
26	C1E1	C7D6
27	E4E2	F8F3
28	G1G2	F3F5
29	G3G4	F5F4
30	G2G3	E7E6
31	F2F3	D5D3
32	E2E5	F4F3 +
33	G3H4	F3H3 +
34	H4G5	D3D5
35	G5F4	D5E5
36	E1E5	H3F3 +
37	F4E4	F3E3 +
38	E4E3	D6E5
	0	1

Bobby Fischer: A great future behind him?

The other day at a barbeque a group of us were musing about how persons and places suddenly burst on the world scene and then drop completely from public consciousness. "What were the two Chinese islands Kennedy and Nixon so vehemently debated whether we should fight to hold?" Quemoy and Matsu, and who ever thinks about them, and will the Falklands be remembered?

Forgotten people ranged from Neil Armstrong to George Romney. "How about Bobby Fischer?" "What a disappointment! Can you imagine? Maybe the best ever, reaching the top of the world after a grueling climb - and immediately he forfeits, at his prime, refusing to play. What makes someone do that?"

I've often wondered, too, and I couldn't help recounting a couple of days I had spent with Fischer while he was on an incredible streak, rocketing to stardom. Against the world's top competition, Fischer had just scored back to back 6-0, 6-0 shutouts in the quarter and semi-final champion challenge rounds. No grandmaster had ever done it to another even once in official play.

On the last stage of that exhausting process known as "overnight success", unshaven and in pajamas when he opened his hotel room door to me at noon, Fischer was the hot national personality of the moment.

"Why chess, Bobby?" I asked the rugged, manly eight time U.S. Chess champion who at 29 looked like a college halfback but was perpetually remembered and known as "the child chess champion." "When I was six," he said, "I asked my mother, 'what is the hardest game in the world?' She said 'Chess.'"

As a child he used to walk from his Brooklyn home to the chess clubs in Manhattan. In jest I suggested walking in the Olympics; Bobby was immediately and seriously interested, pressing for more details: How long did they walk in the Olympics? How old are they? When do they reach their prime? What are winning times? Fischer, big boned and husky, emphasized the importance of his own physical exercise, tennis, swimming, and especially walking: "Exercise is really important. Your body has to be in top condition. Your chess deteriorates when your body does. You can't separate body from mind." He paused. "Most people don't understand about chess — they think you just sit there, but it requires a lot of energy. Most important, your body can't get in the way."

I asked him to elaborate; he declined. I pressed: "Do you ever start thinking of other things during a game? Does your mind wander?"

"I've asked a lot of players that question," Fischer replied, "and many of them have that problem. Their minds start to wander. They start thinking about their problems. But that never happens to me." Sheepish yet smug, he smiled. "Maybe it's because I have no problems?"

There were reports that in a foreign tournament Fischer had met a heart-throb and his tourament performance suddenly suffered, but Bobby only discussed women impersonally to note that as a group they failed to concentrate, resulting in few truly outstanding women players. "They're interested in other things. They can't keep their minds on the game. Besides, they're too emotional."

But he did reemphasize the mind/body connection. Lack of physical exercise had almost cost him his shutout. "I was in real good shape in the Larsen match.' (The qualifying match by which Fischer reached the finals for the right to challenge Spassky, then Champion.) "I played tennis before each game except for the last one. That was my worst game. He could have had a draw if he wanted it."

But getting a draw from Fischer was less difficult for some grandmasters than drawing him out in conversation.

In brief interviews and television appearances, Bobby often appeared arrogant and curt, his laconic replies mistaken for superciliousness. To Dick Cavett's question, "you really think you're the best in the world?" Fischer's instant "right" was followed by an awkward pause. Only reluctantly and without great facility did he verbalize. But when drawn out, Fischer's arrogance is more a strange blend of shyness and self-confidence: "I am the best player in the world," he said while shaving. "The Russians have known that for years. But they're afraid of me. And so they say all sorts of scornful things about me."

The Russians dominated Bobby's thinking. Occasionally he was respectful as when he conceded that "most of the Russians are in pretty good shape. They're a little heavy though, except Spassky; he's in great physical condition, real great." But mostly he hated them as a group. He was driven to beat them, and he would talk about the Russians at every invitation.

