The Fifteenth

ACM North American

Computer Chess Championship

San Francisco, California

October 7-9, 1984

A Special Event at ACM-84

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Welcome and Overview

Last year the ACM hosted the Fourth World Computer Chess Championship in New York at its Annual Conference. This year, the tournament is "only" the North American Championship, but the top finishers from last year's event will all be present. The computers will be bigger and faster and the programs will be stronger and I suspect we are in for four rounds of very exciting chess.

CRAY BLITZ won the World Championship last year using a dual-processor Cray computer. This year it will run on a four-processor Cray computer and Hyatt expects the program to be significantly stronger. BELLE, the previous world champion, is the main contender and is currently the only program that is officially a U.S. Master with a USCF rating of 2200. The other chief contender is NUCHESS, a descendant of CHESS 4.6, world champion from 1977-1980. A number of other programs have outside chances to win the championship including BEBE, CHAOS, FIDELITY EXPERIMENTAL, NOVAG EXPERIMENTAL, and PHOENIX.

The big computer manufacturers will be well represented. Three programs are expected to run on Cray computers, two on Amdahl computers, one on CDC's Cyber 176, one on Burrough's 7800, and one on DEC's (relatively small) VAX 11/780. One program will run on an 8-processor Data General system; one will run on a DEC 11/23 with special hardware. In addition to these ten systems which will be spread across the United States and Canada and connected into the Hilton by telephones, four computer systems will be on site. Fidelity and Novag will participate with 6502-based systems while Intelligent Software will use an Apple computer. Lastly, SYS-10's Chess Engine, a powerful home-brewed computer, will introduce a bit-sliced machine into the pack.

Mike Valvo will serve as Tournament Director and Emcee for the fourth year in a row. Valvo is an International Master and one of American's best blindfold chess players.

A special panel discussion on "Chess on Non-standard Computer Architecture", will be held on Monday afternoon with Tony Marsland serving as Moderator. The subject will become increasingly relevant over the coming years as the cost of hardware decreases and fabrication techniques improve.

For those interested in participating in next year's event in Denver, an application form is included in this booklet.

Let us close by thanking the participants for coming to San Francisco. It is a large investment of time and energy and we hope you will feel it well justified. To the audience, we hope you enjoy a few days of exciting chess observing the strength of the better programs closing in on the, not Masters any longer, but Grandmasters!

Monty Newborn, Chairman,
ACM Computer Chess Committee
Don Miller, Local Arrangements
Ken Thompson, Entries and Members, ACM CCC
Ben Mittman, Vice Chairman, ACM CCC
Kathe Spracklen, ACM CCC
Tony Marsland, ACM CCC

IMPORTANT TIMES AND PLACES

Required meeting of all participants:

12:00 pm, Sunday October 7th in the Imperial Ballroom

Schedule of Rounds:

Round 1:	1:00 p.m.	Sunday,	October 7th 1984
Round 2:	7:00 p.m.	Sunday,	October 7th 1984
Round 3:	7:00 p.m.	Monday,	October 8th 1984
Round 4:	7:00 p.m.	Tuesday,	October 9th 1984

Location: The tournament will take place in the Imperial Ballroom of the San Fransisco Hilton and Tower Hotel.

Admission: Free to ACM Conference attendees.

ACM Computer Chess Committee Luncheon:
12:30 noon Monday, October 7, 1984. Non-committee members are welcome to attend.

Technical session on computer chess:
Monday, October 8, at 4:00 p.m.
Moderator: Tony Marsland

Awards Ceremony:
11:00 p.m. Tuesday (catered)

ICCA Meeting:
Monday, October 8 at 5:30 p.m.

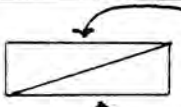
*Note: Places will be announced at the tournament site.

SCORECARD

ACM'S FIFTEENTH NORTH AMERICAN

COMPUTER CHESS CHAMPIONSHIP

TEAM	ROUNDS 1	2	3	4	TOTAL POINTS	FINAL PLACE
1. AWIT						
2. BEBE						
3. BELLE						
4. CHAOS						
5. CRAY BLITZ						
6. FIDELITY EXP						
7. INTELLIGENT SOFTWARE EXP						
8. MERLIN						
9. NOVAG EXP						
10. NUCHESS						
11. OSTRICH						
12. PHOENIX						
13. SCHACH 2.7						
14. XENARBOR						

Code: 

PARTICIPANTS IN THE ACM'S FIFTEENTH NORTH AMERICAN COMPUTER CHESS CHAMPIONSHIP

AWIT	Tony Marsland, Computing Science Department, University of Alberta, Edmonton, Alberta, Canada T6G 2H1.
BEBE	Tony Scherzer, SYS-20 Inc., 2111 Stonington Avenue, Hoffman Estates, Illinois 60195 USA.
BELLE	Ken Thompson, Joe Condon, Bell Laboratories, c/o KT, Room 2C 519, Murray Hill, New Jersey 07974 USA.
CHAOS	Mike Alexander, Fred Swartz, Jack O'Keefe, Victor Berman, c/o FS, Computing Center, University of Michigan, 1075 Beal Avenue, Ann Arbor, Michigan 48109 USA.
CRAY BLITZ	Robert Hyatt, Albert Gower, Harry Nelson, c/o RH, Box 5106 Southern Station, Hattiesburg, Mississippi 39401 USA.
FIDELITY EXP	Dan Spracklen, Kathy Spracklen, c/o KS, Fidelity Computer Products.
INTELLIGENT SOFTWARE EXP	Mark Taylor, Richard Lang, David Levy, Kevin O'Connell, c/o DL, 104 Hamilton Terrace, London NW8 9UP, Egland.
MERLIN	Hermann Kaindl, Marcus Wagner, Helmut Horacek, c/o HK, Marxergasse 18/2/1, A-1030 Wien, Austria.
NOVAG EXP	David Kittinger, Scott McDonald (chess adviser) c/o DK, IHP, 7417 Van Nuys Blvd., Suite 8, Van Nuys, California 91405 USA.
NUCHESS	David Slate and William Blanchard, c/o WB, 360/253 Blackthorn Lane, Warrenville, Illinois 60555 USA.
OSTRICH	Monty Newborn, School of Computer Science, McGill University, Montreal, Quebec H3A 2K6 Canada.
PHOENIX	Jonathan Schaeffer, Department of Computer Science, University of Alberta, Edmonton, Alberta T6G 2H1 Canada
SCHACH 2.7	Matthias Engelbach, Rheinischer Ring 19, 5210 Troisdorf, West Germany.
XENARBOR	Donald Miller, 11661 Patter Ct, Los Altos California 91022 USA

PROGRAM INFORMATION

Program	Authors	Computing System (Location)*	Language	Program Size (Program, Data)	Book Size	Nodes/Sec.
AWIT	Marsland	Amdahl 5860/2 (Univ. of Alberta) (Univ. of Alberta) 24 mb, 32 bits, 13 mips	Algol W	.75 Mb/100 Kb	10K pos	8
BEBE	Scherzer	Custom Chess Engine 32K, 16 bits, 7 mips	Assembler	12K/16K	2K pos	20K
BELLE	Thompson	DEC 11/23 with special purpose hardware(Bell Labs) 128K, 16 bits, .2 Mips	C	24KW/NA	NA	160K
CHAOS	Alexander Swartz O'Keefe Berman	Amdahl 5680 16mw, 32 bits, 10 mips (Amdahl Corp., Sunnyvale)	FORTRAN	700Kb/3000Kb	10K pos	95
CRAY BLITZ	Hyatt Gower Nelson	Cray X-Mp4 8 mw, 64 bits, 420 mips (Mendota Heights, MN)	FORTRAN/CAL	40KW/6MW	40K pos	100K
FIDELITY EXPERIMENTAL	Spracklen Spracklen	6502-based system 20 kb RAM, 4K RAM, 8 bits, 1 mips+	Assembly	20 Kb/4 Kb	72K pos	1K+
INTELLIGENT SOFTWARE EXP	Taylor Lang Levy O'Connell	Apple II E 48 Kb, 8 bits, ∿1 mips	Assembler	48 Kb/1.5 Kb	2.5K	.5K
MERLIN	Kaindl Wagner Horacek	CDC Cyber 176 262 KW + ECS, 60 bits, 35 mips (CDC, Arden Hills, MN)	PASCAL	50 KW + ECS for Trans.Tbl.	6K	.2-.4K
NOVAG EXP	Kittinger McDonald	6502-based system 64 Kb, 8 bits, 1 mips	Assembler	56 Kb/4 Kb	NA	1 K

* at site if not otherwise indicated

NUCHESS	Slate	Cray 1M 2 Mb, 64 bits, 80 mips Cray Res., Chippewa Falls, WI)	FORTRAN	250 Kb/2 Mb	6K	3K
OSTRICH	Newborn	8-Computer DG Multiprocesssing System: 1 S/120 Eclipse, 6 Nova 4's, 1 Nova 3. 32 KW, 16 bits, 1 mips (per computer) (McGill Univ. Mtl.)	Assembly	10 KW/20 KW per computer	2K	.8K
PHOENIX	Schaeffer	VAX 11/780 6 meg, 32 bits, 1 mips (U. of Alberta, Edmonton)	C	250KW/50KW	4K	.5K
SCHACH 2.7	Engelbach	Burroughs 7800 6 Mb, 48 bits, 8 mips (Burroughs, Paoli, PA)	Algol	60Kb/2Mb	10K	1K
XENARBOR	Miller	CRAY 1-S Memory size NA, 60 bits, 80 mips (Kansas City)	FORTRAN	300 Kb/12 Kb	1K	NA

HISTORY OF MAJOR TOURNAMENTS

World Championships

Year	City	Winner	Runner-up
1974	Stockholm (at IFIDS-74)	KAISSA; Donskoy, Arlazarov, ICL 4/70	CHESS 4.0, Slate, Atkin, CDC 6600
1977	Toronto (at IFIDS-77)	CHESS 4.6; Slate, Atkin, CDC CYBER 176	DUCHESS, Truscott, Wright, Jensen, IBM 370/165
1980	Linz	BELLE; Thompson, Condon, PDP11/23 with special purpose hardware	NUCHESS; Slate, Blanchard, CDC CYBER 176
1983	New York (at ACM-83)	CRAY BLITZ; Hyatt, Gower, Nelson, Cray X-MP	AWIT; Marsland, Amdahl 5860/2

ACM's North American Championships

1970	New York	CHESS 3.0; Slate, Atkin, Gorlen, CDC 6400	The Daly Chess Program; Daly, King, Varian.
1971	Chicago	CHESS 3.5; Slate, Atkin, Gorlen, CDC 6400	TECH; Gillogly, PDP 10
1972	Boston	CHESS 3.6; Slate, Atkin Gorlen CDC 6400	OSTRICH; Arnold, Newborn, D.G. Supernova
1973	Atlanta	CHESS 4.0; Slate, Atkin, Gorlen, CDC 6400	TECH II; Baisley, PDP 10
1974	San Diego	RABBIT: Hansen, Crook Parry, Honeywell 6050	CHESS 4.0; Slate, Atkin, CDC 6400
1975	Minneapolis	CHESS 4.4; Slate, Atkin, CDC CYBER 175	TREEFROG; Hansen, Calnek, Crook, Honeywell 6080
1976	Houston	CHESS 4.5; Slate, Atkin, CDC CYBER 176	CHAOS; Swartz, Ruben Winograd, Berman, Toikka, Alexander, Amdahl 470
1977	Seattle	CHESS 4.6; Slate, Atkin, CDC CYBER 176	DUCHESS; Truscott, Wright, Jensen, IBM 370/168
1978	Washington	BELLE; Thompson, Condon, PDP 11/70 with chess hardware	CHESS 4.7; Slate, Atkin, CDC CYBER 176
1979	Detroit	CHESS 4.9; Slate, Atkin, Cahlander, CDC CYBER 176	BELLE; Thompson, Condon PDP 11/70 with chess hardware
1980	Nashville	BELLE; Thompson, Condon, PDP 11/70 with chess hardware	CHAOS; Alexander, O'Keefe, Swartz, Berman, Amdahl 470
1981	Los Angeles	BELLE; Thompson, Condon, PDP 11/23 with chess hardware	NUCHESS; Blanchard, Slate CDC CYBER 176
1982	Dallas	BELLE; Thompson, Condon PDP 11/23 with chess hardware	CRAY BLITZ; Hyatt, Gower, Nelson, Cray 1
1983	* Not held in 1983 as such. The ACM hosted the World Championship instead of the NA Championship.		

Report on a Meeting

The Fourth World Computer Chess Championship

D. Kopec and M. Newborn McGill University

The Fourth World Computer Chess Championship (WCCC) was won by CRAY BLITZ, a program written by Robert Hyatt, Albert Gower, and Harry Nelson of the University of Southern Mississippi. The event was hosted and sponsored by ACM and took place during its annual conference in New York City October 22–25, 1983. There was a record number of 22 participants, including nine entries from the United States, three from Canada, three from England, three from West Germany, and one each from Austria, Finland, the Netherlands, and Sweden. Previous world championships have been held in Stockholm (1974), won by KAISSA (Misha Donskoy and Vladimir Arlazarov of the U.S.S.R.); Toronto (1977) won by CHESS 4.6 (David Slate and Larry Atkin of the United States); and Linz, Austria (1980) won by BELLE (Ken Thompson and Joe Condon of the United States). Due to the large number of participants this world championship was extended to a five-round Swiss System event instead of four rounds as in the past.

The event was attended by journalists from the popular and science press and by some of America's most prominent grandmasters. Mikhail Botvinnik, former World Chess Champion (1948–63), attended as an Honored Guest and was a center of interest for the news media. He noted that although there had been a ten-fold increase in the processor speed of computers since the last World Championship he had attended (Toronto, 1977) there seemed to be only about a 10 percent improvement in the strength of computer chess play, a perspective perhaps reserved for those few players of the former World Champion's stature. Nonetheless, to the more usual computer chess observer it is clear that the general level of play has risen. The tail-enders played respectably and there was stiffer competition among the top contenders.

CRAY BLITZ Finally Succeeds

CRAY BLITZ won the tournament outright with a score of 4½/5 (four wins and a draw). 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 in head-to-head encounters with the World Champion program BELLE, by either losing or drawing on each occasion. At last year's ACM Championship in Dallas, CRAY BLITZ held BELLE to a draw in their crucial last round encounter only to finish 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 time CRAY BLITZ succeeded with flying colors, and defeated BELLE in yet another tense last round encounter between the two programs.

The final standings saw AWIT (Tony Marsland, University of Edmonton, Alberta, Canada) and BEBE (Tony Scherzer, SYS-10 Inc., Hoffman Estates, Illinois) each finish with a 4-1 score, although BEBE took second place based on tie-break points. NUCHESS (David Slate and William Blanchard, Northwestern University) gained fourth place on tie-break points over CHAOS (Mike Alexander, Fred Swartz, Jack O'Keefe, University of Michigan) each scoring 3½–1½, three wins, one draw, and one loss.

A surprise was the final score of BELLE, the defending World Champion who had distinguished herself

(Thompson believes the program is likely to be a female) as the most outstanding program for at least the past three years. BELLE had not lost a tournament game against another computer since the 1978 ACM North American Computer Chess Championship in Washington, D.C., when she won her first title. As recently as August 1983 BELLE achieved a remarkable 8½–3½ score and 2300+ performance rating at the U.S. Open Championship in Los Angeles, defeating four human masters en route. Ironically BELLE had been awarded a certification plaque by the United States Chess Federation early in its third-round game for having become the first 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 fifth-round showdown with CRAY BLITZ, BELLE still had a chance to tie for first and serve as spoiler again for CRAY BLITZ, but she lost, leaving her with a final score of 3-2, (three wins and two losses).

