Nobody believed it could be done. A dedicated computer chess enthusiast in Hungary, Dr Laszlo Lindner, worked unerringly for almost a year. In the end all the large manufacturers of chess computers— and a few amateur entries— got together in Budapest to take part in the Third World Microcomputer Chess Championship—the first time an event of this kind has been staged in a socialist country.

There were astonishingly few problems getting the computers to Hungary. A number of units, especially the 68000-based ones, had to be cleared by the US Trade Administration before being allowed to go on the trip. And the Hungarian customs officials had to be carefully prepared to cope with the sudden arrival of so many computer systems at Budapest Airport. But everything went well and on the evening before the tournament all participants had arrived safely at the Szamos Computer Education and Information Centre, the venue of the World Championship. The teams and the participating machines were as follows:

**Fidelity Electronics:**
Authors: Dan and Kafle Spracklen, Ronald Nelson, Boris Baczynsky.

**Prestige:** This is the chess computer well known to aficionados as one of the finest (and most expensive) sets available on the market. The version used in Budapest ran at 4MHz on a 6502C. The new program (in EPROM) is 20K long and requires 14K RAM. The machine is capable of generating and evaluating about 1000 positions per second. The special openings library contains 16,000 positions.

**Elite A/S:** A completely new product (no connection with the old Elite) manufactured at Fidelity's plant in Germany. The handcrafted wooden board is less bulky than the Prestige. Both programs are identical, although the Elite A/S processor runs at 3MHz and looks at 750 positions per second. Normally the unit comes with a built-in openings book containing about 16,000 positions, but as in the Prestige the Spracklens used a specialised tournament book with fewer (but deeper) lines in Hungary.

**Chess Challenger Sensory 9:** The newest version of the well-known 'CC9' has become faster (2MHz instead of 1.5, 500-600 nodes per second) and received an improved program which resides in 16K masked ROMs and contains some very interesting new algorithms. The openings book contains 3000 positions.

**Hegener & Glaser:**
Authors: Thomas Nitsche, Elmar Henne

Mephisto Excilbur. The big wooden Mephisto sensor board has no less than a complete 68000 system built into it. The 43 Kbytes program is loaded from EPROM into RAM, allowing the system to run at 8MHz (on the 1982 used in the regular Mephisto unit this would correspond to about 21MHz!). The new Mephisto III program has an extremely selective search and looks at only five positions per second, spending most of its time on sophisticated chess evaluations. The openings book contains about 1500 moves and the program will recognise all transpositions. The unit is available in Germany for around £1250.

**Mephisto X:** Practically identical to the Excilbur, except for a smaller openings book of 1000 moves.

**Mephisto Y:** Also identical with the other two. For experimental purposes this unit first played without an openings library, later the book from the 'X' was used.

**Novag Industries:**
Authors: David Kittinger, Scott McDoanald.

**Constellation:**

The normal Constellation speeded up from two to three MHz, but otherwise unchanged (6502, 16K ROM, 2K RAM, 2500 positions in book). The computer looks at about 800 positions per second. Although it has no special end game heuristics, it uses this speed to go down 10-11 ply and play very pretty end games. Constellation is also well known for tactical brilliances.

**Super Constellation:** A new version planned for 1984. In Budapest the prototype ran at 4MHz (6502C) but had to be slowed down to 3.6MHz after technical difficulties in the first two games. The program is 32K long and requires 4K of RAM. It looks at just over 1000 positions per second.

**Novag X:** A true Kittinger 'Experimental' which he expected would win the tournament outright. The 34k program running on a 6502C at 3.6MHz was built into the base of Novag's Robot with LEDs around the edge of the board to indicate the computer's moves.

**Intelligent Software:**
Authors: Richard Lang, Mark Taylor

**Chess 2001:** This computer, programmed and manufactured in Hong Kong, performed very well in the PCW tournament in London. It is one of the few Z80-based chess computers left. The processor was running at 8MHz in Budapest (vs. 4 in the standard version). The 16k program is in masked ROM and includes an openings library of 2500 positions. It conducts a selective search and looks at about 500 nodes per second.

**Chess 2001 X:** Identical with the previous unit (except for red squares on the chess board). For experimental purposes David Levy, who was operating the machine, turned off the openings library for a large part of the tournament.

