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THE 20TH WORLD COMPUTER CHESS CHAMPIONSHIP (WCCC 2013)

Jan Krabbenbos, Guy Haworth, and Jaap van den Herik¹

Amersfoort, Reading and Tilburg

The 20th anniversary edition of the World Computer Chess Championship was held in the Collaboration Complex on the Hiyoshi campus of Keio University in Yokohama. It is a pleasure to recall and thank our hosts and all those who have contributed to the sequence of WCCC events since the first in Stockholm, 1974, prominent amongst whom are those who participated this time in Yokohama.

Over the period 12-17 August, the authors, operators and programs engaged with each other in a double round-robin format of ten rounds. They are listed in Table 1 and Chessprogramming Wiki's chess biographies are available on the web (CPW, 2013a-n). The platform for JONNY was a subset of the cluster at the University of Bayreuth, namely 100 nodes each having 24 AMD cores, communicating on an Infiniband network of 2.5GB/sec and analyzing 2bn positions/sec. with the platform adding an estimated 350 ELO to the chess performance of a single-core engine.

	Program	Author(s)	Country	Operator	Cores	Architecture	GHz
1	HIARCS	Mark Uniacke	GB	Harvey Williamson	16	Intel Xeon E5, Ivy Bridge	3.1
2	JONNY	Johannes Zwanzger	DE	Johannes Zwanzger	100×24	AMD x86-64	2.8
3	JUNIOR	Amir Ban, Shay Bushinsky	IL	Amir Ban	24	Intel Dual Xeon i5, Ivy Bridge	2.7
4	MERLIN	Balázs Jákó	HU	Balázs Jákó	4	Intel i7 3740, Ivy Bridge	2.7
5	PANDIX	Gyula Horváth	HU	Gyula Horváth	4	Intel i7 3740, Ivy Bridge	2.7
6	SHREDDER	Stefan Meyer-Kahlen	DE	Stefan Meyer-Kahlen	16	Intel	3.1

Table 1: The authors, operators and programs of WCCC 2013.

The game tempo was 'all/105' + 15"/move'. The games (13 wins for White, 10 draws and 7 wins for Black) are available on the web as played (ICGA, 2013) and with evolving post-event comments (Krabbenbos et al., 2013) including some from Mark Uniacke (MU), Harvey Williamson (HW) and Johannes Zwanzger (JZ).

Round 1: JUNIOR–MERLIN 1-0, HIARCS–PANDIX ½-½ and SHREDDER–JONNY ½-½

In the first round of the 20th World Championship, the current World Champion JUNIOR started with a convincing win over newcomer MERLIN. Black played the Ruy Lopez, Berlin Defence. In a quiet position Black decided to sacrifice a pawn analogously to Marshall in similar positions of the Ruy Lopez opening. However the compensation was minimal. JUNIOR reacted with strong moves and had no difficulties in materializing its pawn. A good start by JUNIOR.

In the HIARCS–PANDIX game, White attempted to keep its advantage from the opening by using modest means. However Black reacted intelligently and showed that its knowledge of the Queen's Gambit was up to date. For both human chess players and computers, it was a quiet game. A draw was agreed after 44 moves.

The drawn game between SHREDDER and JONNY was the most interesting fight of the first round. After one hour of play the position was equal and so White attempted to increase the tension by sacrificing a pawn. The pressure which resulted from the sacrifice gave White some play and hope for the future. Yet JONNY did not play materialistically but looked for dynamic opportunities. It found the best way to bring its strategic ideas into practice by returning the advantage of being a pawn up. With material on both sides

¹ jan.krabbenbos@gmail.com, guy.haworth@bnc.oxon.org and h.j.vdnherik@tilburguniversity.edu

being equal, neither side was able to take the initiative, break through or penetrate the opponent's position. The resultant draw was acceptable to both sides.

