

## 20<sup>th</sup> WCCC

### Round 1

In the first round of the 20<sup>th</sup> 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 his pawn. A good start by Junior.

In the game Hiarcs – Pandix the white player attempted to keep white's advantage from the opening by using modest means. However black reacted intelligently and showed that his knowledge of the Queen's Gambit was up to date. For a human chess player it was a quiet game and for computers it was the same. After 44 moves they agreed on a draw.

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 his strategic ideas into practice by returning the advantage of being a pawn up. With material at both sides equal, no side was able to take the initiative for a breakthrough or for penetrating the opponent's position. The resultant draw was both sides acceptable.

Standing: 1. Junior 1(out of 1), 2. Pandix, Hiarcs, Shredder, Jonny 0.5 6. Merlin 0.

### Round 2

Junior showed to be well prepared for this championship. It played the Sicilian Defence with g4 and h4 in the opening. Of course it castled to the queen side and so we saw 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 his 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 queen side 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 the defences Rxe2 as well as Nc4 are not sufficient. Therefore Stefan Meyer-Kahlen resigned for Shredder.

The game Jonny – Hiarcs started quietly with implies 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 sensible 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 end game of four rooks with white having a strong bishop and black a jumping knight with the task to prohibit penetration by the white pieces. Continuing the pressure led to winning a pawn by white. Yet black managed to reach a rook ending with some small changes on a draw. Strong play by white showed that speaking and thinking on chances of a draw were in vain. White performed a task which black could not contradict. White won deservedly.

Merlin – Pandix was a game that had an equal position in the opening but soon after the opening Merlin was overclassified by Pandix. It was a game as any stronger player always would like to play against the weaker player. From positional advantage to winning a pawn to gaining more space and to exchanging pieces in such a way that the pawn ending is an easy win. Observers of this game saw all happening in this order. So Merlin is still without points.

Standing: 1. Junior 2; 2,3 Jonny, Pandix 1.5; 4,5 Shredder, Hiarcs 0.5; 6 Merlin 0.

### Round 3

The Junior team is well known for their creative programming skills. The current program excels in unexpected moves, marvelous variations and beautiful completions of games. In this round Junior played Hiarcs. And for the uninformed spectator it looked like a game where Hiarcs was dictating the position and possibilities. However on move 25 Junior played an unexpected sacrifice of the bishop. The compensation was a pawn and some dynamical play. In the night after the game Harvey Williamson had contact with the human world champion Vishy Anand, who said that the move played by Junior must have been in desperation. Whatever the case he complimented Junior for taking this chance. For Hiarcs the situation was more difficult than expected. His position was full of weak squares that had to be protected. With a piece up it seemed not a very difficult task but Junior managed to pose time and again new problems 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. Dxc7 would have been a complex alternative. As the game went now Hiarcs could only hope for a draw but it did not realize that it should aim for a draw instead of a win. Hence it played 40. Qe4 and thereafter Junior took its chances and played well thought moves which brought Hiarcs into problems. In the end of the game we saw three black pawns moving forward, the a-pawn, the f-pawn and the h-pawn. It forced Hiarcs to resign.

Shredder played Merlin and succeeded in winning its first game in this tournament. The opening was double edged but Shredder showed to have the better book in which the position was with a piece up against three pawns. So materially it was a balanced position however Shredder managed to place its pieces on the better squares. Especially his extra piece found a good place on f6, paralyzing the black position. From then on it was a matter of technique, which

was in good hands of the Shredder program. Pawn after pawn disappeared from the board and soon the black position was totally lost.

Pandix – Jonny was a remarkable game. Pandix started as white with quiet play, however Jonny concentrated the pieces for a king's attack. In fair observation white had sufficient possibilities to defend its king. Normally it is difficult in practice to find the correct move in these positions and then the attacker is successful. In this case however Pandix was able to neutralize all dangers and reached a mid-game in which chances at both sides dominated the contest. Subsequently pieces were exchanged and finally the programs embarked upon an end game in which the dynamics were at a par. Most pieces disappeared from the board and the resulting position was clearly a draw. Well deserved at both sides.