**65 Cyrus X:** A completely new version of the Cyrus program (which is also in the 2001), developed by Richard Lang and Mark Taylor. They used an Apple II with a Saturn Systems Accelerator Card (3.5MHz). The playing code of the program is only 5K long and the openings book contains 180 moves.

**SciSys:**
Author: Julio Kaplan

**Superstar X:** This new product from the Hong Kong manufacturers arrived at the very last moment via Holland. The 24k program is executed by a 6502A running at 2MHz and looking at about 400 nodes per second. The openings library contains 2500 positions. This computer has some highly interesting I/O features and 24 extremely versatile playing levels.

**Mikroelektronik Erfurt:**
Authors: Rudiger Worba, Dieter Schultz

**Chess Master:** The very first East European chess computer, developed and built in the German Democratic Republic. It has advanced magnet sensors and LEDs in all 64 squares. The processor (U808D, 2.5MHz), a development of the company, is very close to
In this round Fidelity’s finest, the Prestige, which was tied for second, had to play one of the Methisto machines. These were not doing too well and badly needed every point they could get. Ossi Weiner, PR consultant and best chess player in the Methisto team (he has won the Munich championship twice) was operating the German machine; Dan Sprackle made the moves for Prestige.

Round 5 (17.9.1983)

White: Prestige O Black: Methisto X

1.e4 d5 2.exd5 Qxd5 3.Nc3 Qd4 4.d4 Bf5 5.Qc3 Qxe6+ 6.Bc3 e6 7.dxe5 (White should not help black to unravel his terrible position.)

7...Qxc4 8.Qxf5 e5 9.Qxe5 N7d 10.Qg3 Bf5. (A strange move which humans are not likely to play.)

11.Nc3 Bb4 12.Nge2 Bxc3+ 13.bxc3 g6 14.Qc7 (Both computers love to attack b-pawns.)

14...Qa6 15.Rb1 b5 16.Rb2 Ne7 17.0-0 Nfd 18.Qg3 N5e6 19.Qf4 Rb8 20.a3 (White is afraid of Nc4 and Qxa2. Now if 20...Qxc3 then 21.Rxb5 wins back the pawn.)

20...Qa3 21.Bh6 Rfe8 22.Raf1 Qc3 23.Bb1 Nc4 24.Rdb4 e5 25.Rb3 (White is wasting an unbelievable amount of time with these rook moves.)

25...Qa6 26.Qd3 c4 27.Qa3 Na5 28.Rb2 c5 29.d4 Nc4 30.Rb2 Nf6 31.Nf4 N66 32.f5 Rdb8 33.Rd2 Rd6 34.Qg3 Rxd6 35.Rd6 Rxd6 36.Nd7? (An astonishingly short-sighted blunder, not at all typical for the Prestige. White overlooks the fact that after 36...Rxd5 37.Qb8+ Kf7 there is a threat of back-rank mate that prevents him from winning back the knight. Methisto has just been given a piece for nothing!)

On the adjacent board the Sensory 9 is winning against Superstar, but both computers are in bad time trouble. The operator of the SciSys machine offers his opponent a draw and is turned down.

36...Rxd5 37.Qb8+ Kf7 38.h3 Qc4 39.Ra1 Qxc3 40.Rb1 Qxc2 41.Rxb5 Qb4 42.Rb5+ Kc4 43.Rxc5+ Kd3 (After 42...Rxa2 Rb5+ wins back the rook.)

Meanwhile, on another table, the Superstar-Sensory 9 game has reached a climax. Superstar calmly completes its 38th move in the last minute of its clock time, the petrified operator hardly daring to breathe. He has offered a draw in the second game on the adjacent board — turned down again. Literally seconds before the flag falls Superstar finally makes the move.

Now the Fidelity people stop breathing. They have a little over three minutes on the clock. They are perfectly clear that they will win the game if their computer moves a second earlier than they have. You can almost hear the prayers of Peter Reckwitz, Fidelity’s German importer, who is operating the machine. If it loses on time the chance is sure to fall on him. You always blame the operator for being too slow entering and executing moves.

With Peter Reckwitz growing crim-
Continued from page 221

machine. The arbiter is not sure what he should do and decides to postpone a final decision until the international jury can be summoned the next day. For purposes of pairing the game is tentatively adjudicated a draw.

