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April 7, 2000

The 10th CSA Computer Shogi Championships

The Sheraton Grand Hotel, Tokyo
March 8th-10th 2000

1 Introduction

This year the CSA Computer Shogi Championships were already held for the 10th time. There were no special celebrations, which was a little surprising, since the CSA tournament has come a long way since the first tournament in 1990. For one thing, in 1990 there were only six programs competing, while this year there were 45 participants. With an early entry count of 60 it was hoped that the magic number of 50 participating programs would be reached, but in the end there were too many programs that could not be finished in time. Still, there were five more programs than last year, so the steady increase continues. It was surprising that MORITA SHOGI was not among the entries. A bad result last year was followed by a busy year without time to improve the program. Morita therefore decided not to enter, but promised to be back next year.

This year the tournament was held over three days for the first time. The first day was for the first preliminary stage of seven rounds of accelerated Swiss from which eight programs would advance to the second preliminary stage on the second day. The second preliminary was a nine round accelerated Swiss tournament with the top five programs qualifying for the final day. On the final day the three best programs from last year (KANAZAWA SHOGI, YSS and SHOTEST) and the five programs that qualified from the second preliminary stage would play a round robin tournament to decide the winner of the tournament.

Like in the previous years, the final day was open to the public and comments on the games were given by professional shogi players. This year the comments were by Katsumata (5-dan) and Kitahama (6-dan). Katsumata is very interested in computer shogi and is at the CSA tournament almost every year, even when he was still an apprentice professional in the Shoreikai. Kitahama was there for the first time and admitted that he had no idea what was going in computer shogi and that he would take the opportunity to learn more about the strengths and weaknesses of the programs.

The number of non-Japanese entries had not increased over last year. Unfortunately (like last year) Don Beal and Martin Smith had to withdraw a couple of weeks before the tournament, so the foreign programs were SHOTEST by Jeff Rollason (England), KCC (North Korea), SHOCKY by Pauli Misikangas (Finland) and my program SPEAR. Based on the results in the past two years, Jeff's SHOTEST was expected to do very well and in my opinion was even a dark horse for winning the tournament. The KCC team also seemed very confident at the start of the tournament.

2 Before the Tournament

This year I had been quite busy with other things than programming SPEAR, so I had no high expectations. Until the final days before the tournament I had been fixing obvious bugs in my program and the results of test games were not very good. When I played the new SPEAR against last year's version, it only barely managed to get a winning percentage, so objectively it was even a toss-up whether to enter last year's version or the new one. However, last year's version was unusable because of a rarely occurring but deadly bug, so there was never any doubt which version I would enter in the tournament.

Before the tournament I had regular contact with Jeff and he had some interesting news about SHOCKY. It seemed that SHOCKY had some very good results against SHOTEST in test games with SHOTEST getting a time handicap. SHOCKY barely missed qualification for the second preliminary stage last year because of a bug in the time control, but this year it seemed ready to make a strong impact. This was confirmed on the evening before the tournament when SHOCKY destroyed SPEAR in a couple of test games. This was on a machine twice as slow as the one I would use in the tournament, but still a disheartening experience. My goal was to clear the first preliminary so that I would not be a bystander for two whole days. Was I really going to make that?

[1] Trip reports in this series are by members of the Machine Inference Group for the benefit of members of the Electrotechnical Laboratory, Japan. Only exceptionally should they be cited or distributed outside ETL.