BELLE's Misfortune

Not long before the World Championship, BELLE's search was modified to analyze capturing sequences more deeply, implicitly implying that noncapturing sequences received less attention. Thompson convinced himself that this modification improved the program's strength when he put her through the Bratko-Kopec test [1], on which she performed better than had previous versions. This test was designed to measure and compare the performance of humans and computer chess programs. BELLE's im-

FINAL STANDINGS

Program	Country	Authors	Computer	Points	Final* Place
CRAY BLITZ	USA	Hyatt, Gower, Nelson	CRAY X-MP (dual processor)	4½	1
BEBE	USA	Scherzer	Custom-built bit-sliced machine (at site)	4	2
AWIT	Can	Marsland	Amdahl 5860/2	4	3
NUCHESS	USA	Slate, Blanchard	CRAY 1-M	3½	4
CHAOS	USA	Swartz, Alexander, O'-Keefe	Amdahl 5860	3½	5
BELLE	USA	Thompson, Condon	PDP 11/23 with special hardware (at site)	3	6
SCHACH 2.7	W. Ger	Engelbach	Burroughs B7800	3	7
ADVANCE 3.0	Eng	Johnson, Wilson	Bit-sliced microcoded machine (at site)	3	8
MEPHISTO EXP.	W. Ger	Nitsche, Henne	Motorola 68000-based system (at site)	3	9
FIDELITY EXP.	USA	Spracklen, Spracklen, Baczynskyj	6502-based system (at site)	2½	10
MERLIN	Aus	Kaindl, Wagner, Koracek	Siemens 7.890F	2½	11
NOVAG EXP.	USA	Kittinger	6502-based system (at site)	2½	12
PHOENIX	Can	Schaeffer, Ris, Scian	Honeywell DPS 8/70	2½	13
OSTRICH	Can	Newborn	D. G. Multiproc. Sys. (with 8 Nova-equiv.)	2	14
PION	Neth	Derkson, van Beinum, Dekker, Van den Herik, Hunen, Nefkens	VAX 11/750	2	15
BCP	Eng	Beal	Z-8000 Custom-built computer (at site)	2	16
PATSOC 2.0	USA	Berliner	DEC KL-10	1½	17
PHILIDOR	Eng	Broughton, Levy, O'Connell, Taylor	IBM PC (at site)	1½	18
CONCHESS EXP.	Swe	Rathsman	6502-based system (at site)	1½	19
BOBBY	W. Ger	Krass, Schrufer	IBM 370/165	1½	20
SHY	Fin	Kasanen, Korhonen, Saari	Burroughs B7800	1½	21
SFINKS EXP.	USA	Fink	IBM PC (at site)	0	22

* Teams finishing with an equal number of points were ordered based on the number of points won by their opposition.

proved performance on the test led Thompson to conclude that the general performance of the program had been improved. However, time prevented him from thoroughly testing the effects of these changes and they appear to have been adverse.

The improved performance of CRAY BLITZ may be primarily attributed to modifications made in the weeks leading up to the tournament. These enabled parallel execution of the program on the dual-processor CRAY X-MP computer. Cray Research has been supporting the work of Hyatt (a strong programmer but a relatively weak chess player) and his colleagues, Gower and Nelson (the chess advisors) since 1980, and the group has made significant progress in recent years. While CRAY BLITZ is outsearched by BELLE and BELLE has a much larger opening library, Hyatt would contend that this is balanced by the ability of his program to base its search on somewhat more chess-specific knowledge.

NUCHESS's Missed Opportunity

After NUCHESS[1] defeated BELLE in the third round and escaped with a draw in the fourth round against CRAY BLITZ (see Appendix) it seemed destined to win the tournament. However, it was upset by BEBE in the final round and finished in fourth place. 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[2] noted that he feels NUCHESS plays more like a human than any other program—that is, it seems to know what moves are necessary in order to improve a bad position.

The Microcomputers

Nine microcomputer programs were among the twenty-two participants. Although the Third World Microcomputer Chess Championship (held just prior to this event) was convincingly won by Fidelity's ELITE program and in the view of some had an outside chance to win the New York event, the best microcomputer performances were by ADVANCE 3.0 (Mike Johnson and David Wilson, London, England) and MEPHISTO EXPERIMENTAL (Elmar Henne and Thomas Nitsche, Munich, West Germany) each scoring 3-2, placing 8th and 9th respectively. Nitsche, who claims to have made considerable improvements to his program, feels that MEPHISTO EXPERIMENTAL 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 Baczynskyj, San Diego, California) and NOVAG EXPERIMENTAL (David Kittinger, Van Nuys, California). These results indicate that the top microcomputers have established themselves in the 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.

Texas Instruments contributed the terminals for the World Championship and financial assistance was provided by Control Data Corporation, SciSys, Hayden Software, Fidelity Electronics, Ralph Wanger, Myron Szold, and the Baruch College Chess Club.

ACM '84 is to host the 15th North American Computer Chess Championship in San Francisco. For more information or to apply, write to M. Newborn, School of Computer Science, McGill University, 805 Sherbrooke Street West, Montreal, Quebec, H3A 2K6, Canada.

[1] A FORTRAN offspring of the CHESS 3. and 4. series by Larry Atkin and David Slate of Northwestern University, the programs which dominated computer chess tournaments through most of the 1970s.

[2] An Honored Guest, former World Correspondence Chess Champion, author of a backgammon program which defeated a World Champion in a short match, and programmer of PATSOC 2.0.

REFERENCES

1. Kopec, D., and Bratko, I. The Bratko-Kopec experiment. In *Advances in Computer Chess*, 3 (ed. M.R.B. Clarke). Pergamon Press, Oxford, 1983, pp. 57–72.
2. Christiansen, L. Annotation in The new champion by H. Bogner, in *Chess Life*, Feb. 1983, p. 33.
3. Kopec, D., and Newborn, M. The Thirteenth Annual North American Computer Chess Championship at ACM 82. *Commun. ACM 26*, 9 (Sept. 1983), 695–97.

APPENDIX

Following are the games considered most important to the final standings and most characteristic of the play of the top finishers.

The game between NUCHESS (White) and CRAY BLITZ (Black) was a tumultuous battle in the style to which we have become accustomed for games between two resourceful and strong computer programs. Although far from perfect, the play is highlighted by sparks of brilliance and phases where each side dictates. Human experts (ratings between 2000 and 2199) will also often play such games with varying trends. The end result of this extremely hard-fought struggle is an equitable draw.

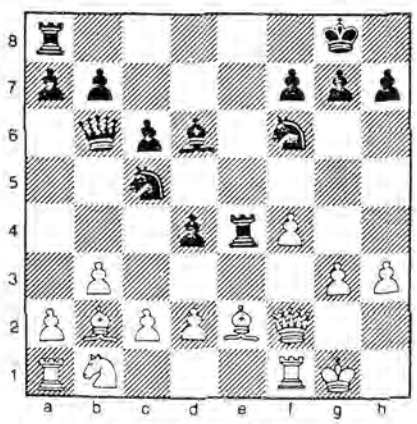
Symbols

! = A very good move
!? = An interesting move
?! = a dubious move
? = a blunder

Round 4

NUCHESS–CRAY BLITZ
Bird's Opening

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



Position after 17. Qf2

Considering Black's lead in and superior development, one would expect a winning combination to exist; it does but it's not obvious. The sequence goes 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's continuation is a worthy try, but NUCHESS defends accurately even finding a way to develop its Queen side.

17. . . 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.Bd5 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+ 1/2-1/2 Drawn by repetition.

The last-round encounter between BELLE (White) and CRAY BLITZ (Black) was another epic battle, although after BELLE relinquished her queen for rook and bishop on move 23 the result was never in much doubt. From that point on, White had little chance of winning and Black's material advantage was sufficient to lead ultimately to victory. Nonetheless, with a win BELLE could still emerge tied for first place. (The following game is annotated by Danny Kopec.)

Round 5

BELLE-CRAY BLITZ
Sicilian Defense

1. e4 c5 2.c3

This second move which avoids the main-line theory of the complex Sicilian Defense, was BELLE's choice for the tournament. In recent years the move has undergone considerable revitalization on the international tournament chess scene.

2. . . . d5 3. exd5 Qxd5

With the White Queen's knight unable to develop to c3 and gain a tempo on the Black queen, this line is considered quite reliable for Black towards securing easy equality.

4. Nf3 e6 5.d4 Nf6 6.Bd3

6.Be2 is a viable alternative aimed against a possible later transfer of the Black queen to h5.

6. . . . Nc6 7. O-O Be7 8. Be3 O-O?!

Up to here play has been following book for both programs. However the text is a departure from standard theory which continues 8. . . . cxd4 9. cxd4 Bd7 10. Nc3 Qd6 with a solid position for Black. CRAY BLITZ believed that after the ensuing move sequence (9.dxc5 Rd8) it would stand slightly better.

9. dxc5!

The point is that 9. . . . Bxc5? 10. Bxh7+ etc. would lead to the loss of a pawn for Black.

9. . . . Rd8

White could now obtain a slight edge with 10. Be2 Qf5 11.Nbd2 Bxc5 12. Bxc5 Qxc5 13. Qc2. If in this sequence 10. . . . Bxc5? then 11.Qxd5 Rxd5 12.c4 etc. wins material for White.

10. Nd4

Instead the "intercepting" text move invites complications on the *d*-file while losing time.

10. . . . Bxc5

Black could now steer for a "dynamic" equality via 10. . . . Ne5 11. Be2 Nc4 12. Bxc4 Qxc4 13. Nbd2 Qd5 with active play for the pawn as suggested by Grandmaster Larry Christiansen in *Chess Life*, [2] although computers have never been known to venture in such pawn sacrifices. Another viable alternative is 10. . . . e5 virtually forcing 11. Nxc6 Qxc6 when Black recovers his pawn with an easy game.

11. c4!

BELLE now effects a slight weakening of CRAY BLITZ's pawn structure, but the pressure on the *d*-file must first be withstood.

11. . . . Qd6 12.Nxc6 bxc6

Here 12. . . . Qxc6? loses the exchange after 13. Bxc5 Qxc5 14. Bxh7+ etc.

13. Bxc5 Qxd3 14.Qa4 ?!

This leaves the White queen offside and BELLE's queenside lagging in development. Akin to the difficulties BELLE encountered against OSTRICH in last year's ACM Championship [3] a delay of the development of White's queen's knight is responsible. As Christiansen points out, 14.Na3 would remedy White's problems, even leaving him with a slight positional edge.

14. . . . Ne4!

Strong since 15. Qxc6 loses to . . . Bd7.

15. Bb6! Rd7 16. Ba5?

Now 16. Na3 was White's last chance to procure a definite plus. The Bishop on a5 guards d2 and attacks d8, but the move wastes more precious time.

16. . . . Bb7!? 17.Nc3 Nc5

On the previous move 16. . . . Nxc3 was simpler and safer, but CRAY BLITZ is "naively" inviting the pin of its knight d3.

18. Qb4 Qd4 19. Rad1?

A very natural move which most humans would make, although it actually leads to favorable chances for Black. Instead 19.Ne2 is better, leaving more room for the White queen.

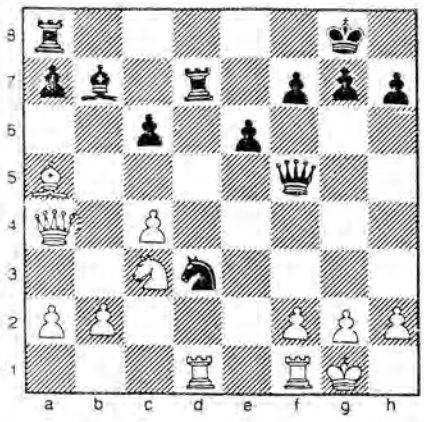
19. . . . Nd3 20.Qa4 Qg4

Due to the pins, possible discovered attacks, and uncertain position of both queens, the position is now very tricky. 20. . . . c5! was a promising alternative.

21. c5

Cutting off Black's bishop on b7 but leaving the b and c-pawns weak.

21. . . . Qf5



Position after 21. . . . Qf5

22. b4?
BELLE decides to give up her queen. Instead 22.Qe4 with the idea . . . Qxc5 23. Rxd3 Rxd3 24.Qxd3 Qxa5 25.Qd7 enables White to equalize.

22. . . . Nb2 23. Rxd7 Nxa4 24.Nxa4 Qc2 25.Rxb7 Qxa4
Although White's bishop prevents an activation of the Black rook via d8, it is otherwise seriously out of play. A winning plan for Black now would be to centralize its queen (e.g. to d5), move . . . Re8, and then advance the e and f-pawns in order to effect a decisive kingside breakthrough.

26. Ra1 e5! 27.f3 Qc2 28.Rc7 Qd3
29.Rf1 Qd5 30.a3 g5
An unusual way of removing back rank threats, but since Black has nothing better to do, he seems to gradually stumble upon the above-mentioned overall winning plan.

31. Re7 f6 32.Rc7 h5 33.h3
Interestingly CRAY BLITZ does not wish to take the "time out" for . . . a6 to free its rook until the kingside expansion is completed.

33. . . . Kh8 34.Kh2 a6
At last!

35. Re1 Re8 36. Re4
Black's reply deems this move somewhat pointless. Instead 36.a4 would at least attempt to distract the Black queen.

36. . . . f5 37.Re2 g4 38.hxg4 fxg4 39.fxg4 hxg4 40.Rf2
CRAY BLITZ must have already calculated that the White rook's penetration to the seventh rank cannot amount to much, as it seems to be zoning in on its own winning plan.

40. . . . e4 41.Rff7 Qe5+! 42.g3 e3 43.Rh7+ Kg8 44.b5 cxb5 45.Be1 Qb2+ 46.Kg1 Qa1
A multifunctional queen—defending g7 and pinning the bishop on e1.

47.Kg2 Qf6! 48.Kh2 Rd8 49.Rhd7 Rf8
49. . . . Rxd7 50.Rxd7 Qf1 would also win quickly, but CRAY BLITZ prefers to play for mate.

50. Rd6 Qb2+ 51.Kg1 Qb1 52.Kh2 Qc2+ 53.Kg1 Qf5!
And now with mate unavoidable, Ken Thompson resigned for his program.

The game between the two top microcomputer finishers in the WCCC, ADVANCE 3.0 (White) and MEPHISTO EXP. (Black), resulted in a route when the latter was ill-prepared in a sharp line of the Sicilian Defense which led to a permanent bind on Black's position.

Round 4

ADVANCE 3.0–MEPHISTO EXP.

Sicilian Defense

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 O-O 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 Kf6 49.Ra7 Rxd6 50.Rxb7 Rc6 1–0.
After a harmless opening in which there were many liquidations, BEBE found some clever endgame tactics against NUCHESS to emerge an exchange ahead. A long phase followed where NUCHESS put up good resistance, but in the end BEBE's technique proved adequate to secure the full point.

Round 5

BEBE–NUCHESS

Petroff's Defense

1.e4 e5 2.Nf3 Nf6 3.d4 Nxe4 4.Bd3 d5 5.Nxe5 Bd6 6.O-O O-O 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.a8=Q Kf5 62.Qa6 Kg5 63.Qxg6+ Kh4 64.Nxg4 hxg4 65.Rh8 Mate 1-0.