Standings: 1 JUNIOR 1, 2= HIARCS, JONNY, PANDIX and SHREDDER ½, and 6 MERLIN 0

Round 2: JONNY–HIARCS 1-0, MERLIN–PANDIX 0-1 and JUNIOR–SHREDDER 1-0

The JONNY–HIARCS game started quietly which implied that Black was fighting for an equal game. Both players followed the usual lines that are played in the English variation. However the small advantage by White was tangible and Black never had any possibility to annihilate. For a long time Black managed to counter all threats by White. Some clever exchanges of minor pieces and the queens led to an endgame of four rooks with White having a strong bishop and Black an agile knight with the task of prohibiting penetration by the white pieces. Continuing the pressure led to White winning a pawn. Yet Black managed to reach a rook ending with some small chances of a draw. Strong play by White showed that speaking and thinking of such chances were in fact in vain. White achieved its goal in a way which Black could not counter and won deservedly.

MERLIN–PANDIX was a game that had an equal position in the opening but soon after, MERLIN was outclassed by PANDIX. It was a game that any stronger player would always like to play against a weaker player - acquire positional advantage, win a pawn, gain more space and exchange pieces to reach an easily won pawn ending. Observers of this game saw precisely this happening. So MERLIN is still without points.

In this battle between two world champions, JUNIOR showed it was well prepared for this edition of the WCCC. It played the Sicilian Defence with g4 and h4 in the opening against SHREDDER. Of course it castled to the queenside and so we saw the two programs attacking each other. The intriguing question is always "Who comes first?" White played f4-f5xe6 and Black played b5-b4, axb4, Rxb4. In this scrimmage Black lost a pawn but that was really unimportant because the position called for dynamics and tactics. Black's drawback was its king in the center. The black king on e8 was confined by the rook on f1 and the bishop on g5. The activities of the black pieces in the center and on the queenside turned out to be no compensation for the fundamental dangers the black king was facing. Black regained an important pawn on e4 but had to allow White to penetrate on g7. Soon it turned out that the black rook on e4 was out of place. In the final position White is threatening Nb5 and neither Rxe2 nor Nc4 is sufficient in defence. Stefan Meyer-Kahlen duly resigned for SHREDDER.

Standings: 1 JUNIOR 2, 2= JONNY and PANDIX 1½, 4= HIARCS and SHREDDER ½, and 6 MERLIN 0.

Round 3: PANDIX–JONNY ½-½, SHREDDER–MERLIN 1-0 and HIARCS–JUNIOR 0-1

PANDIX–JONNY was a remarkable game. PANDIX started with quiet play but JONNY concentrated its pieces for a king attack. In all fairness, White had sufficient possibilities to defend its king but normally it is difficult in practice to find the correct move in these positions and the attacker is successful. In this case however PANDIX was able to neutralize all dangers and reached a middle game in which chances for both sides dominated the contest. Subsequently pieces were exchanged and finally the programs embarked upon an endgame in which the dynamics were at a par. Most pieces disappeared from the board and the resulting position was clearly a draw, a result well earned and deserved by both sides.

SHREDDER played MERLIN and succeeded in winning its first game in this tournament. The opening was double-edged but SHREDDER proved to have the better book, reaching a position a piece up for three pawns. Material was balanced but SHREDDER managed to place its pieces on better squares, particularly with its extra bishop on f6 paralyzing the black position. Thereafter it was a matter of technique, straightforward in the good hands of SHREDDER. Pawn after pawn disappeared from the board and soon the black position was totally lost.

The JUNIOR team is well known for its creative programming skills. The current program excels in unexpected moves, marvelous variations and beautiful completions of games. In this round JUNIOR played HIARCS. To the uninformed spectator it looked like a game where HIARCS was dictating the position and the possibilities. MU indicates that 22. Rf2!! was better than 22. Qe2 and on move 24, JUNIOR 'crucially' (JZ) sacrificed its bishop for the compensation of a pawn and some dynamic play. The night after the game,