No	Program Name	1	2	3	4	5	6	7	Pt	SOS	SB
*1	Ryu no tamago	11+	21+	4+	2+	15+	3+	7+	7.0	31.0	31.0
*2	Isobe Shogi	24+	11+	6+	1-	5+	9+	4+	6.0	31.0	24.0
*3	SPEAR	23+	17+	20+	5+	7+	1-	8+	6.0	26.5	19.5
*4	Shocky 3	8+	16+	1-	10+	9+	15+	2-	5.0	31.5	18.5
*5	Ojiro	12+	20+	17+	3-	2-	8+	15+	5.0	28.5	16.5
*6	Gekisashi	26+	9+	2-	20+	8-	16+	10+	5.0	23.0	13.0
*7	Yamada Shogi	19+	18+	11+	15=	3-	13+	1-	4.5	30.5	14.0
*8	Sakashita Shogi	4-	25+	19+	18+	6+	5-	3-	4.0	28.0	12.0
9	Suzu no ne	25+	6-	18+	17+	4-	2-	16+	4.0	26.0	10.0
10	Kiraku	16+	23+	15-	4-	13+	12+	6-	4.0	25.5	12.0
11	TACOS	1-	2-	7-	23+	22+	20+	17+	4.0	25.5	8.0
12	Ujiie Shogi	5-	15-	21+	24+	19+	10-	18+	4.0	21.5	9.0
13	Sexy ai chan	20-	26+	23+	14+	10-	7-	21+	4.0	17.5	7.0
14	Fuku Shogi	18-	24+	25+	13-	16-	19+	23+	4.0	16.0	6.0
15	Suzuki Shogi	22+	12+	10+	7=	1-	4-	5-	3.5	31.5	10.0
16	DNA Shogi	10-	4-	22+	21+	14+	6-	9-	3.0	26.0	8.0
17	Tsubakihara Shogi	21+	3-	5-	9-	24+	22+	11-	3.0	24.0	5.0
18	Yokoyama Shogi	14+	7-	9-	8-	20+	24+	12-	3.0	23.5	7.0
19	Piece Captor	7-	22+	8-	26+	12-	14-	25+	3.0	19.5	3.0
20	Shuto Shogi	13+	5-	3-	6-	18-	11-	26+	2.0	27.0	4.0
21	Nagayoshi Shogi	17-	1-	12-	16-	25+	26+	13-	2.0	22.0	1.0
22	Shogi Moba	15-	19-	16-	25+	11-	17-	24+	2.0	18.5	2.0
23	Hello Baba Shogi	3-	10-	13-	11-	26+	25-	14-	1.0	23.0	0.0
24	Aoi	2-	14-	26+	12-	17-	18-	22-	1.0	22.0	0.0
25	Kikuchi 1400	9-	8-	14-	22-	21-	23+	19-	1.0	20.0	1.0
26	U10 Ver.2	6-	13-	24-	19-	23-	21-	20-	0.0	18.0	0.0

Table 1: Results of the First Qualification Round.
* Ryu no tamago, Isobe Shogi, SPEAR, Shocky 3, Ojiro, Gekisashi, Yamada Shogi and Sakashita Shogi qualify for the second qualification round.

3 The First Preliminary Stage

The first preliminary stage was played with 26 programs of very different levels. First year entries with all kinds of problems were playing strong programs that had been tuned and tested for a long time. In the first round SPEAR played Hello Baba Shogi whose playing level was just as obscure as its name. It made no effort to save attacked pieces, put its own pieces in the worst possible corners and in the end allowed a simple mate in three moves. The program reminded me very much of the program I entered with four years ago. Hello Baba Shogi was actually better, since it did not crash, unlike my first attempt at a shogi program.

Meanwhile, Shocky had a little scare against Sakashita Shogi, a program that did not enter last year, but entered two years ago. Pauli was complaining so loudly about the game that I thought he had lost when it was over. Only after I congratulated his opponent on a fine game and reported the result to Jeff, who had just come in after a late breakfast, Pauli told me that he had actually won.

Round 2 was no problem for both Shocky and SPEAR. Shocky easily defeated DNA Shogi, while SPEAR beat Tsubakihara Shogi. Tsubakihara Shogi was not a very strong program, but it had a good tsume shogi solver, just like SPEAR. This resulted in a one-sided game that ended in a flash because both programs had calculated a 21 ply mate to the end and played it out instantly. I had to play back the game to see what had actually happened.

The third round saw the first defeat of a foreign program. Shocky lost a good game against Ryu no Tamago (*Dragon's egg*). This first year entry by Nakatani looked very good and shared the lead after three rounds with SPEAR, Isobe Shogi, Ojiro, Yamada Shogi and Suzuki Shogi.

In round 4 SPEAR beat Ojiro by finding a 25 ply mating sequence. So far, things were going better than expected. I needed only one more win to be certain of qualification. Shocky also won, staying close to the lead. Thus far I was not really impressed by the average level of the programs, so I was much more nervous about my own qualification chances than those of Shocky.