CSC 86 February 3–7 Cincinnati

RESULTS AND GAMES (Ken Thompson)

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 ♗g5 f6 3 ♗f4 ♘c6 4 ♘f3 g5 5 ♗g3 h5 6 ♕d3 h4 7 ♕g6† ♔d7 8 ♘×h4 g×h4 9 ♕g4† e6 10 ♗×h4 f5 11 ♗×d8 f×g4 12 ♗g5 ♘×d4 13 ♔d1 ♗d6 14 e3 ♖h5 15 h4 g×h3 16 ♖×h3 ♖×h3 17 g×h3 ♘f3 18 h4 ♗e5 19 ♘c3 ♗×c3 20 b×c3 e5 21 ♗e2 ♘g1 22 f4 e×f4 23 ♗g4† ♔d6 24 ♗×f4† ♔c6 25 ♗×c8 ♖×c8 26 ♖b1 ♘e7 27 ♖b4 ♘h3 28 ♗e5 ♘f5 29 h5 ♘×e3† 30 ♔c1 ♘c4 **0–1**

Cray Blitz — BCP 1 e4 c5 2 ♘f3 ♘f6 3 e5 ♘d5 4 ♘c3 e6 5 ♘×d5 e×d5 6 d4 ♘c6 7 d×c5 ♗×c5 8 ♕×d5 ♕b6 9 ♕d2 O-O 10 ♗c4 ♖e8 11 O-O ♘×e5 12 ♘×e5 ♖×e5 13 ♕f4 ♕f6 14 ♕×f6 g×f6 15 ♔h1 d5 16 f4 ♖h5 17 ♗e2 ♖h4 18 ♗f3 d4 19 g3 ♖h3 20 f5 ♔g7 21 ♔g2 ♖h6 22 ♗×h6† ♔×h6 23 ♗d5 ♔g7 24 ♖ad1 a5 25 ♔h1 ♖a6 26 ♗e4 b5 27 ♖fe1 ♗d7 28 ♖d2 ♗c6 29 ♗×c6 ♖×c6 30 ♖e8 ♗b6 31 ♖b8 b4 32 ♖b7 ♔f8 33 ♖e2 ♗c7 34 g4 ♖c5 35 ♖a7 ♗b6 36 ♖a6 ♖c6 37 ♖d2 ♖d6 38 ♖d3 ♔g7 39 c3 ♔g8 40 a4 ♔g7 41 c×b4 a×b4 42 a5 ♗c5 43 ♖×d6 ♗×d6 44 ♖×d4 ♗c5 45 ♖d5 ♗e3 46 ♖d3 ♗c5 47 ♖d7 ♗e3 48 a6 h5 49 g×h5 ♔f8 50 ♖d3 ♗c5 51 ♖g3 ♔e8 52 h6 ♗d6 53 a7 ♔e7 54 ♖d3 ♗c7 55 a8♕ ♗d6 56 h7 b3 57 ♕b7† ♔e8 58 h8♕† ♗f8 59 ♕e4# **1–0**

Schach 2.7 — Chaos 1 d4 ♘f6 2 c4 e6 3 ♘f3 b6 4 g3 ♗b7 5 ♗g2 ♗e7 6 O-O O-O 7 ♘c3 ♘e4 8 ♕c2 ♘×c3 9 ♕×c3 ♗e4 10 ♗f4 c6 11 ♖fd1 d5 12 c×d5 ♕×d5 13 ♘e1 ♗×g2 14 ♘×g2 ♘d7 15 f3 ♕b5 16 e4 c5 17 d5 e×d5 18 ♖×d5 ♘f6 19 ♖d3 ♖fd8 20 ♖ad1 ♖×d3 21 ♖×d3 c4 22 ♖d1 ♗c5† 23 ♗e3 ♗b4 24 ♕c2 h6 25 h4 ♖c8 26 ♔f2 ♗c5 27 ♕e2 ♕a5 28 ♗×c5 ♕×c5† 29 ♘e3 b5 30 ♕d2 b4 31 ♕e2 c3 32 ♕c2 a5 33 ♖e1 ♖d8 34 ♖c1 ♕d4 35 b×c3 ♕d2† 36 ♕×d2 ♖×d2† 37 ♔e1 ♖×a2 38 c×b4 a×b4 39 ♘d5 b3 40 ♘×f6† g×f6 41 ♖b1 b2 42 ♔d2 ♔g7 43 ♔c2 ♖a3 44 ♖×b2 ♖×f3 45 ♖b3 ♖×b3 46 ♔×b3 ♔g6 47 ♔c4 ♔h5 48 ♔c5 ♔g4 49 ♔d6 f5 50 e×f5 ♔×f5 51 ♔e7 ♔g6 Adjudicated ½–½

Nuchess — Philidor X 1 f4 d5 2 ♘f3 ♘f6 3 e3 g6 4 ♗e2 ♗g7 5 O-O O-O 6 d3 c5 7 ♕e1 ♘c6 8 c3 b6 9 ♘a3 e6 10 ♘e5 ♘×e5 11 f×e5 ♘e8 12 d4 ♗d7 13 ♗d2 ♗a4 14 ♕g3 ♗c6 15 b4 ♖b8 16 ♘b5 ♗×b5 17 ♗×b5 ♕e7 18 ♖ab1 ♕c7 19 b×c5 b×c5 20 ♗d3 ♖b6 21 ♗c2 h6 22 ♕h4 g5 23 ♕h5 ♕c6 24 h4 g×h4 25 ♕×h4 ♖×b1 26 ♖×b1 ♕a6 27 a4 ♕c4 28 ♕e1 ♕a6 29 ♗c1 ♕c4 30 ♗a3 ♕a2 31 ♕c1 a6 32 ♗×c5 ♕c4 33 ♕d2 ♘d6 34 e×d6 **1–0**

Merlin — Bebe 1 e4 c5 2 c3 d5 3 e×d5 ♕×d5 4 d4 e6 5 ♘f3 ♘c6 6 ♗e2 ♘f6 7 d×c5 ♗×c5 8 ♕×d5 ♘×d5 9 ♘bd2 O-O 10 O-O ♖d8 11 ♘e4 ♗e7 12 ♖e1 e5 13 ♗d2 ♘c7 14 ♗g5 ♗×g5 15 ♘e×g5 h6 16 ♘e4 ♗f5 17 ♘c5 b6 18 ♘b7 ♖d7 19 ♖ad1 ♖b8 20 ♖×d7 ♗×d7 21 ♘d6 ♗e6 22 ♗c4 ♖d8 23 ♗×e6 ♘×e6 24 ♖d1 ♔h7 25 ♔f1 ♔g6 26 ♘h4† ♔h5 27 ♘hf5 f6 28 f3 ♔g6 29 h4 ♘f4 30 g3 ♘e6 31 ♔f2 a5 32 ♔e3 ♖d7 33 ♔e4 ♘cd8 34 ♖h1 h5 35 ♖h2 ♘c7 36 ♖f2 ♘de6 37 ♖d2 ♘c5† 38 ♔e3 a4 39 c4 ♘7e6 40 ♘c8 ♖×d2 41 ♔×d2 ♘d7 42 ♘fe7† ♔f7 43 ♘d5 ♘d4 44 ♘c×b6 ♘×f3† 45 ♔e3 ♘×b6 46 ♘×b6 a3 47 b×a3 ♘d4 48 a4 ♔e6 49 a5 ♘c2† 50 ♔e2 ♘b4 51 a3 ♘a6 52 ♘d5 ♘c5 53 ♘b4 ♔d6 54 ♔e3 ♔c7 55 ♘d3 ♘b3 56 a6 ♔b6 57 ♔e4 ♘d2† 58 ♔f5 ♘×c4 59 ♔g6 ♔×a6 60 ♔×g7 f5 61 ♔g6 e4 62 ♘b4† ♔a5 63 ♔×f5 e3 64 ♔f4 e2 65 ♘d3 ♘b2 66 ♘e1 ♔a4 67 ♔g5 ♔×a3 68 g4 h×g4 69 ♔×g4 ♘a4 70 h5 ♘b6 71 h6 ♘d7 72 ♔f3 ♘f8 73 ♔×e2 ♘h7 74 ♔e3 ♔b3 75 ♔f4 ♔b2 76 ♔f5 ♔c3 77 ♘f3 ♔d3 **1–0**

Advance 3.0 — Sfinks X 1 e4 e5 2 ♘f3 ♘c6 3 ♗b5 a6 4 ♗a4 ♘f6 5 O-O ♗e7 6 ♖e1 b5 7 ♗b3 O-O 8 c3 d5 9 e×d5 ♘×d5 10 a4 b×a4 11 ♗×a4 ♗b7 12 ♗×c6 ♗×c6 13 ♘×e5 ♗b7 14 d4 ♕d6 15 ♘d2 ♕e6 16 ♘df3 ♖ae8 17 c4 ♘b4 18 ♕b3 c5 19 ♗d2 ♕c8 20 d×c5 ♘c6 21 ♘×c6 ♕×c6 22 ♕b6 ♗×c5 23 ♕×c6 ♖×e1† 24 ♘×e1 ♗×c6 25 b4 ♗e7 26 ♗c3 ♗b7 27 b5 ♖a8 28 ♖d1 ♖e8 29 h3 a×b5 30 c×b5 ♗d8 31 ♖d7 ♗c8 32 ♖d6 ♗f6 33 ♗×f6 ♖×e1† 34 ♔h2 g×f6 35 ♖d8† ♔g7 36 ♖×c8 ♖b1 37 ♖b8 ♖b2 38 ♔g3 ♖b3† 39 f3 ♔g6 40 b6 ♔f5 41 ♖b7 h5 42 ♔h4 ♔g6 43 f4 ♔f5 44 g3 ♔e6 45 ♖c7 ♖×b6 46 ♔×h5 ♖b5† 47 ♔h4 ♖d5 48 ♖a7 ♖d8 49 ♖a6† ♖d6 50 ♖×d6† ♔×d6 51 ♔g4 ♔e6 52 h4 f5† 53 ♔g5 ♔e7 54 ♔h6 ♔f8 55 ♔h7 f6 56 ♔g6 ♔g8 57 ♔×f6 ♔h7 58 ♔×f5 **1–0**

Pion — Fidelity X 1 ♘f3 ♘f6 2 g3 g6 3 ♗g2 ♗g7 4 c4 O-O 5 d4 d5 6 c×d5 ♘×d5 7 O-O ♘c6 8 ♖e1 ♘b6 9 e3 ♕d6 10 ♕e2 ♗g4 11 ♖d1 e5 12 d×e5 ♕×e5 13 h3 ♗×f3 14 ♗×f3 ♘a4 15 ♗×c6 b×c6 16 ♕c2 ♘×b2 17 ♖d4 c5 18 ♖e4 ♕d5 19 ♗×b2 ♗×b2 20 ♕×b2 ♕×e4 21 ♘c3 ♕e5 22 ♖c1 ♖fb8 23 ♕e2 ♖b4 24 a3 ♖b3 25 ♘a4 ♖×a3 26 ♘×c5 a5 27 ♕f3 ♖d8 28 ♘e4 f5 29 ♘c5 ♖a1 30 ♖×a1 ♕×a1† 31 ♔g2 ♕e5 32 ♕c6 ♕d5† 33 ♕×d5† ♖×d5 34 ♘e6 a4 35 ♘×c7 a3 36 ♘×d5 a2 37 ♘f6† ♔g7 38 ♘e8† ♔f7 39 ♘d6† ♔e7 40 ♘c8† ♔e6 41 ♘b6 a1♕ 42 e4 ♕b1 43 e×f5† ♔×f5 44 ♘d7 ♕b7† **0–1**

Mephisto X — Conchess X 1 e4 c5 2 ♘f3 a6 3 ♗c4 ♘f6 4 ♘c3 d6 5 d4 c×d4 6 ♘×d4 ♕c7 7 ♕d3 ♘bd7 8 f4 e6 9 O-O b5 10 ♗b3 b4 11 ♘a4 ♗b7 12 ♖e1 ♘×e4 13 ♖×e4 ♗×e4 14 ♕×e4 ♖c8 15 ♗d2 ♘f6 16 ♕e2 ♕b7 17 ♗c4 ♖a8 18 f5 e5 19 ♘f3 ♗e7 20 ♗e3 e4 21 ♘g5 d5 22 ♗b3 h6 23 ♘h3 O-O 24 ♖d1 ♖ad8 25 ♘f4 ♗d6 26 ♘h5 ♘×h5 27 ♕×h5 ♗e5 28 f6 ♗×f6 29 ♗×d5 ♕b5 30 b3 ♖d7 31 ♘c5 ♖e7 32 ♕g4 ♗g5 33 ♗d4 ♖d8 34 ♗c4 ♕b6 35 c3 b×c3 36 ♘a4 ♕c6 37 ♗×c3 ♗e3† 38 ♔h1 ♖×d1† 39 ♕×d1 ♗f4 40 ♕d8† Time **1–0**

Awit — Ostrich 1 c4 e5 2 ♘c3 d6 3 ♘f3 f5 4 d3 ♗e7 5 g3 ♘c6 6 ♗g2 ♘f6 7 O-O O-O 8 ♗d2 e4 9 ♘h4 ♘d7 10 d×e4 ♗×h4 11 g×h4 ♕×h4 12 e×f5 ♖×f5 13 f4 ♘e7 14 e3 ♘b6 15 ♗e1 ♕f6 16 ♘b5 ♘×c4 17 ♘×c7 ♖b8 18 ♕a4 ♕f7 19 ♕×a7 ♘c6 20 ♗×c6 ♕×c7 21 e4 ♖f6 22 ♗c3 ♖g6† 23 ♔f2 ♔h8 24 ♖g1 ♗g4 25 f5 ♖f8 26 ♕×b7 ♕×b7 27 ♗×b7 ♗h5 28 a4 ♘e5 29 a5 ♖×g1 30 ♖×g1 g6 31 ♔e3 g×f5 32 ♖g5 f4† 33 ♔f2 ♗g6 34 ♗×e5† d×e5 35 a6 ♖d8 36 a7 ♗×e4 37 ♗×e4 ♖d2† 38 ♔f3 ♖d8 39 ♖×e5 h6 40 b4 ♔g7 41 b5 ♔g8 42 b6 ♖c8 43 b7 ♖c3† 44 ♔×f4 ♔g7 45 b8♕ **1–0**

Novag X — Bobby 1 e4 e5 2 f4 ♘f6 3 f×e5 ♘×e4 4 ♘f3 ♘g5 5 d4 ♘×f3† 6 ♕×f3 ♕h4† 7 ♕f2 ♕×f2† 8 ♔×f2 ♘c6 9 ♗e3 d6 10 ♗b5 d×e5 11 ♗×c6† b×c6 12 d×e5 ♗f5 13 ♖c1 ♗e7 14 ♘c3 O-O 15 ♘e2 ♖fd8 16 ♘d4 ♗e4 17 e6 ♖ab8 18 e×f7† ♔×f7 19 ♘b3 ♗f6 20 c3 a6 21 ♗f4 ♖b7 22 ♔g1 ♖e8 23 ♖f1 ♗d5 24 ♖f2 ♔g8 25 ♘c5 ♖a7 26 ♗g3 ♗g5 27 ♔h1 ♗e3 28 ♖e2 ♗c4 29 ♖ee1 ♗f7 30 ♘d3 ♗d2 31 ♖×e8† ♗×e8 32 h3 ♗g6 33 ♖d1 ♗g5 34 h4 ♗h5 35 ♖e1 ♗f6 36 ♖e6 ♗f7 37 ♖×c6 ♗d5 38 ♖×c7 ♖×c7 39 ♗×c7 ♗×a2 40 g3 ♗d5† 41 ♔g1 ♔f7 42 ♘c5 ♗c4 43 ♘d7 ♗d5 44 ♘×f6 ♔×f6 45 b4 ♔f5 46 ♔f2 ♔e4 ½–½

Shy — Patsoc 2.0 1 e4 e5 2 ♗c4 ♘f6 3 ♘f3 ♘c6 4 d4 e×d4 5 O-O ♘×e4 6 ♖e1 d5 7 ♗×d5 ♕×d5 8 ♘c3 ♕h5 9 ♘×e4 ♗e6 10 ♘×d4 ♕×d1 11 ♖×d1 ♘×d4 12 ♖×d4 ♖d8 13 ♖×d8† ♔×d8 14 ♗e3 b6 15 ♘g5 ♔d7 16 ♘×e6 ♔×e6 17 ♖d1 ♗d6 18 ♖e1 ♔d5 19 ♖d1† ♔c6 20 ♖d4 ♗e5 21 ♖c4† ♔d6 22 c3 ♖e8 23 ♖a4 a5 24 ♖h4 h6 25 ♖h5 a4 26 ♗d2 ♔e6 27 f4 ♗d6 28 ♔h1 f5 29 c4 ♔f6 30 ♖h4 ♖e4 31 b3 ♔g6 32 ♗c3 a×b3 33 a×b3 ♖e3 34 ♖h3 ♖×h3 35 g×h3 ♗×f4 36 h4 h5 37 b4 ♗d6 38 b5 ♔f7 39 ♔g2 ♗e7 40 ♗e5 ♗c5 41 ♗×c7 ♔e6 42 ♗f4 g6 43 ♔f3 ♔f7 44 ♔g2 ♗d4 45 ♔g3 ♔e7 46 ♔f3 ♔d7 47 ♔g3 ♔c8 48 ♗d2 ♔c7 49 ♔f4 ♗f6 50 ♔g3 ♗e5† 51 ♔g2 ♗d6 52 ♗g5 ♔b7 53 ♗e3 ½–½

