

## World Chess Software Championship 2011

### Round 1

In the French opening between Hiarcs and Jonny it all went very quiet. As if they were on the way to a draw without any fight. However in the transition from middle game to end game there was a remarkable indirect exchange of pieces. The full transaction resulted in black having two pieces and white a rook and two pawns up. The position was difficult to judge although both programs assessed it as a draw. The margin of the draw assessment was quite large since black allowed himself 34. ... g5 instead of taking on h4 or c4. We have to admit that the move Hiarcs expected the move played by Jonny. Also in the sequel of the game both programs agreed on many moves. So the result was a draw.

In the Sicilian game between Pandix and Shredder most pieces were exchanged without having added the possibility to fight for their king. The players soon reached a rook end game that turned out to be interesting but not particularly thrilling. Black was continuously in the defence but white did not miss any chance for a win as we considered afterwards. The game ended with two kings left on the board.

### Round 2

In the game Junior-Hiarcs the white player was not ready with his opening book and decided to play without it. This explains its first move. Nevertheless soon we had an acceptable position for both players and one might think that such a position would result in an easy draw. However chess programs are looking for the small opportunities. Junior is an optimistic program and tried to find even the smallest opportunity for a chance in continuation. In an indirect exchange combination the position became unbalanced with black having some material advantage and white some dynamical advantage. However black managed to control the advancement of the white pawn and was able to find good places for its pieces. Although Junior showed a full shoot of tricks Hiarcs did not intend to make the position more exciting than it was. By looking for quiet moves and keeping control over white's major pieces it managed to arrive at a simple end game with a piece up. That end game was won in a limited number of moves. It was an unexpected loss for Junior.

In a queen's gambit declined Jonny played without a plan. This observation is to be just from moves such as Kgh1 and Re1-g1. Meanwhile black developed an attack on the queenside and managed to build up a formidable pawn structure. It took some time before the knights were directed to the right squares but then they finally landed on the promised squares. They were forceful strong. White had a shortage of space and was fully overplayed. A well deserved victory for Pandix.

First and second Pandix and Hiarcs with 1.5 out of 2.

### Round 3

In the game Pandix-Junior black played the sharp Ruy Lopez Schliemann/Jaenisch variation. Apparently this was not in Pandix's book and therefore white reacted quietly, allowing black to develop its pieces quiet easily and comfortably. Pandix's style made it possible for him to avoid complications and bring the game into strategic play resulting in fixed pawn formations. Yet Junior had two points of attack: one along the half open g-file and one along the open a-file. Junior was convinced that the advantage was sufficient for a win and therefore it played slowly and solidly. That was a good assessment by Junior since, as chess players would say, the win came automatically to the black side.

The game Shredder-Jonny was a computer game at a high level with an old variant (xx. Ng5). As Johannes Zwanzger said, "this is an old fashioned move which modern teachers do not allow their pupils to be played". Nevertheless the move is not particularly bad. In this phase we might estimate the game as equal. From that moment both players attempted to develop a strategic line, which was guided by deep down evaluations in the game tree. Although all moves were perfectly understandable it was difficult to explain what strategic lines the programs were following. We may assume that game took place at a very high level. However human beings are waiting for action preferably human understandable actions. We saw when Shredder played 47. g4. It was the start of an advancement of pawns on the king side allowing black his passed pawn on the b file. Obviously the white prospect with two passed pawns than black counter play with the d-pawn only. This strategic line has been chosen by white paid off some 20 moves later. All in all we may state that white won the game deservedly.

### Round 4

In the game Hiarcs-Pandix we saw Pandix playing quiet well up to move 17. Then it played 18. ..., h5. Not a really bad move but an unusual one, which needed explanation and motivation by the program author. Of course this could not be given on the spot. Nevertheless black managed to make the game exiting by his actions on the queenside. Meanwhile at the king side he had is advanced h-pawn also involved by moving it to h4. At the beginning of these actions it did not seem to probably that white's king attack was effective. Yet Hiarcs managed to improve the position of its pieces slowly in such a way that they obtained well-chosen positions in the neighbourhood of the black king. Soon the attack was more dangerous then the advancement the black passed pawn on the a-file. Black defended well and manages to exchange the queens. However at that time his a-pawn had lost pawn because white's e-pawn deserved all attention. An implicit exchange of the two passed pawns resulted in an end game that was lost for Pandix. Hiarcs did not make any mistakes and arrived in a position with two pawns up. After some additional moves black resigned.