For me, round 5 was the most exciting and tiring round of the tournament. Against Yamada Shogi a win

would suffice to reach my goal in this tournament. From the early middle game SPEAR was clearly better, but then both programs lost their way in turn. Not being able to find any good attack, both programs wandered around aimlessly for a long time, dropping pieces at the wrong places and generally playing an embarrassing game. I have never been as happy with my program as the moment I saw a 21 ply mating sequence appear on the screen after more than 150 plies of stressful shogi. Anyone who thinks that just watching your program play by serial cable is as relaxing as watching gold fish in a bowl should try and enter the CSA tournament. All my fears of not making the second day were over and it seemed that SHOCKY would join me, as Pauli scored his fourth win in five games.

In round 6 there were a lot of people gathered around my game against RYU NO TAMAGO, both programs being undefeated. Unfortunately the game was a complete letdown. Finally I played a program that could find all the weaknesses in SPEAR and the game ended in a total defeat. SHOCKY fared better, securing a place in the second round by beating SUZUKI SHOGI.

In the final round of the first preliminary stage, RYU NO TAMAGO showed its strength by also beating YAMADA SHOGI and advancing without a single defeat. Ever since there have been two qualification rounds in the CSA tournament, there has always been a program that got into the final from the bottom class. On the first day, it seemed clear that RYU NO TAMAGO was the prime candidate this year. Second place was for ISOBE SHOGI and SPEAR. ISOBE SHOGI was a second year entry, not doing well at all last year. This year it was vastly improved and lost only to RYU NO TAMAGO. In the final round it showed its potential by beating SHOCKY. SPEAR crowned a fine performance on the first day with a win over SAKASHITA SHOGI. Six wins were much more than I had expected and (to be honest) a little more than I deserved. A post game interview with a PC magazine and numerous pictures taken during the final games were nice, but also a little embarrassing knowing the true strength of my program. SHOCKY ended in fourth place, and Pauli looked a bit disappointed. SHOCKY had chances to win in both of the games it lost and that seemed to trouble Pauli a little.

The other programs that qualified for the next round were OJIRO, GEKISASHI, YAMADA SHOGI and SAKASHITA SHOGI. I was happy that SAKASHITA SHOGI went through despite losing to SPEAR in the final round. Last year I blocked SHOCKY's path to the next round, and I know how tough it is to barely miss qualification for the next stage. Tough luck this year for TACOS, the program of the students of Shizuoka University. They were paired against RYU NO TAMAGO, ISOBE SHOGI and YAMADA SHOGI in the first three rounds. They lost these three games, won the remaining four but came up just short of qualification.

4 The Second Preliminary Stage

In the second preliminary stage there were no easy games anymore and I did not expect to win many games (although I secretly hoped to win five out of nine). In any case, the pressure was off (at least that is what I thought at the start) and I was preparing to enjoy a day of seeing how the fight for the all important top five spots would develop. The late night hotel bar predictions with Jeff and Pauli were that there would not be many surprises. IS SHOGI, EISEI MEIJIN, KAKINOKI SHOGI and KCC would qualify and the only vacant spot would probably be the one of SOUGIN, which lost all games in the final last year. We would be very wrong (again).

The first round saw an immediate upset when KCC was beaten by TAKADA SHOGI, a stable program but not one that was named as a possible finalist before the tournament. KCC followed this up by another defeat in the second round against SAKURA, also not a program that was expected to do well. It seemed like KCC was the victim of some last minute testing that showed good results against the strong commercial programs, but was not able to deal well with programs that played a different type of shogi. The second round also saw a surprising defeat of EISEI MEIJIN against KAWABATA SHOGI. KAWABATA SHOGI got very close to qualifying for the finals last year, so it was a candidate for one of the five qualification tickets. Still, EISEI MEIJIN had a very good result last year and Yoshimura again had put a lot of work in the program. Furthermore, it also ran on the fastest hardware in the tournament. A special clocked-up processor gave it a staggering 950 MHz.