Round 2

Belle — Mephisto X 1 e4 c5 2 c3 e6 3 d4 d5 4 e×d5 e×d5 5 ♘f3 ♗d6 6 d×c5 ♗×c5 7 ♗e2 ♘f6 8 O-O ♗f5 9 ♘d4 ♕c8 10 ♗b5† ♘c6 11 ♖e1† ♔f8 12 ♘×f5 ♕×f5 13 ♗e3 ♗×e3 14 ♖×e3 ♖e8 15 ♖×e8† ♘×e8 16 ♘a3 a6 17 ♗d3 ♕g5 18 ♕b3 b5 19 ♘c2 ♘c7 20 a4 ♘e5 21 ♗e2 ♘c4 22 a×b5 a×b5 23 ♘d4 ♔g8 24 ♗×c4 d×c4 25 ♕×b5 ♕×b5 26 ♘×b5 ♘e8 27 ♘d6 ♘c7 28 ♖a7 ♘e6 29 ♘×f7 g6 30 ♘×h8 ♔×h8 31 ♖a4 **1–0**

Fidelity X — Cray Blitz 1 c4 e5 2 ♘c3 ♘c6 3 ♘f3 f5 4 d4 e4 5 ♘g5 ♗b4 6 d5 ♗×c3† 7 b×c3 ♘a5 8 ♕d4 ♕f6 9 c5 ♕×d4 10 c×d4 ♘f6 11 d6 c×d6 12 c×d6 ♘c6 13 e3 ♘b4 14 ♔e2 b6 15 ♗d2 ♗a6† 16 ♔d1 ♘d3 17 ♗×d3 e×d3 18 f3 O-O 19 ♗e1 ♖fe8 20 ♗d2 ♖ac8 21 ♖c1 ♖×c1† 22 ♔×c1 ♖c8† 23 ♔b1 ♖c2 24 ♖d1 ♗c4 25 a3 h6 26 ♘h3 ♗a2† 27 ♔a1 ♗b3 28 ♔b1 ♖a2 29 ♗c1 ♖×g2 30 ♖d2 ♖×d2 31 ♗×d2 ♗d5 32 ♘f2 ♗×f3 33 ♘×d3 ♗e4 34 ♔c2 ♘g4 35 ♔c3 ♗×d3 36 ♔×d3 ♘×h2 37 ♗e1 g5 38 ♔e2 ♔f7 39 ♗g3 ♘g4 40 ♔f3 ♘f6 41 ♗e5 h5 42 ♔g2 ♘g4 43 ♔f3 ♘×e5† 44 d×e5 b5 45 ♔f2 a5 46 e4 f4 47 ♔e2 g4 48 ♔e1 h4 49 ♔f2 h3 50 ♔g1 g3 51 ♔f1 f3 **0–1**

Merlin — Nuchess 1 e4 e5 2 ♘f3 ♘f6 3 ♘×e5 d6 4 ♘f3 ♘×e4 5 ♕e2 ♕e7 6 d3 ♘f6 7 ♗g5 ♘bd7 8 ♘c3 ♕×e2† 9 ♗×e2 h6 10 ♗d2 g6 11 O-O ♘b6 12 ♘b5 ♘fd5 13 c4 c6 14 ♘bd4 ♘e7 15 ♗f4 ♘f5 16 ♖fe1 ♗e7 17 ♘×f5 ♗×f5 18 ♘d4 ♗d7 19 ♗f3 ♔f8 20 h3 ♖e8 21 a4 ♘c8 22 ♘b3 g5 23 ♗h2 ♗f6 24 ♘a5 ♗×b2 25 ♖×e8† ♔×e8 26 ♖e1† ♗e6 27 ♘×b7 ♔d7 28 c5 d5 29 ♖b1 ♗c3 30 ♘d6 ♘×d6 31 ♗×d6 a5 32 ♖b7† ♔d8 33 ♖a7 ♖e8 34 ♗c7† ♔c8 35 ♗×a5 ♔b8 36 ♖a6 ♗×a5 37 ♖×a5 ♔b7 38 g4 ♗d7 39 ♔f1 h5 40 ♔g2 h×g4 41 ♗×g4 ♗×g4 42 h×g4 ♖e2 43 ♔f3 ♖e1 44 ♔g2 ♖d1 45 ♔f3 ♖×d3† 46 ♔e2 ♖h3 47 ♔d2 ♖h2 48 ♔e1 ♖g2 49 f3 ♖c2 50 ♔d1 ♖f2 51 ♔c1 **0–1**

Awit — Advance 3.0 1 c4 e5 2 ♘c3 d6 3 ♘f3 ♘c6 4 d4 e×d4 5 ♘×d4 ♘×d4 6 ♕×d4 ♘f6 7 ♗f4 ♗e6 8 O-O-O ♗e7 9 ♘d5 ♗×d5 10 c×d5 ♕d7 11 e4 c5 12 ♕e3 ♕a4 13 e5 d×e5 14 ♕×e5 ♘g4 15 ♕c7 ♘×f2 16 ♖e1 O-O 17 ♖g1 ♗d8 18 ♕d6 ♗a5 19 ♗e2 ♖fe8 20 ♗e5 ♗d2† 21 ♔×d2 ♘e4† 22 ♔c1 ♘×d6 23 ♗×d6 ♕×a2 24 ♗f3 ♕a1† 25 ♔d2 ♕×b2† 26 ♔d3 c4† 27 ♔×c4 ♖ac8† 28 ♗c5 ♕c2† 29 ♔b4 ♖e3 30 ♖×e3 ♕×c5† 31 ♔a4 ♕d4† **0–1**

Chaos — Shy 1 d4 ♘f6 2 c4 e5 3 d×e5 ♘g4 4 ♗f4 ♘c6 5 ♘f3 ♗b4† 6 ♘bd2 ♕e7 7 a3 ♘g×e5 8 ♘×e5 ♘×e5 9 e3 ♗×d2† 10 ♕×d2 O-O 11 ♕d5 d6 12 c5 ♖e8 13 c×d6 ♕×d6 14 ♕×d6 c×d6 15 ♖d1 ♗e6 16 ♖×d6 ♗b3 17 ♗b5 ♖ec8 18 O-O ♘g6 19 ♗g3 ♖c2 20 ♖d7 ♖×b2 21 ♖×b7 ♗e6 22 ♖d1 ♗d5 23 ♖d7 ♖×b5 24 ♖7×d5 ♖×d5 25 ♖×d5 ♘e7 26 ♖d7 ♖c8 27 h3 ♘c6 28 f3 a5 29 ♖d5 ♖a8 30 e4 ♘e7 31 ♖d7 ♘c6 32 ♔f2 ♖e8 33 ♔e3 ♘b8 34 ♖a7 ♘c6 35 ♖a6 ♘e7 36 ♖×a5 ♘c6 37 ♖c5 ♘e7 38 a4 ♖a8 39 ♖c7 ♖e8 40 ♔d2 ♘g6 41 ♖b7 ♖a8 42 ♔e3 ♖a6 43 ♖b8† ♘f8 44 ♖d8 ♖×a4 45 ♗d6 g6 46 ♗×f8 h5 47 ♗c5† ♔h7 48 ♔f4 ♖a5 49 ♖c8 ♔h6 50 ♖c7 ♔g7 51 e5 ♖a4† 52 ♔e3 ♖a6 53 ♔d4 h4 54 f4 ♖a4† 55 ♔e3 ♖a1 56 ♔f3 ♔g8 57 ♗e7 ♖f1† 58 ♔g4 ♖f2 59 ♖c8† ♔h7 60 ♗f6 ♖×g2† 61 ♔×h4 **1–0**

Patsoc 2.0 — Bobby 1 d4 ♘f6 2 ♘c3 e6 3 ♘f3 ♗b4 4 a3 ♗×c3† 5 b×c3 ♘e4 6 c4 c5 7 e3 ♕a5† 8 ♗d2 ♘×d2 9 ♕×d2 ♕b6 10 ♕c3 c×d4 11 e×d4 ♘c6 12 c5 ♕d8 13 ♗d3 ♘e7 14 ♕b2 ♕a5† 15 ♔f1 ♘d5 16 ♔g1 f5 17 ♖e1 O-O 18 ♗b5 ♘f4 19 g3 ♘g6 20 ♔g2 f4 21 c3 ♕c7 22 ♕b1 f×g3 23 h×g3 b6 24 ♕e4 ♖b8 25 c6 d5 26 ♕e3 ♖f5 27 ♘g5 ♕e7 28 ♘×h7 e5 29 d×e5 ♖×e5 30 ♕c1 ♗f5 31 ♖×e5 ♘×e5 32 ♘g5 ♖c8 33 ♖e1 ♕f6 34 ♕f4 ♘g6 35 ♕d2 ♕d6 36 ♗c4 ♘e7 37 ♖×e7 Time **1–0**

Schach 2.7 — Novag X 1 d4 ♘f6 2 c4 e6 3 ♘f3 b6 4 g3 ♗a6 5 b3 ♗b4† 6 ♗d2 ♗e7 7 ♗g2 c6 8 O-O d5 9 ♘e5 ♘fd7 10 c×d5 c×d5 11 ♘×d7 ♘×d7 12 ♘c3 ♖c8 13 ♖c1 O-O 14 h3 ♘f6 15 a4 ♕d7 16 ♗g5 ♖c6 17 ♗×f6

♗×f6 18 ♕d2 ♖fc8 19 ♘a2 ♖×c1 20 ♖×c1 ♖×c1† 21 ♘×c1 ♕d6 22 ♕c3 e5 23 d×e5 ♗×e5 24 ♕f3 ♕c5 25 ♘d3 ♗×d3 26 ♕×d3 d4 27 ♕e4 a5 28 ♕a8† ♕f8 29 ♕c6 ♕d8 30 ♗e4 g6 31 ♗d5 ♔g7 32 ♕b5 h6 33 ♔f1 h5 34 ♗×f7 ♕f6 35 ♕e8 ♕f5 36 ♗×g6 ♕×h3† 37 ♔e1 ♗×g3 38 ♕f7† ♔h6 39 ♗d3 ♗×f2† 40 ♕×f2 ♕e6 41 ♕×d4 ♔g5 42 e3 ♕f6 43 ♗b5 h4 44 ♗d7 ♕×d4 45 e×d4 ♔f4 46 ♗e6 **1–0**

Bebe — Philidor X 1 e4 c5 2 ♘f3 d6 3 d4 c×d4 4 ♘×d4 ♘f6 5 ♘c3 e6 6 ♗e2 a6 7 O-O ♕c7 8 ♕d3 ♘bd7 9 ♕c4 ♕d8 10 ♗g5 ♘c5 11 ♘f3 ♗e7 12 e5 d×e5 13 ♘×e5 ♗d6 14 ♕d4 ♗×e5 15 ♕×e5 ♘cd7 16 ♕d6 ♕a5 17 ♘e4 ♕f5 18 ♗d3 ♕g4 19 f3 ♕h5 20 h4 ♘e5 21 ♗×f6 ♘c6 22 ♗×g7 **1–0**

Ostrich — Pion 1 e4 d6 2 d3 g6 3 ♗e2 ♘f6 4 ♘f3 ♗g7 5 O-O O-O 6 ♘c3 ♖e8 7 ♗g5 c5 8 e5 d×e5 9 ♘×e5 ♘d5 10 d4 ♘×c3 11 b×c3 c×d4 12 c×d4 f6 13 ♗c4† e6 14 ♗h4 g5 15 ♗×g5 f×g5 16 ♗b5 ♗d7 17 ♘×d7 ♘×d7 18 ♕g4 ♖c8 19 ♕e4 a6 20 ♗d3 ♘f8 21 ♕×b7 a5 22 ♖ad1 ♗×d4 23 ♕e4 ♕b6 24 h4 g×h4 25 ♕g4† ♗g7 26 ♕×h4 ♕b2 27 a4 ♕b6 28 ♗b5 ♖ed8 29 ♖c1 ♗b2 30 ♖cd1 ♖×d1 31 ♕g4† ♗g7 32 ♕×d1 ♖c3 33 ♕e2 ♔f7 34 ♗d3 ♔f6 35 ♕h5 ♕b4 36 g4 e5 37 g5† ♔e7 38 f3 ♕×a4 39 ♗×h7 ♕e8 40 ♕h4 ♘×h7 41 ♕×h7 ♕f8 42 ♕e4 ♔e6 43 ♖f2 ♕f5 44 ♕a8 ♕×g5† 45 ♖g2 ♕c1† 46 ♔h2 ♕f4† 47 ♔g1 ♕d4† 48 ♔h2 ♕h4† 49 ♔g1 ♕e1† 50 ♔h2 ♖c7 51 ♕e8† ♖e7 52 ♕c6† ♔f7 53 ♕g6† ♔f8 54 ♕d3 ♔e8 55 ♕h7 ♗f8 56 ♕h5† ♖f7 57 f4 e4 58 ♖e2 ♕b4 59 ♕g6 ♕c3 60 ♕×e4† ♖e7 61 ♕g6† ♔d7 62 ♕g4† ♔d8 63 ♖×e7 ♔×e7 64 ♕g5† ♔e8 65 ♕f5 ♗g7 66 ♕e4† ♔d7 67 ♔g2 ♗d4 68 f5 ♔d6 Adjudicated **0–1**

Sfinks X — Phoenix 1 e4 e6 2 d4 d5 3 e×d5 e×d5 4 ♗d3 ♘c6 5 ♘f3 ♗g4 6 ♗e3 ♘b4 7 ♗e2 ♗f5 8 ♘a3 ♘c6 9 O-O ♗×a3 10 b×a3 ♘f6 11 ♖b1 ♖b8 12 ♗d3 ♗×d3 13 ♕×d3 O-O 14 c4 ♖e8 15 ♖fe1 d×c4 16 ♕×c4 ♕d5 17 ♕×d5 ♘×d5 18 ♗d2 ♖×e1† 19 ♖×e1 ♘ce7 20 ♗c1 ♖e8 21 ♗b2 b6 22 ♔f1 f6 23 ♔e2 ♘f4† 24 ♔f1 ♘d3 25 ♖e2 ♘×b2 26 ♖×b2 c6 27 ♔e2 ♘d5† 28 ♔f1 b5 29 h3 ♖e7 30 ♔g1 ♖e6 31 ♔h2 ♔f7 32 ♔g3 ♖e4 33 ♖c2 ♘e7 34 ♔h2 ♔e8 35 ♔g1 ♔d7 36 ♔f1 ♘d5 37 ♔g1 ♔c7 38 ♔h2 ♔b6 39 ♔g3 ♘f4 40 ♖d2 ♔a5 41 ♖c2 ♘e2† 42 ♔h2 ♔b6 43 ♖d2 ♘c3 44 ♖b2 ♖e2 45 ♘d2 ♔c7 46 f3 ♘d1 **0–1**

BCP — Conchess X 1 e4 e6 2 d4 d5 3 e5 c5 4 c3 ♘c6 5 ♘f3 ♕b6 6 ♗d3 c×d4 7 c×d4 ♘×d4 8 ♘×d4 ♗c5 9 ♕a4† ♗d7 10 ♗b5 O-O-O 11 ♗×d7† ♖×d7 12 ♘f3 ♗×f2† 13 ♔e2 ♘e7 14 ♘c3 ♘c6 15 ♕g4 d4 16 ♕×g7 d3† 17 ♔f1 ♖hd8 18 ♕×h7 ♔b8 19 ♘d1 ♗c5 20 ♗h6 f6 21 ♗g7 d2 22 g4 ♕a6† 23 ♔g2 ♕e2† 24 ♔g3 ♖d3 25 ♘e3 ♖×e3 26 ♖hf1 d1♕ 27 ♖a×d1 ♖×d1 28 ♕h8† ♔c7 29 e×f6 ♖×f3† 30 ♖×f3 ♗d6† 31 ♔h4 ♕×f3 32 ♕e8 ♕f2† 33 ♔h5 ♕×h2† 34 ♔g6 ♘e5† 35 ♔g5 ♕d2† 36 ♔h4 ♘f3† 37 ♔h3 ♖h1# **0–1**

