REPORT ON THE 1ST SOVIET COMPUTER-CHESS CHAMPIONSHIP
OR
RE-AWAKENING A SLEEPING GIANT

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1. INTRODUCTION

The 1st Soviet Computer-Chess Championship was held in Ulan-Ude, June 27-29, 1988. Not only was a successful tournament held but, more importantly, the Soviet Computer-Chess Federation was formed.

Computer chess in the Soviet Union has had a proud tradition, although in the past decade there has been little activity. In 1967, the famous USSR-USA computer-chess challenge matched Moscow’s ITEP program against its counterpart from Stanford University. The result was a decisive 3-1 victory for the Soviet entrant.

Computer chess came to the fore in the Soviet Union with the pioneering work of the Kaissa team, principally G.M. Adelson-Velsky, V. Arlazarov, and M. Donskoy. This group, as well as the Northwestern University group (authors of the Chess x.x programs), pioneered many of the computer-chess algorithms and terms that we use today (for example, such as null moves, bit-board move generation, iterative deepening, brute-force searching, the method of analogies, etc.). The Kaissa effort culminated in the program winning the 1st World Computer-Chess Championship in Stockholm, 1974.

In the mid-70s, the Kaissa group moved on to other projects, creating a vacuum of computer-chess activity in the Soviet Union.

2. COMPUTER-CHESS INTEREST

Other than isolated attempts, such as Butenko’s program in Siberia, not much was heard from the USSR but for one notable exception. For many years, former human chess World Champion Mikhail Botvinnik’s efforts to create a chess program received a great deal of publicity. However, nothing was seen of the program other than some analysis it did on a few isolated positions. Botvinnik does indeed have a program (as discussed in the March 1988 issue of the ICCA Journal) but it may be a long time before it is seen in the West.

With the intense interest in chess of the Soviet people and the early success of computer chess, it is perhaps surprising that from the mid-70s to 1988 there was little computer-chess activity in the Soviet Union. There is no good explanation, but lack of financial support and machine time appear to be the most plausible reasons.
3. THE ULAN-UDE COMPUTER FESTIVAL

With this background, the organizing committee of the Ulan-Ude Computer Festival Informatics, Peace, Communication and Ecology decided to hold a computer-chess event as part of their festival.

Ulan-Ude (pronounced oo-Lan oo-da) is a city of 350,000 people and is the capital of the Buriat Republic. The city lies 100 kilometers north of Mongolia. Close by the famous Lake Baikal, containing 20% of the world’s fresh water. Its scenic beauty makes it a favourite vacation area.

The tournament was directed by A.R. Bitman, an International Master and a member of the Kaissa team, with assistance from M.V. Donskoy (of Kaissa fame) and Jonathan Schaeffer (ICCA observer). The tournament attracted 6 programs although, regrettably, there were 4 notable absentees. Not present were Kaissa (retired), Botvinnik’s program Pioneer (too many bugs?), Butenko’s program (he required a main-frame that was impossible to arrange), and V. Petrenko’s program Electronics-OI (travel problems).

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The round-robin tournament was won by the Centaur program, authored by dr. Victor Vikhrev of Moscow. The program clearly played the best chess and might have won by a larger margin had it been able to win two games when up material.

Three of the entrants were variants on the Strategist program. This program will be commercially available in the Soviet Union shortly at the price of 380 rubles, roughly $600 (US). The differences in the program were not significant to avoid a repeated game in the tournament. Centaur, playing White, had identical games against Strategist and Strategist-I. Neither program would vary and both ended in draws.

In general, the quality of play was quite weak, perhaps 1200 or 1300 strength. Every game featured simple blunders of material and poor positional play. On the other hand, all the entrants were amateurs using slow computing facilities with limited memory. Without doubt, next year’s event will see a marked improvement in play.

The tournament had a few disputes that showed the inexperience of the participants. One program made an en passant move 5 moves after it was legal. Another program announced the game was over, even though the opponent made his move and waited to be mated. None of the programs had triple repetition code; several games ended in draws even when up considerable material. Finally, there were problems with the time control.