Standing: 1. Junior 3(out of 3); 2, 3. Jonny, Pandix 2; 4. Shredder 1,5; 5. Hiarcs 0.5; 6. Merlin 0.

#### Round 4

The fourth round saw three victories, and thus three losers too. Jonny won against Merlin in a game in which he 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 and saw probably to his own surprise that all his ideas were realized from move 30 to move 50. In fact Jonny overclassed Merlin.

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 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 many spectators have seen before. In the final position black has five pawns for a piece. Of course he can take a pawn but then his position is immediately lost. For instance Nxe4, g3, Kxd3, g2 and the black pawn promotes. Even less promising Nx7, Kf6. It is remarkable that a time of not being so much involved in chess programming cost Stefan Meyer-Kahlen so many points.

Junior showed to be in its best form ever. It is a big pleasure to see this program play. New ideas, new variations, new lines. For the older people it may look that Tal in silicon dressing has been returned in the world of chess. Material is no longer an important element in the evaluation function. Dynamics, initiatives, threats and mobility seem to be the relevant factors in the evaluation function, at least if the name of the program is Junior. In this round too it played the solid Ruy Lopez but in a well-known variation the program had detected a line in which a past pawn could be saved on the cost of the exchange. Even recapture of the knight had not the highest priority from Junior's side. The program was searching for the opponent's king. The threats were so overwhelming that black did not see any other opportunity than returning one piece after the other. The collection process came to an end at a moment that black no pieces had to return

to white. Junior deservedly won and deserves our sincere complements for this game and its play so far in the tournament.

Standing: 1. Junior 4; 2. Jonny 3; 3. Pandix 2; 4,5 Shredder, Hiarcs 1.5; 6. Merlin 0.

### Round 5

The exciting game of the last round of the first turnus was between Jonny and Junior. Jonny was up to now a serious contender for the first place. This role became clear in the game. Junior played creative as always and tried to develop a king attack. For this reason 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 maneuver, which took some time, it is incorrect to believe that white played defensively since, in the center and at the queenside they developed initiatives. Junior concentrated its pieces on the kingside. However 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 is determined by what emerged on the board as position that can be assessed by human beings. Slowly we starting to see that white had the upper hand and was able to reach a won end game. It was a great performance by Jonny who brought back excitement in this tournament that now has two leaders.

Pandix – Shredder started as a positional game with fighting for space and good places for the pieces. Slowly Pandix to managed to get its pieces on preferable positions. 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 he obtained two knights for a rook. But the knights were displaced and the rooks showed full activity over the board. Shredder defended as adequate as possible but Pandix did keep an advantage, which he could exploit with accurate play and transform into a win.

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 went for a long time in a balanced position 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 according to the requirements of the position. So Hiarcs obtained the upper hand and brought the complex situation to a clear won position for white. This made those three games of this round ended in three decisions.

Standings: 1,2. Jonny, Junior 4; 3. Pandix 3; 4. Hiarcs 2.5; 5. Shredder 1.5; 6. Merlin 0.

### Round 6

The game Merlin – Junior is a telling example how the difference in playing strength can be expressed in terms of understanding the concepts of the game. In a Grunfeld Indian game, which followed the known line both sides had to find their own way after the opening book. Black did exactly know what the essence

of the existing position was. White was looking for material advantage and it has a target the black rook on a8 at the queenside far away from the white king. Junior let white go to its goal and did not lose any tempo for its attack. White cashed the rook, indeed a full rook but meanwhile the black attack had a hurricane force of 9. With the combinatorial possibilities that the Junior program possesses the white defense was eliminated in a few moves. The king surrendered and in the tournament Junior took the lead again.