Round 3

Nuchess — Belle 1 e4 e5 2 ♘f3 ♘c6 3 ♗b5 a6 4 ♗a4 ♘f6 5 d4 e×d4 6 O-O ♗e7 7 e5 ♘e4 8 ♘×d4 O-O 9 ♘f5 d5 10 e×d6 ♗×f5 11 d×e7 ♘×e7 12 ♗e3 ♘d5 13 ♕f3 ♘×e3 14 f×e3 ♗g6 15 ♕f4 b5 16 ♗b3 c5 17 c4 ♕f6 18 ♕×f6 ♘×f6 19 ♖c1 b4 20 ♘d2 ♖fe8 21 ♖e1 ♖ad8 22 ♘f1 ♗d3 23 ♖ad1 ♘g4 24 ♗a4 ♖f8 25 ♘d2 ♘e5 26 ♗b3 ♖d6 27 ♘f3 ♘×f3† 28 g×f3 f5 29 ♖d2 ♖e8 30 ♔f2 f4 31 e×f4 ♖×e1 32 ♔×e1 ♖d4 33 ♔f2 ♔f7 34 ♔e3 ♗×c4 35 ♖×d4 c×d4† 36 ♔×d4 ♗×b3 37 a×b3 ♔f6 38 ♔e4 g6 39 h4 ♔e6 40 f5† g×f5† 41 ♔d4 ♔d6 42 f4 ♔e6 43 ♔c5 a5 44 h5 ♔f7 45 ♔d5 ♔f6 46 ♔d6 ♔f7 47 ♔e5 ♔e8 48 ♔×f5 **1–0**

Cray Blitz — Advance 3.0 1 e4 c5 2 ♘f3 d6 3 d4 c×d4 4 ♘×d4 ♘f6 5 ♘c3 a6 6 ♗g5 e6 7 f4 ♕b6 8 ♘b3 ♕e3† 9 ♕e2 ♕×e2† 10 ♗×e2 ♗e7 11 O-O O-O 12 ♖ad1 ♖d8 13 e5 ♘bd7 14 e×f6 g×f6 15 ♗h6 ♔h8 16 ♗h5 ♔g8 17 ♖f3 ♗f8 18 ♖g3† ♔h8 19 ♘e4 ♗×h6 20 ♘×d6 ♖f8 21 ♘×f7† ♖×f7 22 ♗×f7 ♗g7 23 ♗×e6 ♘f8 24 ♖d8 ♗×e6 25 ♖×a8 ♗g8 26 ♖b8 f5 27 c3 b5 28 ♘c5 ♘g6 29 ♖e3 ♗f8 30 ♘×a6 ♗×a2 31 b4 ♔g7 32 g3 ♗c4 33 ♘c7 ♗e7 34 ♘e6† ♔f7 35 ♘d4 ♗d6 36 ♖b7† ♔g8 37 ♘×f5 ♗d3 38 ♘×d6 **1–0**

Patsoc 2.0 — Chaos 1 d4 ♘f6 2 ♘c3 d5 3 ♗g5 ♗f5 4 f3 c6 5 g4 ♗d7 6 e3 e6 7 ♕d3 h6 8 ♗h4 c5 9 ♘ge2 ♘c6 10 a3 ♗e7 11 ♗g2 ♕b6 12 d×c5 ♗×c5 13 ♗×f6 g×f6 14 ♘a4 ♕a5† 15 ♕c3 ♗×e3 16 ♕×a5 ♘×a5 17 ♘ac3 ♘c4 18 ♘d1 ♗c5 19 ♘f4 ♖c8 20 ♘h5 ♔e7 21 a4 f5 22 g×f5 e×f5 23 f4 ♖ce8 24 ♗f3 ♖hg8 25 b3 ♔d8† 26 ♗e2 ♖g2 27 ♘g3 ♘e3 28 ♖c1 ♘g4 29 ♔f1 ♖×h2 30 ♖×h2 ♘×h2† Time **0–1**

Bebe — Schach 2.7 1 e4 e5 2 ♘f3 ♘c6 3

♗b5 a6 4 ♗a4 ♘f6 5 O-O ♗e7 6 ♖e1 b5 7 ♗b3 d6 8 c3 O-O 9 h3 ♘b8 10 d3 ♘bd7 11 ♘bd2 ♗b7 12 ♘f1 ♘c5 13 ♗c2 a5 14 ♘g3 c6 15 d4 ♘cd7 16 ♘f5 ♖e8 17 a4 ♗f8 18 a×b5 c×b5 19 ♕e2 ♕b6 20 ♗e3 ♕a6 21 d5 ♖ab8 22 b4 a4 23 c4 ♗a8 24 c×b5 ♕×b5 25 ♕×b5 ♖×b5 26 ♖×a4 ♖c8 27 ♗d3 ♖bb8 28 ♖ea1 ♗b7 29 ♗b5 ♖c2 30 ♖a5 ♖c3 31 ♗d2 ♖c7 32 ♘g3 ♖bc8 33 ♖a7 ♘b8 34 ♗e3 ♗e7 35 ♗b6 ♖c1† 36 ♖×c1 ♖×c1† 37 ♔h2 ♗×d5 38 ♖×e7 ♗e6 39 ♗c7 ♘c6 40 ♗×c6 ♖×c6 41 b5 ♖c5 42 ♗×d6 ♖×b5 43 ♗×e5 ♖a5 44 ♗×f6 g×f6 45 ♖e8† ♔g7 46 ♘d4 h5 47 ♘×e6† f×e6 48 ♖×e6 ♔f7 49 ♖c6 ♔g6 50 f4 h4 **1–0**

Conchess X — Fidelity X 1 c4 c5 2 ♘c3 ♘c6 3 ♘f3 g6 4 d3 ♘d4 5 ♗f4 d6 6 ♘×d4 c×d4 7 ♘d5 e6 8 ♘b4 ♗g7 9 h3 ♗d7 10 ♕d2 e5 11 ♗g3 h5 12 ♘d5 ♘f6 13 ♗h4 ♗c6 14 ♗×f6 ♗×f6 15 ♖d1 ♗g5 16 ♕b4 a5 17 ♕b3 a4 18 ♕b4 a3 19 b3 ♖a7 20 ♕b6 ♕×b6 21 ♘×b6 ♗d8 22 c5 d×c5 23 ♘c4 b5 24 ♘d2 ♗a5 25 ♖c1 ♗c3 26 ♔d1 f5 27 ♔c2 ♖hh7 28 ♖d1 h4 29 ♖g1 ♗d5 30 ♘f3 e4 31 ♘g5 ♖h5 32 f4 c4 33 d×c4 b×c4 34 b×c4 ♗×c4 35 e3 ♗×f1 36 ♖g×f1 d×e3 37 ♔×c3 e2 38 ♖g1 e×d1♕ 39 ♖×d1 ♖b7 40 ♖d6 ♖b2 41 ♖d2 e3 42 ♖d3 e2 43 ♖e3† ♔d7 44 ♘f7 ♖×a2 45 ♘e5† ♔c7 46 ♘×g6 ♖b2 47 ♘e5 ♖h6 48 ♘c4 ♖c6 49 ♖e7† ♔c8 50 ♖e5 ♖×c4† **0–1**

Mephisto X — Pion 1 e4 d6 2 ♘f3 ♘f6 3 ♘c3 g6 4 d4 ♗g7 5 ♗b5† c6 6 ♗e2 O-O 7 O-O ♘bd7 8 a4 ♖e8 9 ♘g5 ♕c7 10 f4 ♖d8 11 ♗c4 d5 12 e×d5 c×d5 13 ♗b3 ♘b6 14 ♘b5 ♕b8 15 ♕e2 ♖e8 16 ♖e1 ♗f5 17 a5 ♘bd7 18 ♗d2 ♗g4 19 ♕e3 ♕d8 20 h3 ♗f5 21 g4 a6 22 ♘c3 ♗×g4 23 h×g4 ♘×g4 24 ♕h3 ♗×d4† 25 ♔g2 ♘df6 26 ♗×d5 ♖f8 27 ♘e6 ♘f2 28 ♘×d8 ♘×h3 29 ♗×f7† ♔h8 30 ♔×h3 ♖a×d8 31 ♗b3 ♗c5 32 ♗e3 ♗b4 33 ♗b6 ♖de8 34 ♗d4 ♖d8 35 ♖ad1 h5 36 ♖e5 ♗×c3 37 b×c3 ♖d7 38 ♖de1 ♖c7 39 ♖×e7 ♖×e7 40 ♖×e7 b6 41 a×b6 g5 42 b7 g4† 43 ♔h4 a5 44 ♗×f6† ♖×f6 45 b8♖† ♖f8 46 ♖×f8# **1–0**

Phoenix — Merlin 1 d4 d5 2 ♗g5 ♘f6 3 ♗×f6 e×f6 4 e3 ♗f5 5 c4 ♗b4† 6 ♘c3 ♘c6 7 ♕b3 ♕e7 8 ♕d1 O-O-O 9 c×d5 ♖×d5 10 ♘ge2 ♖hd8 11 ♖c1 ♖b5 12 ♘g3 ♖×d4 13 ♗×b5 ♖×d1† 14 ♖×d1 ♗×c3† 15 b×c3 ♗g6 16 ♗×c6 b×c6 17 ♖d2 ♕a3 18 ♘e2 ♗e4 19 O-O ♗d5 20 ♖c1 ♔b7 21 c4 ♗e6 22 ♖b1† ♔a6 23 ♘d4 ♗×c4 24 ♘×c6 ♕a4 25 ♘b8† ♔a5 26 ♖b7 a6 27 ♖×c7 ♕b5 28 ♖d1 ♗×a2 29 ♖c8 ♔a4 30 ♖c2 ♔b3 31 ♖dd2 ♕f5 32 ♘c6 ♕g6 33 f3 ♗b1 34 ♖b2† ♔c4 35 ♘e7 ♕h6 36 f4 ♗e4 37 ♖d6 ♕h4 38 ♖d4† ♔c3 39 ♖e2 ♕g4 40 ♖ed2 ♕e6 41 ♘d5† ♗×d5 42 ♖2d3† ♔b2 43 ♖×d5 ♔c2 44 ♔f2 h6 45 ♖d6 ♕g4 46 ♖d2† ♔b3 47 ♖×a6 ♕h4† 48 ♔f3 ♕×h2 49 ♖b6† ♔c3 50 ♖d5 ♔c4 51 e4 ♕g1 52 ♖c6† ♔b4 53 ♖c7 ♕f1† 54 ♔e3 ♕e1† 55 ♔f3 ♕f1† 56 ♔e3 ½–½

Novag X — Awit 1 d4 ♘f6 2 c4 g6 3 ♘c3 d5 4 c×d5 ♘×d5 5 e4 ♘×c3 6 b×c3 c5 7 ♘f3 ♗g7 8 ♗c4 ♘c6 9 ♗d5 c×d4 10 c×d4 O-O 11 ♗e3 ♕a5† 12 ♗d2 ♕a6 13 ♗c3 ♗g4 14 h3 ♗×f3 15 g×f3 e5 16 d×e5 ♘×e5 17 ♗×e5 ♗×e5 18 ♖c1 ♗f4 19 ♖c5 b6 20 ♖c2 ♖ac8 21 ♖g1 ♖×c2 22 ♕×c2 ♖c8 23 ♗c6 b5 24 ♔f1 ♖×c6 25 ♕b2 ♖c1† 26 ♔g2 ♖×g1† 27 ♔×g1 f6 28 ♕b3† ♔g7 29 ♕d5 ♕a3 30 ♔g2 a6 31 ♕d7† ♔h6 32 ♕f7 ♕b2 33 ♕f8† ♔h5 34 ♕f7 a5 35 ♕×h7† ♗h6 36 ♕d7 ♗d2 37 f4 ♔h6 38 ♕d8 ♗×f4 39 ♔f3 ♔g5 40 ♕×a5 ♕e5 41 ♕b6 ♕c3† 42 ♔g2 ♕c4 43 ♔g1 ♕×e4 44 ♕×b5† ♔h4 45 ♕d7 f5 46 ♕h7† ♔g5 47 ♕f7 ♗e5 48 a3 ♕f4 49 ♕e7† ♗f6 50 ♕e1 ♔h4 51 ♔g2 ♕a4 52 ♕b4† ♕×b4 53 a×b4 ♗d4 54 b5 ♗c5 55 f4 ♗d4 56 ♔h2 ♗e3 57 ♔g2 ♗×f4 58 b6 g5 59 b7 ♗b8 **0–1**

Bobby — Shy 1 e4 e5 2 ♘c3 ♘f6 3 f4 d5 4 f×e5 ♘×e4 5 ♘f3 ♗e7 6 d4 O-O 7 ♗d3 f5 8 e×f6 ♗×f6 9 O-O ♘c6 10 ♘×e4 d×e4 11 ♗×e4 ♗×d4† 12 ♘×d4 ♕×d4† 13 ♕×d4 ♖×f1† 14 ♔×f1 ♘×d4 15 ♗f4 c6 16 ♖d1 ♘e6 17 ♗e3 ♔h8 18 ♔e2 ♘f8 19 ♖d6 ♗e6 20 b3 ♗g4† 21 ♔d3 ♘d7 22 ♗d4 ♘f8 23 h3 ♗e6 24 g4 ♗f7 25 a3 ♘e6 26 ♖d7 ♘×d4 27 ♔×d4 ♗g6 28 ♗×g6 h×g6 29 ♖×b7 a5 30 ♔c5 a4 31 b4 ♖f8 32 ♔×c6 ♖f3 33 ♔b5 ♖×a3 34 ♖c7 ♖a1 35 c4 a3 36 ♖a7 g5 37 ♔c5 ♔h7 38 b5 a2 39 b6 ♔h6 40 b7 ♖b1 41 ♔c6 a1♕ 42 ♖×a1 ♖×a1 43 b8♕ ♔h7 44 c5 ♖a3 45 ♕h2 ♔g8 46 ♔d5 ♖d3† 47 ♔c4 ♖d1 48 c6 ♖c1† 49 ♔d5 ♖d1† 50 ♔e6 ♖d4 51 ♕e5 ♖c4 52 c7 ♖c1 53 ♔f5 **1–0**

Philidor X — Ostrich 1 e4 d5 2 e×d5 ♘f6 3 d4 ♘×d5 4 ♘f3 ♗g4 5 c4 ♘b6 6 c5 ♘d5 7 ♕b3 ♗c8 8 ♗b5† c6 9 ♗d3 e6 10 O-O b6 11 ♗g5 f6 12 c×b6 ♕×b6 13 ♕×b6 a×b6 14 ♗d2 ♗a6 15 ♗×a6 ♘×a6 16 ♖e1 ♘ac7 17 ♘c3 ♘×c3 18 b×c3 ♗d6 19 ♖ab1 b5 20 ♖b2 O-O 21 ♖e4 ♖fe8 22 ♖e1 ♘d5 23 ♖a1 e5 24 d×e5 ♗×e5 25 ♖b3 ♖e7 26 a3 ♖f7 27 ♘×e5 f×e5 28 ♖e1 ♖af8 29 f3 ♖f5 30 ♖e4 ♘f6 31 ♖eb4 e4 32 f4 ♖e8 33 ♗c4 b×c4 34 ♖×c4 ♖b5 35 ♗b4 e3 36 a4 ♖×b4 37 ♖b×b4

♕e5 17 ♘g3 ♖c3 18 ♕a4 ♕e7 19 ♕b4 ♖×a3 20 ♕b2 ♖d3 21 ♕c2 ♖×d1† 22 ♕×d1 ♕e5 23 a4 d4 24 f3 d3 25 ♔f2 ♘g4† 26 f×g4 ♕f4† 27 ♔g1 d2 **0–1**