At the other end of the table, both SPEAR and SHOCKY lost their first two games. SPEAR played an interesting game in the first round against KAWABATA SHOGI, but in the second round I realised that the pressure was not completely off. SPEAR lost against S1.5 when a broken pattern generated an illegal move in a very good position. Again I had lost a game because of a programming bug! It seems that one can test a program as much as one likes, but that in a tournament the errors will appear. Fortunately, the problem had not surfaced on the first day when it really mattered.

Round 3 and 4 saw no real surprises even though TANCHO, one of the qualification favourites lost against the new program GEKISASHI. GEKISASHI is a program made by a group of students from Tokyo University and they hope to go as far as IS SHOGI, also made by students of Tokyo University, the most prestigious university of Japan. SHOCKY won both its games and was now back to a 2-2 score. Meanwhile, SPEAR continued losing, this time against SOUGIN and KCC. Especially the game against KCC was no fun as I slowly started to lose all my pieces after a reasonable middle game. In the end I only had a partial anaguma and some scattered pawns. A total

No	Program Name	1	2	3	4	5	6	7	8	9	Pt	SOS	SB
*1	IS Shogi	17+	7+	16+	2+	3+	4+	9+	8-	6+	8.0	49.5	44.5
*2	Kawabata Shogi	19+	6+	13+	1-	4-	10+	16+	3+	7+	7.0	49.0	34.0
*3	KFEnd	22+	18+	15+	13+	1-	6+	4+	2-	10+	7.0	46.0	31.0
*4	Kakinoki Shogi	21+	14+	18+	15+	2+	1-	3-	7+	8+	7.0	45.0	30.0
*5	Shocky 3	7-	17-	11+	21+	14-	16+	12+	19+	13+	6.0	36.5	23.5
6	Eisei Meijin	20+	2-	14+	17+	13=	3-	8+	9+	1-	5.5	47.5	21.0
7	Tancho under Reiki	5+	1-	23+	9-	12+	15+	13+	4-	2-	5.0	48.5	21.5
8	KCC Shogi	15-	11-	22+	19+	18+	9+	6-	1+	4-	5.0	42.5	21.0
9	Gekisashi	14-	21+	20+	7+	10+	8-	1-	6-	11+	5.0	42.5	20.0
10	Sougin	13-	16+	19+	23+	9-	2-	14+	15+	3-	5.0	40.5	17.0
11	Sakura	23-	8+	5-	12+	20+	13-	15+	18+	9-	5.0	37.5	20.0
12	Sakashita Shogi	18-	22+	21+	11-	7-	17+	5-	16+	14+	5.0	35.0	16.0
13	Ryu no tamago	10+	24+	2-	3-	6=	11+	7-	14+	5-	4.5	46.5	16.0
14	Sekita Shogi 6	9+	4-	6-	18+	5+	20+	10-	13-	12-	4.0	44.0	17.0
15	Takada Shogi	8+	23+	3-	4-	17+	7-	11-	10-	24+	4.0	42.0	13.0
16	Nazoteki Dengi	24+	10-	1-	20+	23+	5-	2-	12-	18+	4.0	41.0	10.0
17	Hyper Shogi 6	1-	5+	24+	6-	15-	12-	18-	22+	19+	4.0	38.5	13.0
18	Maruyama Shogi	12+	3-	4-	14-	8-	23+	17+	11-	16-	3.0	43.0	11.0
19	SPEAR	2-	20-	10-	8-	22+	24+	21+	5-	17-	3.0	36.0	6.0
20	S1.5	6-	19+	9-	16-	11-	14-	22+	24-	21+	3.0	32.5	7.0
21	Maruden Shogi	4-	9-	12-	5-	24-	22+	19-	23+	20-	2.0	35.0	4.0
22	Isobe Shogi	3-	12-	8-	24+	19-	21-	20-	17-	23+	2.0	33.0	4.0
23	Ojiro	11+	15-	7-	10-	16-	18-	24+	21-	22-	2.0	32.0	7.0
24	Yamada Shogi	16-	13-	17-	22-	21+	19-	23-	20+	15-	2.0	28.5	5.0

Table 2: Results of the Second Qualification Round.
* IS Shogi, Kawabata Shogi, KFEnd, Kakinoki Shogi and Shocky 3 qualify for the finals.

defeat! I slowly started to fear that SPEAR would lose all games...