Harvey Williamson was in touch with the human world champion Vishy Anand who said that the move played by JUNIOR must have been out of desperation. Whatever the case he complimented JUNIOR for taking this chance. For HIARCS the situation was more difficult than expected. Its position was full of weak squares that had to be protected. With a piece up, it did not seem a very difficult task but JUNIOR managed to pose new problems time and time again to be solved by HIARCS. According to Anand, HIARCS should have taken the draw by repetition of moves. Although computers cannot be exhausted by continuous pressure HIARCS must have been disappointed that it was unable to find a win. Still trying to find an opportunity it played **33. Qc3** whereas 33. c6 Rxc2 34. Qxc7 would have been a complex alternative. In the actual game, HIARCS could only hope for a draw but it did not realize that it should aim for a draw instead of a win. It therefore played **40. Qe4** and thereafter, JUNIOR took its chances and played well thought out moves which posed problems for HIARCS. At the end of the game we saw three black pawns moving forward, the a-pawn, the f-pawn and the h-pawn, forcing a resignation on behalf of HIARCS.

Standings: 1 JUNIOR 3, 2= JONNY and PANDIX 2, 4= SHREDDER 1½, 5 HIARCS ½, and 6 MERLIN 0.

Round 4: MERLIN–JONNY 0-1, SHREDDER–HIARCS 0-1 and JUNIOR–PANDIX 1-0

The fourth round saw three victories. JONNY won against MERLIN in a game in which it was able to show that the long diagonal a8-h1 is important for the white-squared bishop and a real threat for the white king. Black played rather challenging chess and saw, probably to its own surprise, that from move 30 to move 50, all its ambitions were realized. In fact, JONNY outclassed MERLIN here.

SHREDDER played a well-prepared opening against HIARCS. The pawn sacrifice gave it some initiative which was countered by HIARCS by returning the pawn. Both sides penetrated the opponent's position with their rooks supported by other pieces. The complications were difficult to judge. If we see the contest as a movie then we must conclude that winning pawns and not taking care of pieces was more successful in this game than in many the audience have seen before: note **36. ... Bxc3!** as highlighted by MU. In the final position Black has five pawns for a piece. Of course it can take a pawn but then its position is immediately lost. For instance Nxe4, g3, Kxd3, g2 and the black pawn promotes. Even less promising Nxe7, Kf6. It is remarkable that a period of not being so fully involved in chess programming has cost Stefan Meyer-Kahlen so many points.

JUNIOR showed itself to be in its best form ever. It is a great pleasure to see this program play: new ideas, new variations, new lines. For the older people it may look like Tal has been returned to the world of chess in silicon guise. Material is no longer an important element in the evaluation function. Rather, dynamics, initiatives, threats and mobility seem to be the relevant factors, at least if the name of the program is JUNIOR. In this round, it played the solid Ruy Lopez again but in a well-known variation, the program had detected a line in which a past pawn could be saved at the cost of the exchange. Even the recapture of the knight did not have the highest priority from JUNIOR's perspective: it was searching for the opponent's king. The threats were so overwhelming that Black did not see any alternative to returning one piece after another. The collection process came to an end only when Black had no more pieces to return to White. JUNIOR deservedly won and deserves our sincere compliments for this game and its play so far in the tournament.

Standings: 1 JUNIOR 4, 2 JONNY 3, 3 PANDIX 2, 4= HIARCS and SHREDDER 1½, and 6 MERLIN 0.

Round 5: JONNY–JUNIOR 1-0, HIARCS–MERLIN 1-0 and PANDIX–SHREDDER 1-0

The most exciting game in the last round of the first half was between JONNY and JUNIOR. JONNY had established itself as a serious contender for first place, a prospect confirmed in this game. JUNIOR played creatively as always and tried to develop a king attack. For this reason it positioned its black-squared bishop on the diagonal a7-g1. White designed a nice annihilation plan by playing its black-squared bishop via f4-c7 and b6. From this manoeuvre which took some time, it is incorrect to believe that White played defensively because it developed initiatives in the center and on the queenside. JUNIOR concentrated its pieces on the kingside but the defense by JONNY was adequate. In a mixture of moves both sides showed that they could calculate deep variations in which they evaluated the consequences differently. Finally the outcome was determined by what emerged on the board, a position that can be assessed by human beings. JZ: '44. ... Kh6 would have kept Black in the game'. Slowly we started to see that White had the upper

hand and was able to reach a won endgame. A great performance by JONNY which, now co-leader, which increased the excitement of the tournament.