The next afternoon the international jury interviews all involved and decides that the spirit of the rules are quite clear and requires the operator to enter the opponent's moves at all times. He is not allowed to slow down the game for strategic reasons. It issues a reprimand to the Mephisto team for attempting to circumvent the rules and express strong disapproval of the 'emotional and hostile behaviour of the Fidelity representative'. It rules that the game must be resumed at the point where it was left, that the level of play be reset to the level of the previous evening and that the game be played on for an additional 45 minutes (the approximate total time lost during the incident).

A3... Qd7 B4 Qg6 Bxg4 hxg4 Kbb 5 B6 Qg6 Rb7 Qc6 Qd5 Bc6 Qc6 Bxg4 99 Kh2 Qh5 91 Kg3 Qf3 92 Kh4 Qc6 (The 45 minutes are over and the arbiter studies the position. A short time after he adjudicates it a draw. There is a collective sigh of relief. Everyone is happy with the solution. The same evening Weimer and Reckewitz are observed drinking a beer together and joking boisterously.)

In the seven round Swiss style tournament no computer was allowed to play against another machine from the same manufacturer. This naturally made for strange pairings, and some very striking oddities in the final results

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must be considered a result of the system. It is interesting to note, for example, that the Prestige and the Elite A/S have identical playing codes. Still, the slower machine fared much better.

The three virtually identical Mephisto machines, one came in 2nd and the other two 9th and 10th.

The winner of the tournament—a full point ahead of the rest—was the Elite A/S, followed by Mephisto X and Novag X. The prize for the best amateur program was won by Micromurks. The final results are shown in Fig. 1.

The current Computer World Champion Belie was defeated in New York by Gray Blitz, a program running on a 0.2 Gigaop machine (Gray X-MP). Tony Harrington will be back next month with an account of the New York championship.

Games section


This was the game that everyone had been waiting for. If Belle had won the game, there would have been a 3-way tie for first place, with Belle winning on tie-break.

1... e2-e4 c7-c5
2... e3-e2 c7-e5

(A move which was rarely seen a decade ago, but which is now rather popular in human tournaments and in computer events. If Black does nothing, his opponent will build a strong pawn centre with d2-d4. The only two moves which come into serious consideration are 2... Ng8-f6 and 2... d7-d5.)

3... d2-d4 d7-d5
4... dxd5 Qxd5

(Ng1-f3 is somewhat more usual.)

5... e7-e6
6... d2-d4 Qg8-f6
7... Bf1-d3 Nbd7-c6

(Both 6... c6xd4 cxd4 Nbd7-c6 and 6... Be7 are more often seen.)

7... c5-c3 Bc8-e5
8... b2-b4 Be7-a1

(Restraining 29... Qd8-d4+, forcing king and rook.)

29... Re1-f1 Qd8-d5
30... a2-a3 Qg7-g5
31... Rc7-e7 f7-f6
32... Re2-c2 h7-h5
33... Re2-c2 Qe8-e4

(A typical computer move—when in doubt, put the king on a safer square!)

34... Kg1-h2 a7-a6
35... Re1-e1 Rab8-e8
36... Re1-e4 Rf6-f5
37... Re4-e2 g5-g4
38... h3xg4 f5xg4
39... Re4-g4 h5xg4
40... Re2-f2 e6-e4
41... Re7-f7 Qd8-e5+
42... g2-g3 e4-e3
43... Re7-h7+ Kh8-g8
44... b4-b5

(Sacrificing a pawn in order to slow down the advance of the Black e-pawn, but it soon becomes clear that White must lose even more material.)

44... Qe5xb5
45... Ba5-e1 Qe8-e2+
46... Bc2-g1 Qb4-a2
47... Kg1-g2 Qa1-f6

(Not 47... Qa1xe1? when White can draw by 48 Rc7-g7+ Kg8-f8 49 Rg7-f7 Kg8-g8, etc.)

48... Kg2-h2 Re8-d8
49... Rh7-d7

(Black was threatening 49... Rxe8-d1.)

49... Rf6-e8
50... Rd7-d6 Qf6-b2+
51... Kh1-g2 Qb2-a1
52... Kg1-h2 Qb1-c2+
53... Kh2-g1 Qc2-e5

(Resigns

(The king is dead, long live the king!)