Round 5 saw some interesting match-ups as undefeated IS Shogi played undefeated KFEnd and Kakinoki Shogi (also without a loss) played Kawabata Shogi (one loss against IS Shogi). IS Shogi and Kakinoki Shogi won and were now very close to qualification for the finals. A surprising result in the game between Eisei Meijin and Ryu no Tamago, which ended in a draw by sennichite. Because of this result Eisei Meijin dropped to 3.5 points from five games and was suddenly in a lot of trouble, not having played IS Shogi and Kakinoki Shogi yet. At the other end of the table SPEAR finally won its first game. It was not a win to be very proud of, as Isobe Shogi found out the hard way that in between round fixes are seldom good. The program crashed in a position that was much better for Isobe Shogi. Shocky also lost (against Sekita Shogi) and a 2-3 score after five rounds seemed to end all hopes of a second European program in the finals.

In round 6 IS Shogi beat Kakinoki Shogi to become the only undefeated program. Even though seven wins were needed to be certain of qualification, six wins would almost certainly be enough with the number of strong opponents IS Shogi had played. KFEnd joined Kakinoki Shogi in second place with a win over Eisei Meijin, despite running on a laptop that was three times slower. The other programs with a good chance of qualifying were Kawabata Shogi, Tancho, KCC, Gekisashi and Sekita Shogi, all with four wins out of six games. Shocky beat Nazoteki Denki and when I saw Pauli study the score board after this round I urged him on to follow us for coffee, telling him he had no chance to qualify for the finals anyway. Ah well, what do I know?

From round 7 the tournament became a survival match. IS Shogi made certain of qualification by beating its Tokyo University rivals Gekisashi. KFEnd continued its strong performance with a win over Kakinoki Shogi. Tancho also won and Eisei Meijin took its last chance by beating KCC. Sekita Shogi dropped from the lead with a loss against Sougin. Meanwhile, I had one of those experiences that makes you wonder why anyone would want to start writing a shogi program. In the game against Maruden Shogi, SPEAR had position that was completely won. Its opponent had only a vague attack and SPEAR was certain to add another rook to its already vast material advantage. This rook could be taken at any move, but the program selected the most dangerous moment. For a moment it looked like SPEAR's king would be mated, and for about twenty moves it was touch and go before it became clear that SPEAR's king could not be mated. That small period must have taken years of my life. But all is well that ends well and with three consecutive wins things suddenly looked a lot brighter.

Round 8 saw the recovery of KCC, beating the undefeated IS Shogi. With that result KCC took its last

qualification chance. KFEND lost to KAWABATA SHOGI, leaving both programs with a 6-2 score. They were joined by KAKINOKI SHOGI, which beat TANCHO. GEKISASHI lost its third game in a row to end all hopes of qualification. With one round left to play, only IS SHOGI was certain of qualification. KAKINOKI SHOGI, KAWABATA SHOGI and KFEND were in a very good position with 6-2 scores. EISEI MEIJIN had 5.5 points and was the other program with its chances in its own hands. The programs with three losses could only win and hope for the best. TANCHO, KCC and SOUGIN were programs that were expected to compete for a spot in the final, but the final program with only three losses was a big surprise: SHOCKY had managed to climb from the bottom of the table to having an outside chance at qualification. In round 8 it played SPEAR and there was no doubt which was the better program. A convincing win for SHOCKY, even though my hardware was about twice as fast. So far, SHOCKY had only met TANCHO (and lost), so if it would end with the same score as any other program, it would not qualify because of its low SOS points.

The pairing of the final round showed the problems of the tournament system that was used: IS SHOGI-EISEI MEIJIN, KAWABATA SHOGI-TANCHO, KFEND-SOUGIN, KAKINOKI SHOGI-KCC and SHOCKY-RYU NO TAMAGO. This was a very lucky outcome for SHOCKY, as it meant an outside chance of qualification for the final. If all five games would end in SHOCKY's favour (i.e. a win over RYU NO TAMAGO and wins of IS SHOGI, KAWABATA SHOGI, KFEND and KAKINOKI SHOGI) SHOCKY would be in the final as the only program with a 6-3 score! This is exactly how it turned out, even though SHOCKY had a roller coaster game against RYU NO TAMAGO before it finally won.