HIARCS decided to play a quiet opening, looking for mistakes to be made by MERLIN. However MERLIN had learned its lesson and played moves that the position required. So the game was in balance for a long time, even towards the late middle game. Then HIARCS started to be active and take some small risks. This is the point where strong programs should react in a precise and active way. MERLIN reacted actively - very good - but not in a way appropriate to the requirements of the position. So HIARCS obtained the upper hand and brought the complex situation to a clearly won position.

PANDIX-SHREDDER started as a positional game with a fight for space and good placing of pieces. Slowly PANDIX got its pieces on preferable squares. On move 27 White believed that the position was ripe for a sacrifice. Indeed the black position came under severe pressure. Black found an answer, which was materially sufficient since it obtained two knights for a rook. But the knights were displaced and the rooks were fully active across the board. SHREDDER defended as adequately as possible but PANDIX kept the advantage which it exploited with accurate play to secure the win. Thus, all games in the round were decisive.

Standings: 1= JONNY and JUNIOR 4, 3 PANDIX 3, 4 HIARCS 2½, 5 SHREDDER 1½ and 6 MERLIN 0.



Figure 1. Three key positions from the tournament.

Round 6: MERLIN-JUNIOR 0-1, JONNY-SHREDDER ½-½ and PANDIX-HIARCS ½-½

The game MERLIN-JUNIOR is a telling example of how the difference in playing strength can be expressed in terms of understanding the concepts of the game. In a Grünfeld Indian game, which followed the known line both sides had to find their own way after the opening book. Black knew exactly what the essence of the existing position was. White was looking for material advantage and it had as target the black rook on a8 on the queenside far away from the white king. JUNIOR let White pursue its goal and did not lose a single tempo in its own attack. White cashed the rook, indeed a full rook, but meanwhile the black attack was at hurricane force nine. With the combinatorial possibilities that the JUNIOR program had available, the White defense was eliminated in a few moves. The king surrendered and in the tournament JUNIOR took the lead alone again.

Nowadays there is a discussion on the value of an opening book. Since programs are generally better than human grandmasters, why should they follow the 'grandmaster opening book' to move 25? It is possible that the program can improve one of the earlier twenty-four moves. Therefore some programmers opine that a wise strategy can be to leave the opening book as soon as possible. In the game JONNY-SHREDDER both programs left the opening book around move 4 or 5. However another aspect of play now featured, namely the sensibility of the players to the type of position. For one reason or another, both programs had a small dislike of the position with regard to their potential moves. It resulted in them moving their pieces forward and backward which in consequence led directly to a draw. For the operators it was a surprise but they accepted the result.

PANDIX has studied the English opening to a large extent: many variations are stored in its opening library. In the game against HIARCS this opening was explored again. The strategic concepts are in good hands with PANDIX. However the opponent usually does not wait for the moment when it is outplayed. Acting tactically at an earlier stage is a good recipe for a balanced fight and this game was no exception. HIARCS opened lines and penetrated the white position. However White had a solid position and was able to protect all the vital squares so that the penetration had no devastating effect at all. Pieces were exchanged, pawns disappeared from the board in equal quantities and the elimination procedure went on to a simple endgame where both sides had an opportunity to play on for a win. A draw was agreed.

Standings: 1 JUNIOR 5, 2 JONNY 4½, 3 PANDIX 3½, 4 HIARCS 3, 5 SHREDDER 2 and 6 MERLIN 0.

Round 7: PANDIX–MERLIN 1-0, SHREDDER–JUNIOR ½-½ and HIARCS–JONNY ½-½

PANDIX played its usual recipe to programs that it considers weaker than itself, namely **1. a4**. After this move the opponent is out of book and has to find its own way. The same holds for PANDIX so we have an equal fight with the exception that PANDIX has prepared itself for such a situation. All in all Black did not do badly in this situation and reached an acceptable position. In the middle game, the application of chess knowledge to build up a good position becomes less important; tangible decisions increasingly become the key to the remaining game. In this phase MERLIN has no balanced strategic concepts at its disposal. Therefore the result time and again is that its opponent acquires the better positions for its pieces. And then suddenly it looks like combinations are coming out of the blue to the detriment of MERLIN. This game was no exception and MERLIN was completely outplayed in the end.