The prospect of a USSR vs. USA head to head intense and sustained confrontation for the world's top chess spot offered potentially exploitable appeal to the media, some of whom were eager to promote Fischer as the Russian-hating American future world king. Some brief interviews made Fischer's unrelenting hatred of the Russians seem the ravings of a paranoid, or the rantings of a spoiled child. But upon closer examination, his complaints acquired some force.

While Bobby prepared to meet the day, I looked around at the unlit hotel room, curtains drawn to push away as much sunlight as possible. I remembered Fischer's notorious objection to bright lights in tournaments which detractors had seized as evidence of his bad boy spoiled eccentricity. Along with an alumninum tennis racquet and sparse clothing, chess magazines from different countries filled two suitcases, his portable home. (Fischer's mother had taught him to read Russian.) I focused upon an inexpensive wooden chess set whose pieces rested on a vinyl board which could be rolled up. "Want to play?" I asked him, absurdly. Fischer immediately accepted.

We played on his bed. The lighting was his, we were using his set, and he had white. Despite all this, I suddenly realized as the pieces were set up, that I had an arguably even position. I immediately offered him a draw. Bobby smiled and declined it.

He was a gracious and encouraging winner, urging me not to be self-conscious, and complimenting me after my relatively best game (down a pawn after the 21st move — shambles by the 25th). In one game, while I was in the process of making a faulty move, he arched his brow in disapproval just as I was about to land my piece on its new square. Terrorized, I chose another resting place. Six moves later I resigned. Bobby immediately apologized for his intimidation. He returned to the position before he'd interposed with his scowl and insisted we play from there. I resigned three moves later. But I was surprised he had remembered, for Fischer crushed me while he pressed a radio to his ear and read "Cashbox Magazine." But his graciousness and encouragement proved to me that he loved the game and would encourage players at whatever level.

I found myself liking this person, characterized as an *enfant terrible*, this hypersensitive *primadonna* braggart who was to prove uncontestably at the board what he matter of factly declared: He was simply the best in the world, perhaps ever. Yes he had walked out of a tournament because he did not like the conditions. He had pressed for a quieter room during a match against Petrosian — who was partly deaf and declined to switch sites — whereupon Fischer withdrew; the only other time he quit was when glaring light was too bright for one who lived in an overcast hotel room.

He'd asked for a room change at the hotel too, but was effectively put off by a manager who politely discouraged him with a "Sorry sir, we're all full." Bobby bitterly complained to me that he could not concentrate at night because he heard the television from an adjoining room: a perfectly reasonable complaint when issue from a genius preparing for the world's chess championship challenge. I assured him he was entitled to a quiet room, and insisted I'd get it.

Reluctantly but grateful, he agreed. I asked to speak to the manager. Bobby was visibly uncomfortable: "Don't tell him who I am," he said. I semi-adhered to his request: "This man is preparing for the world chess championship and needs a quieter room." Luckily, the manager's son loved chess, and he instantly recognized Fischer.

We were given a key to another room to inspect at the end of a freshly repainted abandoned wing. Fischer blanched at the odor. "You don't think it's dangerous, do you?" he asked several times. I assured him they had removed lead and other noxious ingredients from paint; he trusted my assurance and became obviously at ease.

Inspecting the room, he put his ear to the wall and listened for any sounds, especially traffic noise. Bobby hated traffic noise. This room faced the courtyard; it was very quiet. But still Fischer was not satisfied: "I hear a hum." I was a bit skeptical, confident in my hearing, until I too began to hear it faintly, after many seconds of concentration.

Now Fischer's bad boy past and his hostility to the media made more sense: When he had withdrawn after being refused a quiet enough room, the press had been harsh with him for demanding conditions to his liking and refusing to play without them. Bobby walked out of his new room, this time tolerating the most muffled tremor. On our way out he made certain to take one of his chess magazines which he signed with an encouraging message and left for the manager's son.

Fischer seemed honest and forthright, eager to pay debts, and even scores. For example, he discovered a Holiday Inn room key in his jacket pocket from Denver and immediately mailed it back. On the way to lunch he retrieved a fallen candy bar and overtook the owner walking in the opposite direction.