Pauli was of course the happiest man in the Sheraton Hotel at that moment, probably including the couple that were getting married that day in the Sheraton church next to the tournament hall. EISEI MEIJIN was the victim of the pairing system used, but Yoshimura will have realised that if EISEI MEIJIN would not have settled for sennichite in the game against RYU NO TAMAGO there would have been no problem in qualifying. Scoring only five wins from nine games is not good enough, as the KCC team also knows. Back to the drawing board and trying again next year is all they can do.

5 The Finals

Despite Pauli's obvious delight over qualification, Jeff and I still could not stop him from trying to improve his program even on the evening before the finals. In part this was probably out of frustration that a version of SHOCKY that was half a year old was actually playing better than the latest version. Jeff was also slowly starting to feel the pressure building up and was not feeling very confident about the rented PC on which his program was running. The program may be strong, but if the hardware fails, there is nothing you can do. SHOCKY and SHOTEST played a final test game on my 700 MHz PC that Pauli would use in the final (about twice as fast as the laptop he had). SHOTEST won, but it was a long game that lasted until about three in the morning. SHOTEST had a bug in receiving moves combined with thinking in opponent's time, and this must have added a little to Jeff's uneasiness. The results in test games against the strong programs were good, but hardware problems and small bugs like that do not make for a good night's rest.

Predictions about the final as always focussed on KANAZAWA SHOGI, the program that almost always wins. A safe bet, based on five previous tournament victories and three runner-up places. KANAZAWA SHOGI was expected to be challenged by former tournament winners YSS and IS SHOGI. For me, SHOTEST and KAKINOKI SHOGI were dark horses to win the tournament. The general opinion was that it would be good if SHOCKY would win at least one game to show that it deserved to be in the final despite a lucky pairing in the qualification.

The first round seemed to confirm the prediction, as all of the programs mentioned won, except for SHOTEST, which lost a very good position against KAKINOKI SHOGI. However, the second round saw the first major upset as KFEND beat KANAZAWA SHOGI. A second one was almost added to this as SHOCKY came very close to beating IS SHOGI. IS SHOGI had found a 27 ply mate for SHOCKY and also saw that there was no way to defend against that. To prolong the game, it played a check that could be defended in different ways without changing the mating sequence. However, SHOCKY had no special mating search and was unaware of what was going on. In the end it took the safest looking defence against the check, which was the only way that opened an escape route for IS SHOGI's king. Meanwhile, SHOTEST got the point back that it had lost in the first round. KAWABATA SHOGI seemed to have an easy victory and even managed to get a completely safe entering king. However, instead of trying to attack the SHOTEST king, it kept making the already safe entering king safer and safer. In the end, KAWABATA SHOGI lost on time. This was a big result as it would turn out.

Things really started to heat up in round three. Only the game between YSS and KFEND went according to expectations as YSS won. All the other three games were surprises. IS SHOGI lost to KAWABATA SHOGI, which it had beaten the day before. KANAZAWA SHOGI lost to KAKINOKI SHOGI, suddenly making another KANAZAWA SHOGI tournament victory very uncertain. For me, the biggest upset was the win of SHOCKY over SHOTEST. It was the first time in numerous test games that SHOCKY managed to beat SHOTEST, but SHOCKY picked the perfect

No	Program Name	1	2	3	4	5	6	7	Pt	SB
1	IS Shogi	6+	8+	3-	2+	5+	4-	7+	5	15
2	YSS 10	8+	5+	6+	1-	3-	7+	4+	5	14
3	Kawabata Shogi	4-	7-	1+	5+	2+	8+	6-	4	16
4	Kanazawa Shogi	3+	6-	5-	8+	7+	1+	2-	4	13
5	Kakinoki Shogi	7+	2-	4+	3-	1-	6+	8+	4	10
6	KFEnd	1-	4+	2-	7-	8-	5-	3+	2	8
7	Shotest 4.0	5-	3+	8-	6+	4-	2-	1-	2	6
8	Shocky 3	2-	1-	7+	4-	6+	3-	5-	2	4

Table 3: Results of the Finals.

time to do so. A difficult sacrifice of a bishop for a gold turned out to completely destroy Shotest's position and everything was downhill from there. There were some people who expected Shocky to lose all games, so this win was very important for Pauli to show that he was not out of place in the finals.