In the game Junior-Shredder both players deserve a compliment for their originality, persistence and creativity. Amir Ban and Stefan Meyer-Kahlen showed their sportsmanship and feelings for competition by challenging each other's program to its extremes in calculation as well as in judgment. Amir chooses the c3 variation of the Sicilian defence and followed unthrodnen paths almost from the beginning. This implies that both programs had to find their own way. Junior showed its aggressive ideas. Shredder counted very well and the play went into an equal position. When replaying the game one even could believe that there some boring parts and then wonder why

they did not agree a draw. The answer is obvious, both programs were looking for opportunities to outperform the other. In this respect Junior showed that it is the most creative and audacious program. It was prepared to sacrifice a pawn for additional chances. The game came into a second lively face, that the behaviour of both programs was repeated. They are of equal strength. At the moment that all spectators believed everything was set and done Junior turned the tables again and both programs had to look for new positions. As was expected from intelligent programs they found these positions rapidly and agreed to a draw.

Standings: Hiarcs 2.5, Shredder 2.0.

## Round 5

The game Shredder-Hiarcs opened with the well-known Slav defence. Both players were well prepared and followed well known variations. They know the structures and strategies of the position they were in and both side were not looking for adventures. So the game progressed quietly with Shredder now and then having the upper hand. It turned out that white was to able to materialise the small advantage in space by winning a pawn. At that time the number of pieces on the board were reduced and even though the pawns were on different sides white did not see any possibility to move his king side pawns forward. The result was that the players agreed to a draw.

Junior made serious attempts in its game against Jonny. Jonny tried to improve its chances by attacking the black king. At first blush it looked that the kings side attack was not really serious. But white managed to obtain some threats. However Junior had not only improved the position of its queenside pawns but also had the potential dangers towards its king under control. Black managed to exchange the queens and from that moment the white pressure was reduced. Black continued to increase the pressure on the queenside. As a consequence white sacrificed the exchange for dangerous passed pawn. When this local struggle was over it turned out that white had two pawns and a bishop for a black rook. This implied that black had to change its policy, instead of looking for a win it had to find a draw. Since the rooks were very active it was possible for Junior to penetrate the white position to give the exchange back for a pawn and to draw the resulting end game.

The standings after the first half of the tournament are Hiarcs 3.0 out of 4, Shredder 2.5 out of 4, Junior 2 out of 4.

## Round 6

In the game Shredder-Pandix the same colour distribution was seen as in the WCCC (xxx round). Gyula Horvath was able to draw that game but felt that he had had a very good position, so he decided to include that game in his opening library. That was a good decision since in this game Shredder played indeed the same variation. Here it is worthwhile to note that the time for the WCCC is the whole game in 105 minutes with 15 seconds per move played and in the WCSC it is 45 minutes plus 15 seconds per move played. The result was that Pandix did not spend any noticeable time on the first 15 moves whereas Shredder recomputed all the moves previously played which took him a considerable amount of time with respect to the 45 minutes. The explicit consequence

was that Shredder did not have sufficient time to make well thought decisions. It is remarkable that Pandix could win relatively easy from Shredder.

Jonny-Hiarcs was a solid queens gambit. Both sides showed a little initiative. Refraining from dangerous activities was the major maxim so there much fight to report. Both players were happy with a half a point.

The standings after round 6 are Hiarcs 3.5, Shredder and Pandix 2.5.

## Round 7

The game Pandix-Jonny was not so exiting in the first seventy moves. Thereafter both programs had revenge for their own play in mind. The complications they triggered were only continuations that can be found search tree of advanced chess programs. Assuming that the final result (a draw) was the estimated outcome in the second set of seventy moves humans may have a big puzzle to verify the evaluation as made by the program. Some samples were performed in the tournament hall and in the first instance we may inform you that the assessments were all correct. Having said this the best we may advice our readers to see the sequence of moves as a sequence of movie shots: exiting, hard to follow and with a happy end.

To play a game of chess its sometimes labour consuming but to replay a game of chess may also have the same level, in particular if the game last over 100 moves. It is not spectacular to see two programs making no progress in their contest. Although Hiarcs and Junior both did their utmost their balance in playing strength was in this game completely equal. White's perception of what black was threatening was perfect and the other way around it was the same. The remarkable thing is that these statements are true for a n unbalanced position in which white had two rooks and black a queen. The dynamic balance remained up to the end. The draw was the only logical conclusion.

The standings are Hiarcs 4 (out of 6), Pandix 3 (out of 6) and Junior and Shredder both 2.5 (out of 5).

## Round 8

Jonny-Shredder had a symmetrical English opening. The game looked promising since both sides had an opposite castling however there were no attacks on the king but only a scrimmage in the centre. By the move c5 the outcome of the game was difficult to assess. But as the game continued it turned out that the whole contest was within the margin of a draw. This result was achieved in an ending of pawns and bishops of opposite colours.