Lunch with Fischer was unforgetable. As a cub reporter on an expense account, I eagerly anticipated a lavish meal. But Fischer rejected *seriatim* many of New York's finest. "Let's go someplace more informal." He instantly agreed to Chinese food; he had a favorite restaurant, "not that far away." Fischer disliked taxis (as I later discovered, riding in one with him, his eyes riveted on traffic, uncomfortable with every short stop and swerve: "You can get killed in one of these things," he repeatedly complained) but since this restaurant was "close," although it was 90° and humid, we began to walk up Manhattan through the 50's, 60's 70's.... Determined, silent, I matched Fischer stride for stride, block after block, but as we entered Harlem, I wondered when our journey would end. Finally, about 5 miles after we began, we reached our goal, somewhere around 145th Street. It was a least distinguished dive. We walked up a narrow flight of steps to a tattered room with one lazy fan blade assigned to cool it, sprinkled with flies who had hopped on for the joyride. Fischer ordered a whole spicy fish as our entire meal.

Over lunch, Fischer elaborated his claims of a Soviet conspiracy. What had been quoted out of context in the press slowly began to emerge as the coherent, justified objections of an individual fighting a system which had, over the years, discriminated against him. International chess, he explained, is controlled by FIDE, a "so-called Democratic" organization which established the rules, rankings and sponsored tournaments. Because the Soviets dominate chess with their sheer preponderance of grandmasters, and because the Soviets control Eastern Europe, Communist representatives vote as a block. The Russians badly want to keep the world championship. There are many ways to do this. First and foremost, they allow only one challenge every three years, after a gruelling elimination, which favors a nation with a *group* of top players. The most consistent and hearty player often ends up

challenging for the title, the eliminations having claimed a more talented but fragile player.

"The Russians have stacked the system for years. They twist the rules to suit themselves. When I play Spassky (for the Championship) the rules now say that I need twelve and a half points to win and he merely needs twelve. See what the Russians say about that after I win it."

But there was one more round to go before Spassky. Having won the quarters and semis 6-0, 6-0, in the final eliminations, Fischer faced Petrosian, a "fine position player," an ex-world's champion, and the fastest draw in the East.

This was another way the tournament system was stacked against him: those detested draws which counted one half point to each player. Fischer insisted that draws should not count. This was not a trivial complaint: as in small particle physics, and in polling, so in chess, you often affect the activity by the way you measure its outcome.

If a chess match is played and the winner is the first to get 5 points and if the player loses the first game, then all his opponent need do is to play conservatively, solidly, and unimaginatively and draw the next eight games. In effect, counting draws one half point punishes a single mistake. It forced Fischer to play a tight-fisted game. Many times he'd been afraid to embark on a speculative attack, requiring brilliance and daring, because the consequent weakening of his pawn structure would spell defeat should his attack fail. Facing a future string of draws, he could not afford to chance a single loss, and thus failed to produce a singular win, or at least an exciting climax.

Draws bred draws. Fischer reiterated that only wins should count. Again and again he answered Chess' basic question: White to move and ? with "Chess is a draw with best play." The excitement of a game is the resolution of a struggle: "The way to win chess games is by creating imbalance."

Draws not only cramped Fischer's style and aborted brilliant games, they retarded the progress of Chess. As a continuingly vital game Chess is constantly threatened by two types of opponents. Its most devoted and ardent advocates seek to dissolve the complex object of their rapture. Great players and programmers threaten to "solve it," find its algorithm, reduce it to a puzzle. A puzzle muses but once, in the comprehension of its pattern. Playing at a puzzle is only fun for the uninitiated or those who like to toy with the helpless, tickled by transcending another's ignorance. Tic tac toe, checkers, and other games have suffered that fate.

Solution, then, challenges chess constantly with extinction. Yet its sheer complexity — the estimated number of possible positions varied — one was 10/43rd, greater than the number of molecules in the universe — has thus far produced countless theories, schools, and strategies, but no solution.

Not only do those most involved with Chess constantly seek its destruction, but it is also threatened by a massive failure to comprehend its levels of subtlety and beauty. It will also die if it is thus abandoned. But between those two menaces Chess was delicately positioned, very much alive and on the brink of American pop culture, almost completely because of Bobby Fischer.

Fischer was more interested in his potential influence as world champion than his fame. He had just retired from competitive chess for eighteen months during which he "thought about a lot of things" and was ready to challenge not only the World Champion but the entire system which produced him. "When I am World's Champion things will be different. I'll allow challenges at least once a year, and hopefully twice a year or more." He said this with intense conviction and I fully believed him. "No more round robin tournaments, where you beat all the weaker players and draw the stronger ones. Just head to head matches. That's how you find out who's the best."