Merlin — Schach 2.7 1 e4 e5 2 ♘f3 ♘c6 3 ♗c4 ♗c5 4 c3 ♘f6 5 d3 d6 6 O-O O-O 7 ♘bd2 h6 8 b4 ♗b6 9 ♕b3 a5 10 b5 a4 11 ♕c2 ♘e7 12 ♖b1 ♖e8 13 a3 d5 14 ♗a2 ♘g6 15 e×d5 ♘×d5 16 ♖e1 ♘df4 17 d4 e×d4 18 ♖×e8† ♕×e8 19 c×d4 ♘h4 20 ♘e5 ♘e2† 21 ♔f1 ♗f5 22 ♕c4 ♗×b1 23 ♘×b1 ♘×c1 24 ♕×c1 ♕×b5† 25 ♗c4 ♕a5 26 ♕c2 ♗×d4 27 ♘×f7 ♔f8 28 h3 ♕c5 29 g3 b5 30 g×h4 ♕×c4† 31 ♕×c4 b×c4 32 ♘h8 ♖b8 33 ♘g6† ♔e8 34 ♘c3 ♗×c3 35 ♘f4 c5 36 ♘d5 ♗b2 37 ♘e3 c3 38 ♘c2 ♖d8 39 ♔e1 ♖d2 40 ♘e3 ♗×a3 41 h5 ♗b4 42 ♔f1 c2 43 ♘×c2 ♖×c2 **0–1**

Ostrich — Conchess X 1 e4 c5 2 c3 ♘f6 3 e5 ♘d5 4 ♗c4 ♘b6 5 ♗b3 c4 6 ♗c2 d6 7 ♘f3 d×e5 8 ♘×e5 ♕d5 9 ♕e2 ♕×g2 10 ♗e4 ♕g5 11 ♘×c4 ♘×c4 12 ♕×c4 ♘d7 13 ♘a3 ♕e5 14 O-O ♕g5† 15 ♗g2 e6 16 ♘b5 ♘e5 17 ♘c7† ♔d8 18 ♕e2 ♔×c7 19 d4 ♕g4 20 ♕×e5† ♗d6 21 ♕a5† ♔b8 22 ♗e3 ♗d7 23 h3 ♕g6 24 c4 ♖c8 25 ♖ac1 ♗c6 26 d5 e×d5 27 c×d5 b6 28 ♕d2 ♗b5 29 ♖×c8† ♔×c8 30 ♖c1† ♔d7 31 ♕d4 ♖e8 32 a4 ♗e2 33 ♖c6 ♕b1† 34 ♗c1 f6 35 h4 ♖e7 36 a5 ♕g6 37 a×b6 ♗d3 38 ♗f4 ♗×f4 39 ♕×f4 a×b6 40 ♕b8 ♖e1† 41 ♔h2 ♗a6 42 ♖c7† ♔d6 43 ♖c8† ♔e7 44 ♕c7# **1–0**

Pion — BCP 1 ♘f3 d5 2 g3 ♘f6 3 ♗g2 c5 4 O-O ♘c6 5 d3 e5 6 a3 ♗d6 7 c4 O-O 8 ♘c3 ♗e6 9 ♘g5 d4 10 ♘×e6 f×e6 11 ♘a4 ♔h8 12 b3 ♕d7 13 ♗g5 ♘g4 14 e4 ♘h6 15 ♗×h6 g×h6 16 ♕d2 ♕g7 17 ♖ae1 ♖f7 18 ♕e2 ♖g8 19 ♖b1 b6 20 ♕d2 h5 21 ♗h3 ♕f6 22 ♗g2 ♖g6 23 ♕e2 ♕g5 24 f4 e×f4 25 b4 ♖fg7 26 b×c5 b×c5 27 e5 ♕×e5 28 ♕d2 f×g3 29 ♔h1 ♖c7 30 ♖fe1 ♕f6 31 h×g3 ♖×g3 32 ♘b2 ♕h4† 33 ♔g1 ♖cg7 34 ♔f1 ♖f7† 35 ♔g1 ♖g6 36 ♖e5 ♗×e5 37 ♕f4 ♕×f4 38 ♖e1 ♕g3 39 ♖e2 ♕h2# **0–1**

Shy — Novag X 1 e4 e5 2 ♗c4 ♘f6 3 ♘f3 ♘×e4 4 ♘c3 ♘×c3 5 d×c3 f6 6 ♕d5 ♕e7 7 ♕d1 d6 8 ♘d2 ♗e6 9 ♗×e6 ♕×e6 10 c4 ♗e7 11 ♕h5† g6 12 ♕f3 ♘c6 13 O-O O-O 14 ♖b1 f5 15 ♖d1 e4 16 ♕b3 b6 17 ♕a4 ♘e5 18 ♖e1 c6 19 ♕a6 ♗g5 20 ♘×e4 ♗×c1 21 ♖b×c1 f×e4 22 ♖×e4 ♕f5 23 ♖e2 ♘f3† 24 ♔f1 ♘×h2† 25 ♔e1 ♖ae8 26 ♔d1 ♖×e2 **0–1**

Philidor X — Sfinks X 1 e4 e6 2 d4 d5 3 ♘d2 ♘c6 4 ♘gf3 ♗b4 5 e5 f6 6 ♗b5 ♗d7 7 ♗d3 f×e5 8 d×e5 ♗c5 9 O-O ♘ge7 10 ♘g5 ♘f5 11 ♘b3 ♗e7 12 ♗×f5 e×f5 13 e6 O-O 14 e×d7 ♗×g5 15 ♕×d5† ♖f7 16 ♘c5 ♗×c1 17 ♖a×c1 ♕e7 18 ♖fe1 ♕f8 19 ♘×b7 ♘e7 20 d8♕ ♘×d5 21 ♕×d5 ♖b8 22 ♘a5 ♖×b2 23 ♘c4 ♖×a2 24 ♘e5 **1–0**

Round 5

Belle — Cray Blitz 1 e4 c5 2 c3 d5 3 e×d5 ♕×d5 4 ♘f3 e6 5 d4 ♘f6 6 ♗d3 ♘c6 7 O-O ♗e7 8 ♗e3 O-O 9 d×c5 ♖d8 10 ♘d4 ♗×c5 11 c4 ♕d6 12 ♘×c6 b×c6 13 ♗×c5 ♕×d3 14 ♕a4 ♘e4 15 ♗b6 ♖d7 16 ♗a5 ♗b7 17 ♘c3 ♘c5 18 ♕b4 ♕d4 19 ♖ad1 ♘d3 20 ♕a4 ♕g4 21 c5 ♕f5 22 b4 ♘b2 23 ♖×d7 ♘×a4 24 ♘×a4 ♕c2 25 ♖×b7 ♕×a4 26 ♖a1 e5 27 f3 ♕c2 28 ♖c7 ♕d3 29 ♖f1 ♕d5 30 a3 g5 31 ♖e7 f6 32 ♖c7 h5 33 h3 ♔h8 34 ♔h2 a6 35 ♖e1 ♖e8 36 ♖e4 f5 37 ♖e2 g4 38 h×g4 f×g4 39 f×g4 h×g4 40 ♖f2 e4 41 ♖ff7 ♕e5† 42 g3 e3 43 ♖h7† ♔g8 44 b5 c×b5 45 ♗e1 ♕b2† 46 ♔g1 ♕a1 47 ♔g2 ♕f6 48 ♔h2 ♖d8 49 ♖hd7 ♖f8 50 ♖d6 ♕b2† 51 ♔g1 ♕b1 52 ♔h2 ♕c2† 53 ♔g1 ♕f5 **0–1**

Bebe — Nuchess 1 e4 e5 2 ♘f3 ♘f6 3 d4 ♘×e4 4 ♗d3 d5 5 ♘×e5 ♗d6 6 O-O O-O 7 ♗×e4 d×e4 8 ♘c3 ♕e7 9 ♕h5 g6 10 ♕e2 ♗×e5 11 d×e5 ♕×e5 12 ♕×e4 ♕×e4 13 ♘×e4 ♗f5 14 ♖e1 ♔g7 15 ♗f4 ♘a6 16 ♗e5† ♔h6 17 ♖e2 ♖ae8 18 ♘f6 ♖e6 19 g4 ♗×c2 20 g5† ♔g7 21 ♘d7† ♖×e5 22 ♘×e5 ♗f5 23 ♖ae1 ♘b4 24 a3 ♘d5 25 ♖d2 c6 26 ♘c4 f6 27 ♘d6 f×g5 28 ♘×b7 ♗g4 29 b3 h5 30 ♘a5 ♗d7 31 ♘c4 ♗c8 32 b4 ♗b7 33 ♘a5 ♗a8 34 ♖c2 ♖f3 35 ♖e8 ♘b6 36 ♘c4 ♖f8 37 ♖×f8 ♔×f8 38 ♘e5 ♔g7 39 ♘×c6 a6 40 ♘b8 a5 41 ♖c7† ♔h6 42 b×a5 ♘a4 43 ♘d7 ♗f3 44 a6 g4 45 a7 ♔g5 46 ♖c8 ♔h6 47 ♘e5 ♗d5 48 ♖d8 ♗b7 49 ♘f7† ♔g7 50 ♘d6 ♗f3 51 ♖d7† ♔g8 52 ♘c4 ♗c6 53 ♘e5 ♗e4 54 ♖d4 ♘b6 55 ♖×e4 ♘a8 56 ♖c4 ♔g7 57 ♖c8 ♘b6 58 ♖b8 ♘a8 59 ♖×a8 ♔f6 60 ♖e8 ♔g5 61 a8♕ ♔f5 62 ♕a6 ♔g5 63 ♕×g6† ♔h4 64 ♘×g4 h×g4 65 ♖h8# **1–0**

Chaos — Advance 3.0 1 d4 d5 2 c4 d×c4 3 ♘f3 ♘f6 4 e3 e6 5 ♗×c4 c5 6 ♕e2 a6 7 O-O ♘c6 8 ♘c3 ♕c7 9 ♗d2 c×d4 10 e×d4 ♗e7 11 ♗b3 ♕d8 12 ♕e3 h6 13 ♖ac1 O-O 14 ♖fe1 ♘a5 15 ♗c2 ♘c4 16 ♕e2 b5 17 a4 ♗b7 18 a×b5 ♘×b2 19 ♖b1 ♗×f3 20 g×f3 ♗a3 21 b×a6 ♕×d4 22 ♘b5 ♕c5 23 ♘×a3 ♕×a3 24 ♗c1 ♖×a6 25 ♗×b2 ♕a5 26 ♗e5 ♖c6 27 ♖b5 ♕a6 28 ♗d3 ♘h5 29 ♖b8 ♕a3 30 ♗h7†

e2 38 ♖b1 e1♕† 39 ♖×e1 ♖×e1† 40 ♔f2 ♖e4 41 ♖×e4 ♘×e4† 42 ♔f3 ♘c5 43 a5 ♔f7 44 h4 ♔e6 45 ♔f2 ♔d5 46 g4 ♔c4 47 ♔e2 ♔b5 48 ♔f2 ♔b4 49 ♔e2 h6 50 ♔d2 ♘b3† 51 ♔c2 ♘×a5 52 ♔b2 ♘c4† 53 ♔c2 **0–1**

Sfinks X — BCP 1 e4 c5 2 ♘f3 ♘f6 3 ♘c3 d5 4 e×d5 ♘×d5 5 ♘×d5 ♕×d5 6 c3 e5 7 d4 c×d4 8 c×d4 ♗b4† 9 ♗d2 ♗d6 10 d×e5 ♗×e5 11 ♘×e5 ♕×e5† 12 ♕e2 ♘c6 13 ♕×e5† ♘×e5 14 ♗c3 f6 15 ♖c1 O-O 16 f4 ♘c6 17 ♗c4† ♔h8 18 ♔f2 ♗f5 19 ♖hd1 ♖fd8 20 ♔f3 h5 21 ♔g3 a6 22 ♔h4 ♗e4 23 ♔×h5 ♗×g2 24 ♖×d8† ♖×d8 25 ♔g6 ♗e4† 26 ♔f7 ♔h7 27 h3 ♔h6 28 ♗e1 ♗h7 29 ♔e6 ♔g6 30 f5† ♔h6 31 ♗d2† ♖×d2 **0–1**

Round 4

Nuchess — Cray Blitz 1 f4 d5 2 ♘f3 ♘f6 3 e3 ♗g4 4 b3 ♘bd7 5 ♗b2 e6 6 ♗d3 ♗d6 7 h3 ♗×f3 8 ♕×f3 e5 9 ♗e2 O-O 10 O-O e×f4 11 e×f4 ♖e8 12 ♘c3 c6 13 ♕d3 ♘c5 14 ♕f3 d4 15 ♘b1 ♖e4 16 g3 ♕b6 17 ♕f2 ♘a4 18 ♗a3 ♗×a3 19 ♘×a3 ♘c5 20 ♗f3 ♖e7 21 ♘c4 ♕d8 22 ♖fe1 ♘fe4 23 ♕g2 d3 24 c3 ♘d6 25 ♘e5 f6 26 ♘×c6 b×c6 27 ♗×c6 ♘cb7 28 ♕d5† ♖f7 29 ♕f3 ♔h8 30 ♗d5 ♖d7 31 ♔g2 ♖b8 32 b4 f5 33 ♗e6 ♖e7 34 ♖e5 ♘f7 35 ♖e3 ♘fd6 36 ♗d5 ♘e4 37 ♖×d3 ♖d7 38 c4 ♘f6 39 ♖e1 ♘×d5 40 ♖×d5 ♖×d5 41 ♕×d5 ♕×d5† 42 c×d5 ♘d6 43 ♖e6 ♘e4 44 ♖e7 ♖a8 45 d3 ♘c3 46 d6 ♘d5 47 ♖e5 ♘f6 48 ♖×f5 ♖d8 49 ♖a5 ♖d7 50 d4 ♘e4 51 ♔f3 ♘×d6 52 g4 ♔g8 53 ♖d5 ♔f8 54 a4 ♔e8 55 ♖h5 h6 56 ♖c5 ♖e7 57 d5 ♘e4 58 ♖c6 ♔d8 59 d6 ♘d2† 60 ♔f2 ♖e4 61 ♖c7 ♖×b4 62 ♖×g7 ♖×a4 63 ♖h7 ♘e4† 64 ♔f3 ♘×d6 65 ♖×h6 ♔e7 66 ♖h7† ♔e6 67 f5† ♔d5 68 h4 ♘c4 69 ♖d7† ♔c5 70 ♖g7 ♘e5† 71 ♔g3 a5 72 h5 ♔d6 73 h6 ♖a3† 74 ♔g2 ♖a2† 75 ♔g3 ♖a3† 76 ♔g2 ♖a2† 77 ♔g3 ♖a3† ½–½

Chaos — Belle 1 d4 d5 2 c4 e6 3 ♘c3 c6 4 c×d5 e×d5 5 ♘f3 ♗d6 6 e4 d×e4 7 ♘×e4 ♗b4† 8 ♗d2 ♗×d2† 9 ♕×d2 ♘e7 10 ♗c4 b5 11 ♗e2 a6 12 O-O O-O 13 ♖fc1 ♗e6 14 ♘fg5 ♗f5 15 ♘g3 ♗g6 16 ♖c3 ♖a7 17 ♖ac1 ♖e8 18 ♗f3 ♖d7 19 ♖d1 ♘f5 20 ♘×f5 ♗×f5 21 g4 ♗e6 22 ♘×e6 ♖×e6 23 ♖e3 ♖×e3 24 f×e3 c5 25 ♕c3 c×d4 26 e×d4 ♖c7 27 ♕a5 ♕c8 28 d5 ♖c2 29 b4 ♘d7 30 d6 ♕c3 31 ♕d8† ♘f8 32 ♕a8 ♕e3† 33 ♔h1 ♕f4 34 ♗g2 ♕×g4 35 ♖f1 ♕e6 36 ♕×a6 ♖×a2 37 ♕b7 ♖d2 38 ♗h3 ♕c4 39 ♕e7 ♕c6† 40 ♔g1 f6 41 d7 ♕b6† 42 ♔h1 ♕b8 43 ♗g2 ♖×d7 44 ♕e2 ♖d4 45 ♕a2† ♔h8 46 ♕b3 ♕d6 47 ♖b1 f5 48 ♕f3 f4 49 ♕b3 ♖d3 50 ♕c2 f3 51 ♗×f3 **0–1**