Round 4 saw the fall of the final undefeated program as YSS lost to IS Shogi. This round also saw the other favourites catching up as Kanazawa Shogi beat Shocky and Shotest beat KFEnd. This last game was not without incident, as Jeff's fears about his hardware became true. The PC was not working properly and it took him about 30 minutes to get it to work again. His opponent was very courteous in patiently waiting for him to finish instead of trying to claim the game. A good illustration of the atmosphere among the programmers in the CSA tournament. Shotest then had not much trouble beating KFEnd, first killing all of the opponent's threats and then even all of the potential threats before actually trying to break down the anaguma castle. Katsumata jokingly commented that it would be impossible to sell shogi software that makes no attempt at being friendly, but just completely kills you. KFEnd and Shocky were no longer title contenders with three losses, but all the other programs had everything to play for.

In round 5 Kawabata Shogi was showing its strength again by beating YSS. Kawabata Shogi suddenly had become a big title favourite with consecutive wins against IS Shogi, Kakinoki Shogi and YSS and with the relatively easy games against Shocky and KFEnd still to play. Of course, it needed the help of some other program to beat IS Shogi, the only program with only one loss after round 5. Shotest again was unable to beat Kanazawa Shogi, and will have to wait at least another year to become the first non-Japanese CSA champion.

Round 6 showed how close the championship was this year. Kanazawa Shogi completely opened up the tournament with one round to play by beating IS Shogi. Joining these two programs in the lead were YSS (beating Shotest for the first time) and Kawabata Shogi, defeating Shocky. These four programs all went into the final round with a chance to win the tournament.

A little calculation showed that despite its bad 1-2 start, Kanazawa Shogi had the chances in its own hands. A win over YSS in the final round would mean another CSA crown for Kanazawa. If YSS would win, Kawabata Shogi could clinch a tournament victory with a win over lowly ranked KFEnd. If both Kanazawa Shogi and Kawabata Shogi would lose, IS Shogi would be the winner if it would beat Shotest. YSS could only win if Kawabata Shogi and IS Shogi would both lose. YSS was the first to lose its chance after Shotest ended a disappointing performance with a crushing defeat against IS Shogi. Still, a computer program is not influenced by these things and YSS played to its full potential to beat Kanazawa Shogi. That meant that the winner would be decided in the game between Kawabata Shogi and KFEnd. It was only fitting that the tournament ended with a big upset as KFEnd beat Kawabata Shogi to make IS Shogi the winner of the 10th CSA tournament. Runner up honours again for YSS and a surprising third place for Kawabata Shogi, even though he will think a little about what could have been. Kawabata Shogi beat almost all the top programs, but lost against two programs with only two wins. All other programs will have to try again from the qualification next year. It will be a tough fight for the five qualification spots. The 11th CSA Shogi Championships promises to be very interesting with Kanazawa Shogi in the qualification tournament for the first time, joined by the strong Kakinoki Shogi and Shotest.

6 The Programs

SPEAR: As said, my program SPEAR did better than expected. Finally my work on the tsume shogi paid off as SPEAR found a number of long mating sequences: a 27 ply mate, a 25 ply mate, two 21 play mates and one 19 ply mate. It might have won these games anyway, but it is a great relief to see the message "Mate found". SPEAR also turned out to be a pretty good defender. There were some games where it seemed in trouble, but managed to wriggle out of the attack and win. Still, I will have to reconsider the

method that the program is using to generate moves. The loss against S1.5 because of a bug in a pattern was painful and should be avoided in the future. I am sure that closer cooperation with Jeff and Pauli will lead to improvement of all three programs.

IS Shogi: The winner and even though it was very close, this was probably the right result. Losing against KAWABATA SHOGI in the finals was an unexpected glitch, showing that IS SHOGI still has room for improvement. It will be a little harder next year, since the team will again lose a member as Kishimoto is giving preference to a research career at the University of Alberta. Will the duo Tanase and Goto get another one next year?