He delighted in pointing out how silent the Soviets had become about his proposed reforms: "See if I win it [the championship] then they're all in favor of challenging the next year. But if I lose, then they want to retain the three year system. So they have to wait and see."

The hateful system within which Fischer was constrained to climb discriminated against all non-communist players in yet another way. "They vote in FIDE to keep the prize money small. That way Western players can't make a living from chess alone and can't devote all their time to it. But the Soviets subsidize their players...and when you play in these countries which host the tournaments often all the referees are from communist countries." I was surprised a referee makes any difference. "Sure they do; let's say the conditions are bad, or you're late or something; they can decide on the spot that you forfeit." Asked about the personalities of the Russian players, Fischer retorted. "You really can't get to know them well. They all stay together. They only talk small talk to us." "But isn't the chess community like the scientific community? Doesn't everyone want to contribute knowledge to the game? To find its truth? Aren't there open discussions about relative merits of new lines, etc?" Fischer laughed: "They want to win. That's all." Fischer too wanted to win, and that's all. He made no bones about it.

What if he were to lose? Fischer refused seriously to consider the possibility. Yet even at this point, so close to the championship, the detested system which had made it so difficult for him thus far, was having its effect. The rules provided that 40 moves be made by each player in 2½ hours. The game, if still not complete, was adjourned. Before it reconvened, each player studied the position for possible lines of advantage and prepared his strategy. In the hours between adjourning and reconvening, Seconds may examine the position. The Soviets always brought a huge contingent of Grandmasters to provide analyses to the player and this could be a huge advantage. Western players often could not afford expenses of grandmaster "seconds" and few were available anyway. For awhile, Fischer's "second" was a representative for the U.S. chess Federation and not an analyst. In essence he was doing it himself, taking on the Soviets alone. Yet Fischer rejected a description of himself as an Ayn Randian hero standing astride his circumstances: "You can't do it alone. I've had a lot of help. Nigro helped me. (Carmine Nigro, a chess idol and teacher from his youth.) My mother helped me. She believed in me when I was real young. That's very important."

Fischer was sensitive to accusations that he was too narrow. His interests include politics — he read *U.S. News and World Report* and the *New York Times* — but he would make no political observations: "You can't win. Somebody's going to be unhappy with whatever you say." Did he see the world the same way he saw a chessboard, with moves and variations? He smiled: "Sort of." As usual he declined to elaborate but did admit that his chess ability helped him in other contexts: "I'm good at sizing up situations."

Although he would not answer questions directly about his political convictions, his likes and dislikes — other than his love for tennis and swimmming, and a newly acquired enjoyment of bowling — his enjoyment of pop music, especially Motown, was obvious. The lyrics to one contemporary song in particular struck him as poignant, and in a rare initiation of conversation he pointed them out: "Smiling faces, going places, tell lies."

Walking after lunch we were approached by a man who asked for a quarter. "What for?" I asked. "A jug of wine to get drunk. What else?" Bobby was tickled by the directness of his answer: "Can you beat that? He actually told you."

Fischer not only detested phonies, especially interviewers, but hated the interviews themselves, which he often cut short: "I get bored with all these interviews. I get bored hearing myself saying the same things over again." Yet during this period he had departed from his practice of a decade and had suddenly become a media personality. Why? "For years the only ones who were talking were the Russians and they were telling lies but everyone believed them. So now I realize that the only way to make people understand is by making public my complaints.

We agreed to test his new bowling prowess, and Fischer led us to lanes atop the Port Authority bus terminal. He bowled at a furious clip, pausing not an instant, and during my shots either hunted for a better feeling ball or paced. A half hour later, at the end of three games, Fischer had eleven bowling balls lined on the ball rest, and complained about the conditions of the alleys as I barely beat him, each of us averaging about 150. He was visibly upset at losing: "I bowled much better than this at Denver." Strange person, Fischer: Soft muted light in his room, liking spicy food. Gracious winner; terrible loser. Enjoying fame, yet intensely private.

He would not talk about his friends or family. He denied his media image as a loner: "I have friends, but my friends don't talk about me." Fischer was determined to keep his personal life from the public eye at least until it was worth it. "They don't pay me enough to spill my guts," he said with a half smile.