The game Junior-Pandix was a contest between two programs that combined strategy and tactics. After a Ruy Lopez opening they played some seventy moves attempting to obtain a small initiative. The initiator of the small fights was Junior but apart from a good position and a potential passed b-pawn it did not obtain any substantial advantage. By continuing to work with small threats of penetrating the black position or pinning important pieces Junior raised challenges for Pandix. It is really a sign of professionalism how Junior persisted in its trials. On move 74 the evaluations function showed a first sign of small increase for white. Investigating the position more closely black discovered

that it had to overcome some difficulties. Within its time limited search tree black could not find an adequate solution for the threats posed by Junior. On move 78 white sacrificed its passed b-pawn for a deadly pin of the rook on c5 with the king on d6. This pin was decisive for the outcome of the game. It is a manoeuvre, which any grandmaster would have played. The chess community may enjoy the play as has exhibited by Junior.

With two rounds left Hiarcs leads with 4 points, Junior has 3.5 and Shredder 3.0. As Pandix and Jonny still have a bye left, both are no longer candidates for the title..

## Round 9

The game Shredder-Junior followed the first nineteen moves the game Hiarcs-Junior (see 19th WCCC round xx). In that game Hiarcs played 20. f5, Shredder deviated by playing 20. Bf3. Apparently Shredder aimed at some coordination of the pieces in combination with some spatial advantage however black would like to see tactical tricks and exploiting diagonals, open files and weak king safety. We are sure that human annotators would use the epithet 'brilliant for black's 24<sup>th</sup> move': 24. ..., Rc8-c6 [diagram]. It interrupted the defence by bishop b7 and showed that the white king was in severe danger. Black play after this move continued to be sharp to the point and directed towards attacking the white king. There are many fantastic variations. We restrict our selves to one: 25. Rxf5 (instead of Ba3) would be followed by 25. ..., Bxf5, 26. Bxc6, Bd3 or 26. gxf5, Rxd6 27. Qxd6, Re1+ 28. Kg2, Qg5+. As the game went on white fit his bishop on b7 but black took the opportunity to occupy the main files and rows with its rooks and the diagonals where given to its bishops. Of course white had the same material but the forces seemed paralysed by the enormous power that the black pieces saturated over the board. In the final position white resigned after 41. Qh3 because of the continuation 41. ..., f2 42. Bxe8, fxe1 43. Rxe1, Qd5 44. Qg2, Rh4. Of course there are many variants that lead to a win for black. The performance by Junior is outstanding and deserves our compliments.

After the opening Pandix had an equal game against Hiarcs. The opponents played for good positions for their pieces as well an adequate pawn structure. In some variations the pawn structures was subordinate to the activity of pieces. Black allowed two double pawns, one on the b-file and one on the h-file for attacking the white king. To neutralize the pressure white agreed to have a double d-pawn. So both pawn structures were unimportant with respect to the activities on the board. In the late middle game Hiarcs seemed to have the better part and game watchers were waiting for Hiarcs' decision with respect to its chances to the white king. However each decision had its drawbacks and to Pandix' credits it must be said it defended the position very well. With well placed counter attacks it annihilated many threats and was able to reach an endgame with bishops of opposite colour, rooks and pawns distributed over the board. By implicit exchanges of pieces the game culminated in a rook ending that was a clear draw.

The last round will be exciting since two programs are still candidate for the title. They do not play each other, but both the opponents are considered strong opponents. The standings are now: Hiarcs and Junior have 4.5 out of 7.

## Round 10

The game Junior-Jonny was exciting by the chances Junior had for the world title, but the game itself was quiet. White tried to keep the small initiative from the opening. But on move 20 black managed to turn the tables and took the initiative. From that point onwards Junior had no real chance anymore of winning the game. At move 42 a repetition of positions occurred and as a consequence both players agreed to a draw. So eyes were fixed on the game Hiarcs-Shredder

In the game Hiarcs-Shredder white was able to take the solid Maroczy position against the black fianchetto bishop. On move 13 Shredder decided to exchange its strong bishop for the knight on c3 in order to crumble the white pawn formation. Although pawn structure is an important item for a position piece activity is even more important and the white pieces were able to find adequate squares for putting an enormous pressure on the black position. From move 15 to move 25 pressure increased in such a way that people started to believe that Shredder had no opportunities to keep Hiarcs on a draw outcome. With convincing maneuvers Hiarcs outplayed Shredder and won deservedly the game as well as the World Software Chess Championship. Congratulations.