Advance 3.0 — Mephisto X 1 e4 c5 2 ♘f3 e6 3 d4 c×d4 4 ♘×d4 ♘f6 5 ♘c3 ♘c6 6 ♘×c6 b×c6 7 e5 ♘d5 8 ♘e4 ♕c7 9 f4 ♕b6 10 ♗d3 ♗e7 11 c4 ♗b4† 12 ♔e2 ♘e7 13 a3 ♗c5 14 ♘×c5 ♕×c5 15 ♗e3 ♕a5 16 b4 ♕d8 17 ♗e4 O-O 18 ♕d6 ♘f5 19 ♗×f5 e×f5 20 ♕d3 g6 21 ♖ad1 ♕h4 22 ♗c5 ♖d8 23 ♕g3 ♕h5† 24 ♔f2 ♗a6 25 ♖d4 ♕h6 26 a4 ♗c8 27 b5 c×b5 28 a×b5 a6 29 ♕f3 ♖b8 30 b6 ♗b7 31 ♕g3 ♖dc8 32 ♗d6 ♖a8 33 ♖b1 ♕g7 34 ♔g1 f6 35 ♖bd1 ♖c6 36 ♕h3 ♗c8 37 ♕b3 ♗b7 38 c5† ♕f7 39 ♕×f7† ♔×f7 40 e×f6 ♗c8 41 ♗e7 ♖e6 42 ♖b4 ♖b8 43 ♗d6 ♖b7 44 ♗e5 ♖c6 45 ♗d6 ♔×f6 46 ♖a4 ♔g7 47 ♖×a6 h6 48 ♖da1 ♔f6 49 ♖a7 ♖×d6 50 ♖×b7 ♖c6 51 ♖c7 **1–0**

Fidelity X — Bebe 1 d4 ♘f6 2 c4 e5 3 d×e5 ♘g4 4 ♗f4 ♘c6 5 ♘f3 ♗c5 6 e3 ♕e7 7 ♕d5 ♗b4† 8 ♘c3 ♗×c3† 9 b×c3 ♕a3 10 ♕d2 ♕a5 11 ♖b1 a6 12 ♗d3 ♘g×e5 13 ♘×e5 ♘×e5 14 ♗×e5 ♕×e5 15 ♕c2 h5 16 O-O O-O 17 ♗h7† ♔h8 18 ♗e4 ♖a7 19 f4 ♕c5 20 ♕d3 ♖e8 21 f5 ♕e7 22 ♖f4 ♔g8 23 ♕d5 ♕a3 24 ♕d2 d6 25 ♖b3 ♕a5 26 ♖b2 ♖e5 27 ♕d3 ♕a3 28 ♖ff2 b6 29 ♖b1 ♕c5 30 f6 ♗e6 31 ♖b4 b5 32 ♗h7† ♔h8 33 f×g7† ♔×g7 34 c×b5 ♖×e3 35 ♕d4† ♕×d4 36 c×d4 ♔×h7 37 b×a6 ♖×a6 38 a4 ♖a3 39 ♖b7 ♖6×a4 40 ♖×c7 ♖×d4 41 ♖b7 ♖d1† 42 ♖f1 ♖×f1† 43 ♔×f1 ♖a1† 44 ♔f2 ♖a2† 45 ♔f1 ♗c4† 46 ♔e1 ♖×g2 47 ♖c7 ♗e6 48 h4 ♖h2 49 ♖a7 ♖×h4 50 ♔f2 ♖c4 51 ♖a6 d5 **0–1**

Awit — Patsoc 2.0 1 c4 e5 2 ♘c3 ♘f6 3 g3 ♗b4 4 ♗g2 O-O 5 ♘h3 ♘c6 6 b3 d6 7 O-O ♗c5 8 ♗b2 ♗g4 9 ♘a4 ♘d4 10 ♖e1 h6 11 ♘×c5 d×c5 12 f4 ♗×h3 13 ♗×h3 e×f4 14 g×f4 ♘e4 15 e3 ♘e6 16 d3 ♘f6 17 ♗g2 c6 18 a3 ♕e7 19 ♕d2 ♘h5 20 f5 ♘g5 21 b4 ♖ae8 22 ♖ad1 a6 23 d4 ♘e4 24 ♕e2 ♕g5 25 d×c5 ♕×f5 26 a4 ♕g5 27 ♖d7 a5 28 ♖×b7 a×b4 29 a5 ♕×c5 30 a6 ♘d6 31 ♗d4 ♕×d4 32 e×d4 ♖×e2 33 ♖×e2 ♘×b7 34 a×b7 c5 35 d×c5 ♖d8 36 ♖e1 ♘f4 37 c6 ♔h7 38 c7 ♖d2 39 c8♕ ♖×g2† 40 ♔h1 ♖g5 41 b8♕ b3 42 ♕×f4 ♖g6 43 ♕×f7 h5 44 ♕cf5 ♔h8 45 ♕5×g6 h4 46 ♖e8# **1–0**

Bobby — Phoenix 1 e4 e6 2 c3 d5 3 e×d5 e×d5 4 d4 ♗d6 5 ♗d3 ♘f6 6 ♘e2 O-O 7 ♘a3 ♗×a3 8 b×a3 c5 9 d×c5 ♘bd7 10 ♗e3 ♕a5 11 ♗f5 ♘×c5 12 ♗×c5 ♕×c5 13 ♗×c8 ♖a×c8 14 ♕b3 ♖fe8 15 ♖d1 ♕×c3† 16 ♔f1

♔×h7 31 ♕e4† f5 32 ♕×c6 ♖×b8 33 ♗×b8 ♕b4 34 ♕×e6 ♕c5 35 ♗e5 ♕f8 36 ♖c1 ♘f4 37 ♗×f4 ♔h8 38 ♗e5 ♕a3 39 ♕×h6† ♔g8 40 ♕×g7# **1–0**

Phoenix — Awit 1 d4 ♘f6 2 ♗g5 ♘e4 3 ♗h4 d5 4 f3 ♘f6 5 ♘d2 g6 6 e4 ♘bd7 7 e5 ♘h5 8 c4 ♗h6 9 c×d5 ♘b6 10 g4 ♘f4 11 g5 ♗g7 12 ♘e4 ♘b×d5 13 ♗g3 h6 14 ♕d2 h×g5 15 ♘×g5 ♘h5 16 ♘1h3 f6.17 e×f6 e×f6 18 ♘e4 ♕e7 19 ♕e2 ♗×h3 20 ♗×h3 ♘hf4 21 ♘×f6† ♗×f6 22 ♕×e7† ♔×e7 23 ♗f1 ♗×d4 24 O-O-O ♗e3† 25 ♔b1 ♖ad8 26 ♗d3 c6 27 ♖he1 ♔f6 28 ♗e4 g5 29 ♖h1 ♖h3 30 ♖he1 ♘h5 31 ♗×d5 ♖×d5 32 ♖×d5 c×d5 33 ♖×e3 ♘×g3 34 h×g3 ♖×g3 35 ♖b3 g4 36 ♖×b7 ♖×f3 37 ♖×a7 g3 38 ♖a6† ♔g5 39 ♖a8 ♖f1† 40 ♔c2 ♖f2† 41 ♔c3 d4† 42 ♔×d4 ♖×b2 43 ♔c3 ♖b6 44 ♖d8 ♔f5 45 ♖d2 ♔e4 46 a4 ♖c6† 47 ♔b4 ♔f3 48 ♖d3† ♔f4 49 ♖d4† ♔e3 50 ♖g4 ♔f2 51 ♖f4† ♔e2 52 ♖f7 ♖c8 53 ♖e7† ♔f2 54 ♖f7† ♔g1 55 a5 ♖h8 56 a6 g2 57 a7 ♔h2 58 a8♕ **0–1**

Schach 2.7 — Fidelity X 1 d4 d5 2 c4 d×c4 3 ♘f3 ♘f6 4 e3 e6 5 ♗×c4 c5 6 O-O a6 7 ♕e2 b5 8 ♗b3 ♗b7 9 ♖d1 ♘bd7 10 ♘c3 ♕b8 11 d5 e×d5 12 ♘×d5 c4 13 ♘×f6† ♘×f6 14 ♗c2 ♗c5 15 b3 c3 16 a3 O-O 17 ♖d3 ♘e4 18 ♘d4 ♗d6 19 ♕h5 ♖c8 20 f3 ♘f6 21 ♕h3 ♖c5 22 ♘f5 ♗×h2† 23 ♕×h2 ♕×h2† 24 ♔×h2 ♖×f5 25 ♖×c3 ♖h5† 26 ♔g1 ♖d8 27 ♗b2 ♖d2 28 ♖d1 ♖×d1† 29 ♗×d1 ♖d5 30 ♖c1 ♖d6 31 g3 h5 32 e4 ♘d7 33 ♗c3 f6 34 ♗b4 ♖d4 35 ♗e2 ♘e5 36 ♗c3 ♖d7 37 ♗×e5 f×e5 38 ♖c5 ♖e7 39 a4 b×a4 40 b×a4 ♔h7 41 ♗c4 g5 42 ♔f2 h4 43 ♔g2 h×g3 44 ♔×g3 ♔g7 45 ♔g4 ♔f6 46 a5 ♖e8 47 ♖c7 ♖e7 48 ♖×e7 ♔×e7 49 ♔×g5 ♔d6 50 ♗f1 ♔c5 51 ♔f5 ♔d6 52 ♔f6 ♗c8 53 ♗e2 ♗b7 54 ♗d3 ♗c8 55 ♗c4 ♗b7 56 ♗e6 ♗c6 ½–½

Mephisto X — Ostrich 1 e4 d5 2 e×d5 ♘f6 3 d4 ♘×d5 4 c4 ♘b6 5 ♘f3 ♗g4 6 ♗e2 ♘c6 7 d5 ♗×f3 8 ♗×f3 ♘e5 9 b3 g6 10 ♗b2 ♗g7 11 ♘c3 O-O 12 ♗e2 ♘ed7 13 f4 ♗×c3† 14 ♗×c3 a5 15 ♕d2 a4 16 O-O a×b3 17 a×b3 ♖×a1 18 ♖×a1 ♖e8 19 ♕b2 e6 20 d×e6 ♖×e6 21 ♖a7 ♕b8 22 ♖a5 ♖e4 23 ♗f3 ♖e3 24 ♕d2 ♖e7 25 ♕d4 f6 26 c5 ♘c8 27 ♗g4 b6 28 ♕d5† ♔g7 29 ♖a8 c6 30 ♖×b8 c×d5 31 ♗×d7 ♖×d7 32 ♖×c8 b×c5 33 ♖×c5 d4 34 ♗d2 d3 35 ♔f2 ♖e7 36 ♔f3 ♖e2 37 ♗c1 ♖a2 38 ♖c7† ♔g8 39 ♖d7 ♖c2 40 ♗e3 ♖c3 41 ♗d4 ♖×b3 42 ♗×f6 ♖a3 43 ♗e5 d2† 44 ♔e2 d1♕† 45 ♖×d1 h5 46 ♖d6 ♖a2† 47 ♔f1 ♔f7 48 h4 ♖c2 49 ♖f6† ♔e7 50 ♖×g6 ♔f7 **1–0**

BCP — Novag X 1 e4 e6 2 d4 d5 3 e5 c5 4 c3 ♘c6 5 ♘f3 ♕b6 6 ♗e2 ♗e7 7 O-O ♖b8 8 ♘a3 c×d4 9 c×d4 ♗×a3 10 b×a3 ♘ge7 11 ♗g5 O-O 12 ♖b1 ♕a5 13 ♕b3 h6 14 ♗f4 ♘g6 15 ♗d2 ♕d8 16 ♕a4 ♘ge7 17 ♖fc1 ♗d7 18 ♔h1 ♘f5 19 ♗b5 a6 20 ♗×c6 ♗×c6 21 ♕b3 ♖c8 22 a4 ♕d7 23 ♕b4 ♖c7 24 ♖c5 b6 25 ♕×b6 ♖b7 26 ♖×c6 ♖×b6 27 ♖b×b6 ♘e7 28 ♖d6 ♕×a4 29 ♖×a6 ♕d1† 30 ♗e1 ♘f5 31 ♖a3 ♘×d4 32 ♖e3 ♘c2 33 ♖b6 ♘×e3 34 f×e3 ♕c2 35 ♗b4 ♖a8 36 ♗d2 ♕d1† 37 ♗e1 ♖×a2 38 ♖b8† ♔h7 39 h4 ♖e2 40 ♔h2 ♖×e1 41 ♘×e1 ♕×e1 42 ♖b3 ♕×h4† 43 ♔g1 ♔g6 44 ♖d3 ♕e1† 45 ♔h2 h5 46 ♖b3 h4 47 ♖a3 ♔g5 48 ♖b3 ♕g3† 49 ♔h1 d4 50 ♖b7 d×e3 51 ♖b2 ♕f2 52 ♖×f2 e×f2 53 ♔h2 f1♕ **0–1**

Patsoc 2.0 — Merlin 1 d4 d5 2 ♘c3 ♘f6 3 ♗g5 ♗f5 4 f3 c6 5 g4 ♗g6 6 e3 h5 7 g×h5 ♖×h5 8 h4 ♕b6 9 ♘a4 ♕a5† 10 c3 ♘h7 11 ♘h3 e5 12 ♕b3 b5 13 ♘c5 ♗×c5 14 d×c5 f6 15 ♗f4 e×f4 16 ♘×f4 ♖h6 17 ♘e6 ♘a6 18 h5 ♘g5 19 ♘×g7† ♔f8 20 ♗g2 ♘×c5 21 ♕d1 ♘d3† 22 ♔f1 ♘×b2 23 ♕c1 ♗d3† 24 ♔g1 ♘a4 25 ♕d2 ♕×c3 26 ♖d1 ♗c2 27 ♕×c3 ♘×c3 28 ♖d2 ♗h7 29 f4 ♘ge4 30 ♘e6† ♔e7 31 ♗×e4 ♗×e4 32 ♘d4 c5 33 ♖h3 c×d4 34 e×d4 b4 35 ♔f1 ♖ah8 36 a3 ♖×h5 37 ♖×h5 ♖×h5 38 a×b4 ♖h1† 39 ♔f2 ♖h2† 40 ♔e1 ♖h1† 41 ♔f2 ♔e6 42 ♔g3 ♖b1 43 ♖h2 ♖×b4 44 f5† ♗×f5 45 ♖h8 ♖×d4 46 ♖d8 ♖d3† **1–0**

Pion — Bobby 1 ♘f3 ♘f6 2 g3 e6 3 ♗g2 ♘c6 4 O-O d5 5 d4 ♗d6 6 ♘c3 ♗d7 7 ♘b5 ♗e7 8 ♗f4 ♖c8 9 ♘g5 ♘h5 10 ♘h3 ♘×f4 11 ♘×f4 a6 12 ♘c3 g5 13 ♘h5 f5 14 e3 O-O 15 ♖c1 ♕e8 16 a3 ♔h8 17 ♖e1 ♘a5 18 b4 ♘c4 19 ♖a1 ♖a8 20 ♗f1 ♘b2 21 ♕c1 ♘a4 22 ♘×a4 ♗×a4 23 ♕d1 a5 24 b×a5 ♖×a5 25 ♗d3 ♗c6 26 c4 ♖×a3 27 ♖×a3 ♗×a3 28 ♕e2 d×c4 29 ♗×c4 b5 30 ♖a1 ♗d6 31 ♗b3 ♕g6 32 ♖c1 ♗e8 33 ♗d1 ♕h6 34 ♖b1 e5 35 d×e5 ♗×e5 36 f4 ♗×h5 37 ♕×h5 ♕b6 38 ♕e2 g×f4 39 ♖×b5 f×g3 40 ♖×b6 g×h2† 41 ♔h1 ♖g8 42 ♖b8 ♖×b8 43 ♕h5 ♖g8 44 ♗g4 ♖a8 45 e4 c5 46 e×f5 c4 47 f6 ♖a1† 48 ♗d1 ♗×f6 49 ♕d5 h6 50 ♔×h2 ♖a2† 51 ♔g3 ♖a3† 52 ♗f3 ♖c3 53 ♕f5 ♔g7 54 ♕g4† ♔f7 55 ♕d7† ♔f8 56 ♕d6† ♔g7 57 ♕c5 ♗g5 58 ♕a7† ♔g6 59 ♕b6† ♗f6 60 ♕e6 ♔g7 61 ♕f5 ♗g5 62 ♕d7† ♔f8 63 ♕d6† ♔f7 64 ♔g4 Adjudicated **1–0**