Next to the Russians, money was a chief complaint. He had earned $8,000 his first year as U.S. champion. On the brink of stardom, he was aware he'd earn more, but "I don't get enough. It's ridiculous how in golf you can earn $50,000 for four days work. When I play Spassky, I'll have to work for two months for less than that."

Things would change for Fischer, but only if he won. "I've got to win. The U.S. title means nothing. You've got to be world's champion. In America, you're nothing if you don't win." He said this with determination, and anticipation at finally achieving the title he coveted so long. At age 11 he had started thinking about being great, and since 14, when he won the U.S. championship, he had focused on the world's championship. He confessed that coming out of retirement to begin this latest cycle he had self-doubt: "I was rusty, I wasn't in shape, I wasn't that confident." But having just won back to back shutouts, and at the top of his game, he was now supremely confident that the world title would be his to win and keep "a long time".

And then what? "I sort of see my life as happening in two stages. The first is chess competition; then business.

"I'm in a really good position. I don't owe anybody anything. I haven't signed any contracts, and I don't have a manager. No one's going to own part of me." Bobby was very free, more so, I sensed, than he would wish. He liked to travel, but also wanted to settle down someday, marry, have children. To an obvious next question — would he want his child to be a chess champion — Fischer replied, "Not really. I'd teach him the rules." He was very optimistic about the younger generation and had recently written an article for "Boy's Life" whose reception pleased him. He recognized that the U.S. was moving towards a culture of greater leisure, and felt that youth might move back to the game. Fischer eagerly looked forward to a future with chess studios across the country and yet in a conversation that soon followed, declared the imminent death of the game. In any event, he wrote off American elders: "People don't want to think much — especially the older generation."

How did Fischer regard his thinking contemporaries, other leading chess players? "There are too many grandmasters. Every country wants its own grandmaster. Maybe there are ten people today who should have the title of grandmaster. It's meaningless now, much too easy to get. I didn't deserve the title when I got it, though I've since proved that I do." Yet he treated the best of the bunch with respect: "The field is stronger than ever before. I'm not a lot better than they are. Just a little, but that's enough."

Asked to compare himself to other all-time great players, he tersely answered that he was the best. Although that was his image, the answer conflicted with the respect he'd shown his lesser contemporaries. When pressed specifically to expound on his ability compared with Paul Morphy or Wilhelm Steinitz, two of his most respected predecessors, he explained "I'm not saying I have more raw talent than they do; it's just that so much more is known about the game now."

Chess has been progressing at a furious pace. Until the first decades of the twentieth century the dominant theory had been to occupy the center; the struggle was direct. Then Aron Nimzovitch, Richard Reti, and others challenged that paradigm. The "hypermodern" school advocated allowing the opponent to occupy the center and commit to a structure while the player established potential lines of assault. Once the opponent's structure was hardened, it could be attacked obliquely, and then the center could be occupied. Until recently the creativity in chess, the combination — a long-term material sacrifice for an immediately exploitable positional advantage — took place almost excusively during the middle game. With a recent avalanche of detailed analyses of chess games, attention had again shifted to the openings which were themselves taking on a middle game character. Here lay Fischer's immediate preoccupation, but he rejected adherence to any one school: "I try to take the best from everything. Anyway, I don't think much about the

philosophical issues of chess; I just try to win." Similarly, he denied any concern with the chess aesthetic. Creating beauty was not his goal. "I just try to win," he repeated.

But wasn't Fischer developing his own system, even if unconsciously? Almost ruefully he denied it: "There's no more room for new systems. Anytime you try to invent something you find it's got a name already."

Pressed further, Fischer made this startling admission: he thought chess was on the brink of death. "Capablanca thought so, and he was wrong. But I don't see anywhere much to develop ... a few more lines and variations, maybe, but most of the creative work has alredy been done. The computers may kill chess, if those jerks who are programming the mistakes into them would allow grandmasters to program them."

There had been a lively debate about computers' ability to play perfect chess both among the academic and chess community. On one side was former world's champion Botvinnic, a computer engineer who insisted that a computer could be designed soon to play grandmaster chess, and on the other was former world's champion May Euwe, a Dutch mathematician who insisted that no machine could be programmed to handle the ideas.

Time seemed to side with the computer advocates, because although the number of permutations was astronomical, miniaturization and other technological advances could overcome the problem. (Even Botvinnic had conceded that given then current technology a computer would have had to be larger than the University of Moscow.)