As we all know, SHREDDER and JUNIOR have been competitors and companions for a long time. They know each other's opening preferences and their strategies. Yet in every game they manage to create exciting moments. Even in almost dead positions they are able to revive the fight and make the game exciting. In this round they played a quiet game and exchanged many pieces along the b-file. Although they gave each other small tactical challenges, the chosen solution resulted in equality every time. The game continued with following theme: pawn up, pawn down, equal, small advantages for one side or the other. Then all of a sudden in the endgame both sides started to show their set of tricks. For human beings it is a pleasure to see such sparkling ideas. Again here, the game was always within hailing distance of the draw which was the result.

In the game HIARCS–JONNY, HIARCS tried to gain a pawn and control of the queenside but the cost was that its pieces were a little bit out of play. The characteristics of the position gave Black the opportunity to start a king attack which took place via direct attack in combination with penetration on the queenside. White managed to stay alive and keep the pawn for a long time. However with brute power Black regained the pawn by a rook sacrifice. The acceptance of the rook sacrifice resulted in Black being able to give perpetual check and so a draw was agreed.

Standings: 1 JUNIOR 5½, 2 JONNY 5, 3 PANDIX 4½, 4 HIARCS 3½, 5 SHREDDER 2½ and 6 MERLIN 0.

Round 8: MERLIN–SHREDDER 0-1, JUNIOR–HIARCS 1-0 and JONNY–PANDIX ½-½

In the early days of chess there was a dictum which read 'If you are the stronger player then try to reach the endgame as soon as possible because playing strength is transparent in the endgame more than in the middle game'. For SHREDDER this dictum is 'truth' and it followed it, employing enormous activity by its king. In a knight ending SHREDDER knows that the real danger comes from the rook file pawns. The focus was freeing the a-pawn, so that it became a past pawn and then running to a promotion square. This strategy was fully realised and led to the goal of achieving the full point.

JUNIOR–HIARCS showed that computer chess has reached a high level of performance. The way they handled the Boleslavsky-like positions in the Sicilian defense would have inspired many questions some twenty years ago. Nowadays spectators look at new ideas in this old opening. It is a joy to replay this game: both programs played well, keeping an eye on strategy as well as on tactics. The game deserves to be analyzed by a perfect source of knowledge. As it went, JUNIOR obtained the upper hand and HIARCS did not see any other solution than sacrificing the exchange. Thereafter the game was over and JUNIOR stretched its lead in the championship.

JONNY–PANDIX followed the favorite opening of this tournament, the English variation. Both sides have ample experience with this variation with both colors. They succeeded in bringing new ideas to the surface but these were met with adequate answers. An exchange of queens and rooks and three minor pieces reduced the material to an endgame where activity was a good compensation for a somewhat stronger bishop in relation to the knight. In the end position there was no reason to play on and a draw was agreed.

Standings: 1 JUNIOR 6½, 2 JONNY 5½, 3 PANDIX 5, 4= HIARCS and SHREDDER 3½, and 6 MERLIN 0

Round 9: HIARCS–SHREDDER 1-0, JONNY–MERLIN 1-0 and PANDIX–JUNIOR ½-½

HIARCS-SHREDDER played a theoretical variation which both programs have in their book. There were complications with indirect exchanges of pieces which seem quite common for computer programs these days. It is too early to draw the conclusion that indirect exchanges are a good strategy to aim at. However there must be some advantage because of the times given between the exchanges. SHREDDER used this technique and HIARCS went along with it too. MU notes **24. Bc4!!** The outcome was good for HIARCS since it obtained actively placed pieces and some clear initiative in the endgame. For one moment it looked like SHREDDER controlled its destiny but HIARCS convincingly showed that this was not the case and won deservedly.