There was no common time setting that all the programs could be set to. Fortunately, all problems were settled amicably. Regrettably, the Electronics-OI program was unable to reach Ulan-Ude in time for the tournament. They arrived after the last round. Exhibition games were arranged against the top three finishers the following days. Petrenko’s program scored 2.5 out of 3 against them (drawing with Centaur) while only using a 1-ply search! The consensus was that had it competed in the tournament, it would probably have won.
4. A NEW COMPUTER-CHESS ORGANIZATION

After the tournament, the organizers, directors, participants, and other interested parties held a meeting to form the Soviet Computer-Chess Federation. The meeting established the following goals for the organization:

1) to help get people involved in computer chess;
2) to help the dissemination of information on computer chess;
3) to promote the use of computers in private houses;
4) to provide chess-players with computer chess results, such as databases;
5) to act as a Liaison with the ICCA.

The means for achieving these aims were detailed as:

1) to publish a department in a computer-science journal;
2) to organize computer-chess tournaments and conferences;
3) to find a sponsor for computer chess;
4) to establish a cooperative for producing chess computers;
5) to give courses on computer chess in Universities.

Several of the means and goals may appear to be rather unusual to ICCA members, but it is important to understand the politics of computer chess in the Soviet Union. First, computers are not in abundant supply. It is hoped that through chess-playing computers, the government can be made more aware of the need for personal computers. Second, although one may regard computer chess as a scientific endeavour, the fact is that the USSR Academy of Sciences is not as wealthy as other departments and therefore unlikely to be of financial assistance. More likely sponsors are the Sports Committees (and their interest in human chess) and Industrial Co-operatives (and their interests in making money). Accordingly, it is not surprising to see the affiliations of the first Soviet Computer Chess Executive:

Chairman Dr. A. Timoteev (Institute for Physical Culture, Sport)
Member Dr. A.S. Morozov (NICEVENT, Industry)
Member Dr. M.V. Donskoy (Institute for System Studies, Science)

In summary, the 1st Soviet Computer-Chess Championship was a success. There will be another tournament next year and there is no doubt it will be bigger and stronger. Has a sleeping giant been re-wakened?

5. THE LIST OF PARTICIPANTS

1. Centaur  
   Dr. Victor Vikhrev, Moscow  
   IBM-PC, Pascal, 200KB, no opening book, 4 pos/sec, selective search, roughly 300 games played.

2. Strategist-1  
   E. Surmin, S. Kurbatov, Moscow  
   A. Morozov, Moscow  
   Special hardware running at 1.8 MHz, assembler, 20KB, 1K opening book, 50-100 pos/sec, alpha-beta, roughly 100 games played.

3. Algir  
   Alexander Pokrovski, Moscow  
   IBM-PC, assembler, 32KB, no opening book, 10-100 pos/sec, alpha-beta, roughly 20 games played.
4. Strategist-A
E. Surmin, S. Kurbatov, Moscow
A. Morozov, Moscow
Special hardware running at 1.8 MHz, assembler, 18KB, 1K opening book, 40-80 pos/sec, alpha-beta, roughly 40 games played.

5. Strategist
E. Surmin, S. Kurbatov, Moscow
Y. Konopackey, Minsk
Special hardware running at 1.8 MHz, assembler, 16KB, 1K opening book, 70-200 pos/sec, alpha-beta, roughly 80 games played.

6. Intellect
Y. Kubinov, Leningrad
Special processor running at 2 MHz, assembler, 100 moves opening book, 20 pos/sec, alpha-beta, unknown number of games played.

7. Electronics-01
V. Petrenko, Leningrad
Special hardware, DEC assembler, 8K rom, 1K ram, 200 moves opening book, 25 pos/sec, alpha-beta, roughly 200 games played.

6. THE GAMES

ROUND 1

Strategist - Strategist-1

Strategist-A - Centaur

Algir - Intellect

ROUND 2

Strategist - Strategist-A
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Intellect - Centaur

Algor - Strategist

ROUND 3

Strategist - Intellect

Strategist-A - Algor

ROUND 4

Strategist - Strategist-A

Intellect - Strategist-1
Algir - Centaur


ROUND 5

Strategist-A - Intellect


Strategist-I - Algir


Centaur - Strategist


(cf. Centaur - Strategist-I, Round 3)