YSS: Yamashita always is very relaxed and cheerful, but being runner-up for the second year in a row must be a little frustrating. At least he finally managed to beat SHOTEST after losing all of their previous three encounters at the CSA tournament. YSS is expected to be a favourite again next year.

Kawabata Shogi Kawabata's program was the revelation of the tournament. It came within a whisker of winning the title, despite the lack of confidence of the programmer who did not even book a hotel for Thursday night, expecting to be stopped at the qualification stage. Kawabata is a very good player himself, even being the Kyoto representative for the amateur Ryu-O tournament in his student days. Actually, when I visited Japan for the first time in 1990 I played against a 20-year old and a 13-year old in a shogi club in Kyoto. I lost against the 20-year old and beat the 13-year old which stunned everyone there as he was supposed to be the biggest talent of that club. When I talked to Kawabata on the evening before the tournament he said he clearly remembered me as he was the 20-year old. He also told me that the name of the 13-year is Kobayashi Hiroshi and that he is now a 4-dan professional player. KAWABATA SHOGI has potential to win the tournament and it will be very interesting to see its improvement next year.

Kanazawa Shogi: Of course Kanazawa would have won the tournament again if the Kanazawa team had not made the mistake of making the program play Furibisha. Or would it? I guess we will never know, but it will be interesting to see KANAZAWA SHOGI in the qualification next year. No doubt that it will come through and have a go at another title. Or will it?

Kakinoki Shogi: It is hard to say something good or bad about KAKINOKI SHOGI this year. Its performance lacked colour, not losing any games that it should have won and not winning any games against the top programs. I expected a little more after the tournament victory at the Shogi Forum last June. I am afraid Kakinoki will have to rethink the methods used in his program to have a chance of winning the CSA tournament.

KFEnd: Although I think that the anaguma is a strategy of cowards, I applaud KFEND's fine performance. Clearly a low budget project of the single programmer Arioka, it beat programs like EISEI MEIJIN, KAKINOKI SHOGI and KANAZAWA SHOGI. Arioka can be proud, but it is always the question if there will be enough free time to improve the program for next year.

Shotest: The performance of SHOTEST was a little disappointing. I honestly believed that Jeff had a chance to win the tournament, and he told me before the tournament that he felt that this year's version was much more stable than last year's SHOTEST. In the end, Jeff had to settle for only two wins. Still, I think that the luck that lifted him to third place in the final round of last year's tournament was evening out this year. He had a very good position against KAKINOKI SHOGI and it must have been tough to lose to SHOCKY after winning all previous test games. However, it is not in Jeff's character to be disappointed for long and I am sure that SHOTEST will be very tough to beat again next year.

Shocky: This year SHOCKY was the program that managed to get from the lowest qualification group to the finals. It was clear to everyone that SHOCKY was very lucky to be in the finals. The tournament system failed miserably in evening out the strength of the opponents of each program. Therefore, it was very important to Pauli to show that he deserved to be in the final despite the relatively weak opposition in the qualification. Wins against SHOTEST and KFEND showed that SHOCKY is a strong program and a new European rival for SHOTEST. I wonder if Jeff and Pauli will share the same hotel room again next year?

7 Conclusions

After years of steady improvement in playing strength, I had the distinct feeling that there was not much progress since last year's tournament. Both the second qualification round and the final were very close, indicating that the programs just below the traditional top are catching up. Half of the programs in the final still had a chance to win the tournament at the start of the final round. Another indication that progress is slowing down is the

importance of opening strategy. The anaguma was the main strategy of many programs, including KAWABATA SHOGI, KFEND and KAKINOKI SHOGI. This turned out to be the main reason for KANAZAWA SHOGI not winning the tournament this time. It was tuned to play Furibisha, but during the tournament it turned out that it could not handle the anaguma at all, resulting in two losses in the first three rounds. When switching the opening preference, KANAZAWA SHOGI started winning again and almost got the title.

Still, there is hope for something else than marginal improvements in handling opening strategies. KFEND showed that even on a slow machine it is possible to make a high performance program. I sincerely hope that this will also be visible in the other programs next year and that the current lack of major improvements is not a brick wall, but a small bump in the road to the ultimate goal of beating the strongest human players.