JONNY opened the game against MERLIN with a calm and quiet Italian line. MERLIN played adequately in the beginning. When the game progressed it was difficult to find a plan for Black since White played rather versatile moves: some on the queenside, some on the kingside and a few in the center. However all moves had a clear intention namely to place the black pieces on squares that are not in conformance with the requirements of the position. At the time that JONNY believed it could penetrate the black position, it did so immediately. With queen and rook on the seventh rank, another rook on the d-file and a bishop looking at the black king, there was no hope of survival for Black and the game was soon over.

At the start of this round JUNIOR was in the lead by a full point. JUNIOR used the Schliemann variation of the Ruy Lopez as its weapon to surprise PANDIX. It was a game fully in the style of JUNIOR with unexpected moves, exchange sacrifices and no great regard for the pawn count. The recipe was activity, dynamics and king attack. After the pressure increased, PANDIX collapsed and JUNIOR went into a won position. But winning a won position is difficult even at this level of performance. JUNIOR could not find the proper way in the myriad of possibilities. This is not the place to analyze the game to its full extent, but many winning ways were available. The most convincing one was 57. ... Qd2+ instead of **57. ... Bf5**. The main line is 58. Qxd2 cxd2 59. Kxd2 Bf5 with an easy win. At the board, JUNIOR now believed that it was still up some 500 points but it was unclear how this evaluation was reached after a search to a depth of 24 plies. JUNIOR's problem was that its queen was out of play and its king could not escape perpetual check. The game went on for a long time but finally JUNIOR conceded that it was a draw and its evaluation function agreed too. The consequence is that JUNIOR was leading by a half point from JONNY. In the last round these programs were to meet each other.

Standings: 1 JUNIOR 7, 2 JONNY 6½, 3 PANDIX 5½, 4 HIARCS 4½, 5 SHREDDER 3½ and 6 MERLIN 0

Round 10: SHREDDER–PANDIX 1-0, MERLIN–HIARCS 0-1 and JUNIOR–JONNY ½-½

The game SHREDDER–PANDIX saw a revival of SHREDDER. The programs played a Ruy Lopez with almost all the standard manoeuvres that could be played. White sacrificed a pawn for play but it turned out that the counter play by Black was as dangerous as was the initiative by White. In the struggle both programs continued to surprise each other by the variations adopted. Black returned the pawn for active play. However the white pair of bishops were awakened and became increasingly powerful. Although Black was able to exchange one bishop, the bishop versus knight endgame with rooks and queens was in favor of White. A breakthrough at the black king's bastion was more dangerous than Black's analogous attempts on the white king. The final complications were exhaustively computed and resulted in a win for SHREDDER.

Balázs Jákó experienced the difficulty of playing an opponent that is stronger than your own program when MERLIN played HIARCS. White did well in the opening and in the middle game. To win a game, it is always necessary to break the balance somewhere. This could be material balance but it could also be a positional balance or even the balance in pawn formations. HIARCS succeeded in enforcing a different pawn

formation. Black had four pawns on the kingside whereas White had three plus one on the queenside. The question was now whether the passed pawn on the queenside was weak or strong. After some manoeuvres it turned out to be weak. In the end, White lost the pawn and somewhat later, the game.

Because of the unexpected PANDIX–JUNIOR draw in round 9, the outcome of the JUNIOR–JONNY game directly decided the world championship since the difference between these two leading contenders was just 0.5 points. This was a fitting climax to the championship, a real finale. JUNIOR did not aim with quiet play at the minimum result of a draw but instead exchanged pieces as much as possible. It was an open contest with aggressive moves from both sides. JUNIOR played as it had played in all nine rounds to date. Yet for the spectators it looked like JONNY had the upper hand on the board with two connected passed pawns. In such cases JUNIOR is at its best and finds unexpected resources that are hidden in the position. JZ prefers 35...Rf8 to 35...c4: here, a Knight was sacrificed for the two pawns and (JZ) ‘after 39. Bxe6 Black cannot win’. The battle is a joy to replay and analyzing the situations requires a computer or the strength of a grandmaster. JONNY was able to materialize its small advantage. The compensation for JUNIOR was a handful of pawns which were dangerous and formed a threat to the black king. The resultant endgame was clearer and notwithstanding the unbalanced material on the board, it was a draw fought out over 89 to the very end. The result gave JUNIOR the title of World Computer Chess Champion, by winning the 20th championship convincingly with a ‘plus 5’ score of 7½ from 10.