Recently, Fischer had offered to play the machines in a Chicago computer chess tournament. He was denied permission, he said, because he was too strong. Although the most advanced machine — the MIT computer — was reported to play at only A strength, levels below grandmaster, Fischer believed that someday the computer would solve the game.

And yet, although sounding the death knell of this ancient and revered game, Bobby was optimistic about the future of human play: "Just because cars can do it in less than a minute doesn't mean we stop running the mile."

This observation, which I accepted at the time, while pithy, seems flawed on reflection. It was consistent with Fischer's insistence that chess was a sport. When asked what he would have done if he hadn't been a chess player, he had replied "I don't know, probably an athlete of some sort. Chess is a sport; people and newspapers should treat it as one."

Yet it seems to me that although physical conditioning may be important for best play, chess is not utimately a sport. It is, rather a game, whose best play requires the body not to get in the way of the mind which becomes free to choose a move whose perfect execution, once chosen, is automatic. A sport, on the other hand, requires a physical execution, a performance which is often indeterminate. "Many a slip twixt the cup and the lip' is true in basketball and golf, but not in chess. True sport has two components: the game in the sport and the performance of the sport. In short, in a sport, but not in chess, seeing the right move and executing it are two separate challenges.

Therefore, it seems to me that if chess *is solved* by a computer, it is destroyed. Fischer's racing car analogy would be more apt if steering and endurance, imperfections in human reaction, were somehow eliminated. Presently, before the machine has solved chess, the indeterminacy, the life of this grand human endeavor, is not in the execution of its moves but in the evolution of the plan.

Fischer's racing car analogy, by which he expressed belief in the permanent grandeur of imperfect human intellectual effort, even after the game became a very complex puzzle, warred with his great respect for hard science over psychology. "If not an athlete, then maybe I'd have been a scientist. Chess is a science. But I guess you could say that any sport is part science." And Fischer, more than some other grandmasters, took a very scientific approach to chess.

Those who take a psychological approach will make theoretically bad moves when they feel the result will adequately annoy, puzzle, fool, or unnerve their opponents. Emanual Lasker, an all time chess great, although not one of Fischer's favorites, was reputed to have

played his opponents' personalities. But not Fischer: "I play my own game. I won't play a bad move because I think my opponent doesn't like it."

Furthermore, he did not become emotionally involved in the contest: "It's not good for your game to hate the person while you're playing him." Instead Fischer focuses upon the possibilities inherent in the position. This was Fischer's brand of chess — scientific, objective, and most easily rendered obsolete by machine generated perfect play.

Did Fischer have any weaknesses? Many chess devotees, including grandmasters I interviewed, replied almost as one: "none whatsoever." Bobby was more modest: "I have weak points, but if I revealed them it might help the Russians." Pressed further, he admitted his weaknesses were only relative, and that he was a well balanced player. He did feel himself strongest in the openings, and capable of calculating *ad hoc* any endgame position.

It was generally felt that all possible theoretical work had been done on the endgame and that advantage lay in speed and accuracy of calculation at which Fischer was unequaled. The source of his genius was not clear. Some said it was his ability to perform the thousands of minute calculations necessary. Detractors attribute this ability to a discipline stemming from a deep but narrow vision — tunnel vision. Others said it was his genius of extracting life and tension from apparently sterile, fixed positions. Fischer denied he had a photographic memory, "but I never forget a face."

Nor apparently did he forget a game. I had memorized some of his games which I found most appealing. I set up key positions and asked Fischer to recount as he had thought on those occasions. He instantly issued a stream of consciousness. It was thrilling to hear, and amazing how he could fully remember past positions at request. He even pointed out inferior moves he'd made. But while he narrated his thoughts, something was missing. What were his visions? I wanted him to abstract from it all: "What do you see?" Over and again I asked him this, and he brushed it off. "I'm telling you," or "I don't know." Finally, as we were walking back to his hotel room, out of the blue he turned to me and unsolicited asked: "You want to know what I see? I don't know ... like motion ... pices in motion..."

I pressed him: what did that mean? After much prodding he revealed that when he looked at a position he saw simultaneously radiating from the present configuration, all the ways all the pieces could move. It was to him, as William James has characterized experience itself, a blooming buzzing confusion. Amidst the radiating beehive of all potential moving lines of force, one strong pattern, one scene momentarily appared. The challenge then was to figure out a route by which this position could be reached, and to check for hidden perils along the way.