Conchess X — Philidor X 1 e4 c5 2 ♘e2 ♘c6 3 d4 c×d4 4 ♘×d4 g6 5 c4 ♘f6 6 ♘×c6 d×c6 7 ♕×d8† ♔×d8 8 ♗d3 e5 9 ♗g5 ♗g7 10 O-O ♔c7 11 f4 e×f4 12 ♗×f4† ♔d7 13 ♘c3 ♖e8 14 ♗g3 ♔e7 15 ♗e5 ♗e6 16 c5 ♖ad8 17 ♖ad1 ♘h5 18 ♗c7 ♗d4† 19 ♔h1 ♖d7 20 ♗d6† ♔d8 21 ♗b1 ♗×c3 22 b×c3 ♗c4 23 ♖f2 g5 24 ♖d4 ♗e6 25 ♗b8 a6 26 ♗d6 h6 27 ♗c2 f6 28 ♗d1 g4 29 ♗b3 ♔c8 30 ♖f1 ♖f7 31 ♗×e6† ♖×e6 32 ♖b1 ♘g7 33 ♖c4 ♘e8 34 ♗f4 ♖fe7 35 ♖bb4 a5 36 ♖a4 h5 37 ♔g1 ♘g7 38 ♖d4 ♖d7 39 ♖d6 ♔d8 40 g3 ♖ee7 41 ♖×f6 ♖d1† 42 ♔f2 ♖b1 43 ♖f8† ♖e8 44 ♖×e8† ♔×e8 45 ♖×a5 ♖b2† 46 ♔g1 ♖b1† 47 ♔f2 ♖b2† 48 ♔e3 ♖×h2 49 ♖a8† ♔e7 50 ♗g5† ♔d7 51 ♖d8† ♔c7 52 ♖d2 ♖h3 53 ♗f4† ♔c8 54 ♖d6 ♖h2 55 ♖h6 ♔d8 56 ♗e5 ♘e8 57 ♖h7 ♔c8 58 a3 ♖a2 59 ♖×h5 ♖×a3 60 ♖h4 ♖a5 61 ♔d4 ♖a2 62 ♖×g4 ♖a4† 63 c4 ♖a1 64 ♖g8 ♔d7 65 g4 ♖d1† 66 ♔e3 ♖e1† 67 ♔d3 ♖d1† 68 ♔e2 ♖c1 69 ♔d3 ♖d1† 70 ♔e3 ♖e1† 71 ♔d3 ♖d1† ½–½

Sfinks X — Shy 1 d4 ♘f6 2 c4 g6 3 ♘c3 d5 4 c×d5 ♘×d5 5 ♘×d5 ♕×d5 6 ♘f3 ♗g4 7 ♗f4 ♗g7 8 ♗×c7 ♗×f3 9 g×f3 ♕×d4 10 ♕×d4 ♗×d4 11 ♖d1 ♘c6 12 ♖d2 ♖c8 13 ♗f4 h6 14 ♗h3 ♖d8 15 ♗g2 e5 16 ♗g3 f5 17 e3 ♗c5 18 ♔e2 ♖×d2† 19 ♔×d2 g5 20 ♖c1 ♗b4† 21 ♔c2 f4 22 e×f4 e×f4 23 a3 f×g3 24 a×b4 g×h2 25 ♔c3 ♘e7 26 ♖h1 ♘d5† 27 ♔c4 ♘f4 28 ♖×h2 h5 29 ♔d4 ♔e7 30 ♔e4 ♖d8 31 ♗f1 ♔f6 32 ♗c4 a6 33 b5 ♖e8† 34 ♔d4 a×b5 35 ♗×b5 ♖e5 36 ♗c4 b5 37 ♗f1 b4 38 ♔c4 ♖e1 39 ♖h1 ♖b1 40 b3 ♖b2 41 ♖h2 ♖b1 42 ♗g2 ♖b2 43 ♗f1 h4 44 ♔×b4 ♖c2 45 ♗c4 ♔f5 46 ♗b5 ♘d5† 47 ♔a3 ♔f4 48 ♗d3 ♖d2 49 ♗e4 ♘c3 50 ♖g2 ♘×e4 51 f×e4 g4 52 b4 ♔f3 53 ♖g1 ♖×f2 54 e5 g3 55 e6 ♖e2 56 ♖f1† ♔g4 57 e7 ♖×e7 58 ♖d1 ♖e3† 59 ♔a4 ♖e4 60 ♖d7 h3 61 ♖g7† ♔f3 62 ♖c7 h2 63 ♖f7† ♔g2 0–1

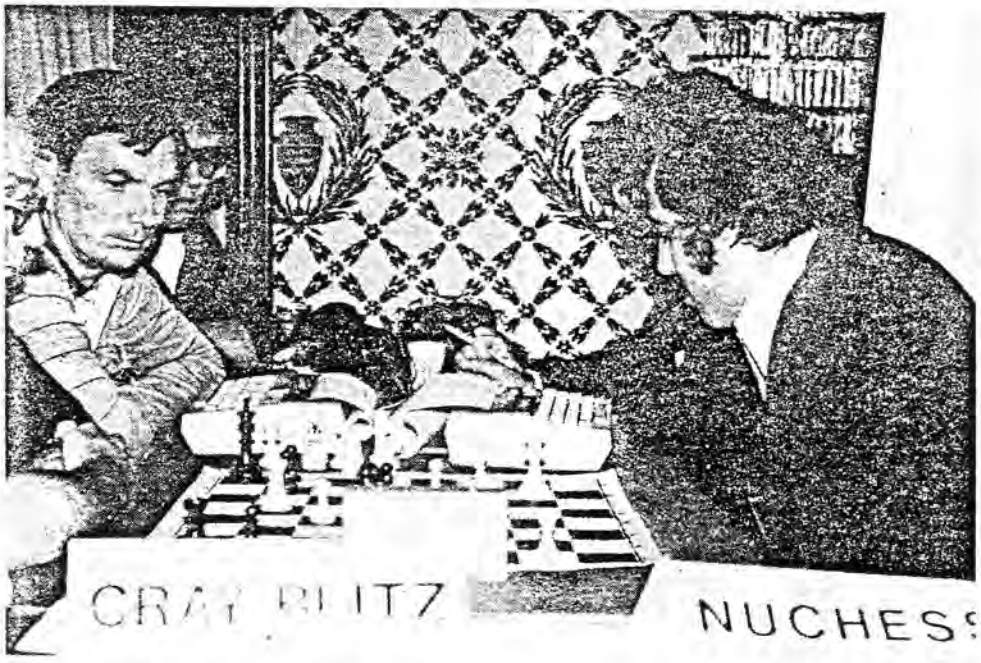


Photo by RH.

Competing for the World Title?
At least, it should be mentioned that both programs suceeeded in defeating Belle.

Abstract

Computer Chess Panel Discussion

Title: Chess on Non-standard Computer Architecture

Moderator: Tony Marsland, University of Alberta

Panelists: Monty Newborn, McGill University
Robert Hyatt, University of Southern Mississippi
Ken Thompson, BTL
Tony Scherzer, SYS/10

The panelists will review their experiences with designing and using special purpose and non-standard hardware for their chess programs.

Ken Thompson will discuss the special-purpose circuitry used by BELLE for move generation. The package developed by Joe Condon and Thompson is tied into a PDP 11/23 and gives BELLE the power to search trees having as many as 25,000,000 nodes per three minute move.

A bit-sliced computer, designed by Tony Scherzer of SYS/10, has some advantages over more standard architectures. The data structures appropriate for chess programs are ideally suited to bit-sliced machines.

Parallel search by chess programs will be surveyed by Robert Hyatt, Tony Marsland, and Monty Newborn. The objective is, of course, to have n computers play n times faster than one, or equivalently, search trees n times bigger in the same amount of time. Hyatt, Marsland, and Newborn will discuss the success of their programming efforts toward achieving this speedup. Hyatt will discuss his parallel search on the CRAY XMP dual processor. He will include observations on the problems involved with transposition tables. Marsland will discuss parallel search on a network of Motorola 68000 computers at the University of Alberta and Newborn will discuss a comparable system of Data General computers at McGill University.

TOURNAMENT RULES

1. Participants are required to attend a meeting at 12 pm on Sunday, October 7th for the purpose of officially registering for the tournament. Rules will be finalized at that meeting. The Tournament Director has the right to choose an alternate to replace any entry which fails to attend.

2. Each entry is a program and computing system. A listing of all programs running on the system are to be available on demand to the Tournament Director.

3. The tournament is a four round Swiss system tournament with trophies awarded to the first three finishers. The order of finish will be determined by the total number of points earned. If two teams have an equal number of points, the sum of opponents' points will be used as a second factor. If a tie still remains, the opponents' opponents' points will be used as a third factor.

4. Rounds are scheduled as follows:

Round 1:	October 7 at 1:00 pm
Round 2:	October 7 at 7:00 pm
Round 3:	October 8 at 7:00 pm
Round 4:	October 9 at 7:00 pm

5. Unless otherwise specified, rules of play are identical to those in "human" tournaments. If a point is in question the Tournament Director has the authority to make the final decision.

6. Games are played at a speed of 40 moves per side for the first two hours and then 10 moves every 30 minutes thereafter.

7. The Tournament Director has the right to adjudicate a game after five hours of play if he feels there is no question of the eventual outcome given the abilities of the participants. The general policy is to avoid adjudications.

8. At the end of each game, each team is required to submit a game listing to the Tournament Director. Computer printouts are preferred. Full algebraic notation (piece-old square - new square) is recommended.

9. Any computing system can be used. Permission to change computing systems must be obtained from the Tournament Director.

10. A computing system can request that its own program be changed (i.e., a new module inserted) if the way in which the request will be made by the computer is submitted in writing to the TD before the first round begins. The TD has the right not to accept the procedure if it is felt that there is any human decision-making involved.

11. A team may request the Tournament Director to stop its clock at most twice during the course of the game because of technical difficulties. The clock must be restarted each time after at most 15 minutes. If the team can clearly establish that its problems are not in its own computing system but in the telephone network or in the communication facilities provided by the Tournament Committee, the Tournament Director can permit additional time-outs. A team may request a 15 minute delay at the beginning of the game if it is having technical problems.

12. There is no manual adjustment of program parameters during the course of a game. In the case of failures, the program parameters must be reset to their original settings if it is at all possible. Information regarding castling status, en passant status, etc., may be typed in after a failure. If at any time remaining on either its or its opponent's clock, this information may be provided. However, the computer must initiate the request for information.

13. Each game is officially played on a chess board and with a clock provided by the Tournament Organizing Committee.

COMPUTER CHESS LITERATURE

Books:

Bell, A., (1978) The Machine Plays Chess?, Pergamon Press, Oxford.

Botvinnik, M.M., (1970) Computers, Chess, and Long Range Planning, Springer Verlag, N.Y.

Clarke, M.R.B., (ed.) (1977) Advances in Computer Chess I, Edinburgh University Press, Edinburgh, Scotland.

Clarke, M.R.B., (ed.) (1980) Advances in Computer Chess II, Edinburgh University Press, Edinburgh, Scotland.

Frey, P. (ed.) (1977) Chess Skill in Man and Machine, Springer Verlag, New York.

Hayes, J. and Levy, D., (1976) The World Computer Chess Championship, University of Edinburgh Press.

Levy, D., (1976) 1975 U.S. Computer Chess Championship, Computer Science Press, Potomac, Maryland.

Levy,D., (1976) Chess and Computers, Computer Science Press, Potomac, Maryland.

Levy, D., (1976) 1976 Computer Chess Championship, Computer Science Press, Potomac, Maryland.

Levy, D., and Newborn, M., (1980) More Chess and Computers, Computer Science Press, Potomac, Maryland.

Levy, D., and Newborn, M., (1981) All About Chess and Computers, Computer Science Press, Potomac, Maryland.

Newborn, M., (1975) Computer Chess, Academic Press, New York.

Newborn, M., (1979) "Recent Progress in Computer Chess", Advances in Computers, Vol.19, Academic Press, New York, pp. 58-119.

Spracklen, D. and Spracklen, K., SARGON: A Computer Chess Program, Hayden Book Company, Rochelle Park, NJ., 1978.

Magazines:

In recent years, articles on computer chess have appeared in many magazines including DISCOUVER. Graduate Engineer, Sports Illustrated, Scientific American, Abacus, Science Magazine, Nature, The Mathematical Intelligencer, Chess Life, Personal Computing, the ACM's SIGART Newsletter and many others.

The ACM Computer Chess Committee:

In 1979 the ACM established the Computer Chess Committee as a standing Committee on the Management Board responsible for organizing computer chess events within the ACM. Its primary responsibility is to put together a successful tournament every year at the ACM's Annual Conference. Committee members are M. Newborn (Chair), B. Mittman (Vice-Chair), K . Thompson, K. Spracklen, and T. Marsland.

The ICCA:

Established at the Second World Computer Chess Championship in Toronto in 1977, the International Computer Chess Association currently has several hundred members. Monty Newborn serves as President; Jaap van den Herik serves as Editor of the ICCA Journal which is published four times yearly. Johann Enroth and William Blanchard serve as Vice-President and Secretary/Treasurer, respectively. Dues are $10 (U.S.) for a one year membership. Interested individuals should write to William Blanchard, 360/253 Blackthorn Lane, Warrenville, Illinois 60555 USA.

ENTRY FORM

The ACM's Sixteenth North American Computer Chess Championship - Denver

October 13 - 15, 1985

Author(s) of the Program: _____
Please indicate the order in which you wish them listed in any printed material about the tournament. Note: it must be one of the authors of the program who is submitting this entry.

Name and address for correspondence: _____
(Name - Address)

Affiliation(s) (univ. or company) (optional): _____

Work Telephone: _____ Home Telephone: _____

Information about program: Name: _____

Tournament Record: (Submit sample Tournament games if you feel that Tournament Entries Committee is unfamiliar with your program or if its present level of play is better than established previously.

_____

USCF Rating or Equivalent: _____ Approx. number of games played: _____

Language? _____ Memory space required for program: _____ for tree search: _____

Book openings? _____ Size of Book? _____ No. of nodes examined/sec. _____

Any special hardware or software features (in a few words) _____

_____

Information about computer to be used in tourney: Name of computer _____

Memory Size _____ Word Size _____ Inst/Sec. _____

Location of computer to be used _____
(Participants are responsible for making arrangements for their own computers.)

If you plan to bring a computer, please indicate power requirements _____
(110 vac, 220 vac, phases?)

Communications requirements: _____
The ACM will cover the cost of telephone communication. Please indicate how you plan to communicate with your computer if it is not brought with you. (via a data network, etc.) _____

_____

The ACM will provide you with a TI silent 700-equivalent terminal if you request. ☐
Place a check in the box if you would like one.

Who will represent the program in Denver? _____

Date: _____ Signature: _____

Deadline for entries: August 10, 1985

Return to: Mr. Ken Thompson
Bell Telephone Labs.,
Room 2C519
Murray Hill, New Jersey 07974, U.S.A.

Note: Conditions for acceptance include the presence at the site of at least one author.

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