Standings: 1 JUNIOR 7½, 2 JONNY 7, 3= HIARCS and PANDIX 5½, 5 SHREDDER 4½ and 6 MERLIN 0

#	Program	Author/Operator	Junior	Jonny	Hiarcs	Pandix	Shredder	Merlin	W	D	L	RR1	RR2	Pts
1	JUNIOR	Amir Ban		0, ½	1, 1	1, ½	1, ½	1, 1	6	3	1	4	3½	7½
2	JONNY	Johannes Zwanzger	1, ½		1, ½	½, ½	½, ½	1, 1	4	6	0	4	3	7
3=	HIARCS	M. Uniacke / H. Williamson	0, 0	0, ½		½, ½	1, 1	1, 1	4	3	3	2½	3	5½
	PANDIX	Gyula Horváth	0, ½	½, ½	½, ½		1, 0	1, 1	3	5	2	3	2½	5½
5	SHREDDER	Stefan Meyer-Kahlen	0, ½	½, ½	0, 0	0, 1		1, 1	3	3	4	1½	3	4½
6	MERLIN	Balázs Jákó	0, 0	0, 0	0, 0	0, 0	0, 0		0	0	10	0	0	0

Table 2. The WCCC cross-table of game results (Round robin 1, Round robin 2).

#	Program	r1	r2	r3	r4	r5	r6	r7	r8	r9	r10
1	JUNIOR	6w1	5w1	3b1	4w1	2b0	6b1	5b½	3w1	4b½	2w½
2	JONNY	5b½	3w1	4b½	6b1	1w1	5w½	3b½	4w½	6w1	1b½
3	HIARCS	4w½	2b0	1w0	5b1	6w1	4b½	2w½	1b0	5w1	6b1
4	PANDIX	3b½	6b1	2w½	1b0	5w1	3w½	6w1	2b½	1w½	5b0
5	SHREDDER	2w½	1b0	6w1	3w0	4b0	2b½	1w½	6b1	3b0	4w1
6	MERLIN	1b0	4w0	5b0	2w0	3b0	1w0	4b0	5w0	2b0	3w0

#	Program	r1	r2	r3	r4	r5	r6	r7	r8	r9	r10
1	JUNIOR	1	2	3	4	4	5	5½	6½	7	7½
2	JONNY	½	1½	2	3	4	4½	5	5½	6½	7
3=	HIARCS	½	½	½	1½	2½	3	3½	3½	4½	5½
	PANDIX	½	1½	2	2	3	3½	4½	5	5½	5½
5	SHREDDER	½	½	1½	1½	1½	2	2½	3½	3½	4½
6	MERLIN	0	0	0	0	0	0	0	0	0	0

Tables 3 and 4. The WCCC 2013 game results and standings per round.



WCCC 2013 prizegiving: Jaap, Gyula, Amir, Johannes and Harvey.

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THE 2013 WORLD COMPUTER SPEED-CHESS CHAMPIONSHIP

J. Krabbenbos and H.J. van den Herik

In the evening of August 16, 2013 the World Computer Speed-Chess Championship (WCSCC) was hold. Four programs participating in the WCSC were participating in the Blitz event. The tournament was won by SHREDDER (Stephan Meyer Kahlen) scoring 4.5 out of 6 games. Table 1 provides the results and final standing.

Place	Participants	1	2	3	4	Score
1	SHREDDER	x x	1 0.5	0.5 0.5	1 1	4.5
2	JONNY	0 0.5	x x	0.5 1	1 1	4.0
3	PANDIX	0.5 0.5	0.5 0	x x	0 1	2.5
4	MERLIN	0 0	0 0	1 0	x x	1.0

Table 1: Final Standings of the 2013 World Computer Speed-Chess Championship.