In short, where some of us see stasis: pieces in position, occupying squares — Fischer saw moving flitting potential.

For me, this was the highlight of our time together. Preparing to say goodbye, I asked him what he would like to be remembered as. Fischer answered emphatically without hesitation: "The man who broke the myth of the Soviet Superman." And what had he given to Chess? He paused, shrugged, and with all due gentleness said, "a lot of good games. That's about all."

EPILOGUE

It has been more than ten years since Bobby Fischer won the world's championship from Boris Spassky at their dramatic confrontation in Iceland. Since then Fischer has not met his great expectations. He has not pushed human comprehension ever closer to solving a mystery of its own creation. Three years after winning the champinship, he forfeited his title, refusing to play. Thus he had not only not fulfilled his promise, but for me personally it was sorely disappointing as he had broken his promises, making a mockery of our time together during which he had declared "I'd like to play at least 150 games a year" as world champion, to take on all comers, and break open the closed system he hated and yet surmounted.

And so, struck by the paradox of this genius who is at once shy and brash, trusting and suspicious, directing conversation away from himself to me, yet egotistical, sleeping 9-10 hours a day, yet athletic and energetic, I too wonder why.

And as a lover of the game I can only fantasize that somehow this account reaches Fischer, and spurs him out of retirement, to beat the Russians and reach his full greatness.

Robert Blecker
Associate Professor,
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COMPARATIVE CHART

	PRESTIGE-B	ELITE A/S	CONSTELLATION	SENSORY 9-B	SUPERSTAR	MEPHISTO III	EXPLORER	SUPER 9
Estimated Rating (1)	1904	1839	1816	1813	1770	1732	1500(1)	1788
Book Size	16 K	6 K	3 K	3 K	4 K	3 K	1 K	8 K
Middle Game Strength (1) Tactical (1)	2150	2050	2200	2000	1900	1800	1700	1950
Positional (1)	1700	1650	1500	1650	1650	1600	1500	1650
End Game Strength (1)	1650	1600	1550	1550	1600	1450	Low	1550
Active/Passive (2)	A	P	A	A	P	A	A	A
Human Like (3)	1	2	3	2	2	2	2	2
Typical Look-Ahead Middle Game Full Width	5	5	5	4+	4+	2	3	4+
Selective	10	10	10+	8	6	13	5	8
User Adjustable Time Control	Y	Y	N	N	N	N	N	Y
Displays Main Variation	Y	Y	N	N	N	Y	N	Y
Displays Depth of Analysis	Y	Y	N	N	N	Y	N	Y
Displays Position Evaluation	Y	Y	N	N	N	Y	N	Y
Underpromotes	Y	Y	Y	Y	Y	Y	N	Y
Accepts/Refuses a Draw	Y	Y	N	Y	N	N	N	Y
Claims A Draw	Y	Y	Y	Y	Y	Y	Y	Y
Announces Forced Mate In Advance	Y	Y	N	Y	N	Y	N	Y
Random/Best Option	N	N	Y	N	N	Y	N	N
Next Best Option	Y	Y	N	N	N	N	N	Y
Ease To Enter Opening Position (3)	1	1	1	1	1	2	3	1
Ease To Enter Problems (3)	1	1	1	1	1	3	3	1
Auto Response Board	Y	N	N	N	N	N	N	N
Key-In Moves	N	N	N	N	N	Y	N	N
Pressure Sensitive	N	N	Y	Y	Y	N	Y	Y
Selectable Openings	Y	Y	N	Y	N	N	N	Y
Retains All Game In Memory	N	Y	N	N	Y	Y	N	N
Clock	Y	Y	N	N	N	Y	N	Y
Count-Down Mode	Y	Y	N	N	N	N	N	Y
Move Counter	Y	Y	N	N	N	Y	N	Y
Plays White/Black From Bottom	Y	Y	Y	N	N	Y	Y	N
Portable (4)	N	N	N	N	N	N	Y	N
List Price (*)	1495	450	217	195	199	399	89	260

*Discount Prices are generally available.

Notes:

1: Subjective Estimate
2: A = Active; P = Passive; M = Intermediate
3: (In Relative Terms) 1 = Maximum; 2 = Intermediate; 3 = Minimum
4: Required: Battery Operated and Small Size.