Nowadays there is a discussion on the value of an opening book. Since the programs are better than the human grandmaster why should the programs follow the opening book of a grandmaster up to move 25? It is imaginable that the program can improve one of the earlier twenty-four moves. Therefore some programmers voice as their opinion 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 and 5. However now another feature occurred namely the feature of sensibility for a type of position. For one or another reason both programs had a small dislike of the position with respect their potential moves. It resulted in moving forward and backward of the pieces that consequence directly led to a draw. For the players it was a surprise but they accepted the result.

Pandix has studied the English opening to a large extend. Many variations are stored in its opening library. In the game against Hiarcs the opening was explored again. The strategic concepts are in good hands with Pandix. However the opponent usually does not wait up to the moment that he is overplayed. In an earlier stage acting tactically is a good recipe for a balanced fight. This game was no exception. Hiarcs opened lines and penetrated in the white position. However white had a solid position and was able to protect all vital squares so that the penetration had no devastating effect at all. The pieces were exchanged, pawns disappeared from the board in equal quantities and the elimination procedure went on to a simple end game where both sides had an opportunity to play on for a win. Draw was agreed.

Standing: 1. Junior 5; 2. Jonny 4.5; 3. Pandix 4; 4. Hiarcs 3; 5. Shredder 2; 6. Merlin 0.

## Round 7

Pandix played its usual recipe to programs that are considered to be weaker, 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 situation. All in all black did not bad in this situation and reached an acceptable position. In the middle game it doesn't matter of applying chess knowledge for building up a good position. There tangible decisions are important for the remaining game. In this phase Merlin has no balanced strategically concepts at his disposal. Therefore the result is time and again that its opponent acquires the better positions for its pieces. And then all of a sudden it looks like combinations coming out of the blue and being

detrimental for Merlin. This came as no exception, Merlin was completely outplayed in the end.

As we all know Shredder and Junior are competitors and companions for a long time. They know each other's opening preferences and their strategies. Yet in every game they managed to create exciting moments. Even in almost dead positions they are able to revive the fighting spirit and make the game exiting. In this round they played a quiet game and exchanged many pieces along the b-file. Although they gave each other small tactical challenges every time the chosen solution resulted in equality. The game continued with following theme: pawn up, pawn down, equal, small advantages at either side and then all of a sudden in the end game both sides started to show their set of tricks. For human beings it is a pleasure to see the sparkling ideas. Also here it was all in the bandwidth of a draw. And that was the result.

In the game Hiarcs – Jonny Hiarcs tried to gain a pawn and the queenside but the cost was that its pieces were a little bit out of play. These characteristics of the position gave black the opportunity to start a king attack, which took place via direct attack in combination with the penetration at the queenside. White managed to stay alive and to 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 had as a result that black could give perpetual check. Hence a draw was agreed.

Standing: 1. Junior 5.5; 2. Jonny 5; 3. Pandix 4.5; 4. Hiarcs 3.5; 5. Shredder 2.5; 6. Merlin 0.

### Round 8

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 deserved 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 then sacrificing the exchange. Thereafter the game was over and Junior took the 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 colours. Yet they succeeded in bringing new ideas to the surface, however together with these ideas also adequate answers were produced. An exchange of queens and rooks and three minor pieces reduced the material to an end game 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. So draw was agreed.

In early days of chess there was a slogan which reads: if you are the stronger player then try to reach the end game as soon as possible because playing strength is transparent in the end game more than in the middle game. For

Shredder this statement is a truth. It followed this truth and employed 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 substantiated and leads to the goal of achieving a full point.

Standing: 1. Junior 6.5; 2. Jonny 5.5; 3. Pandix 5; 4,5. Hiarcs, Shredder 3.5; 6. Merlin 0.

### Round 9

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 moves on the queenside, some on the kingside and a few in the center. However all moves had a clear intension namely to place the black pieces on squares that are not in conformance with the requests of the position. At the time that Jonny believed that he could penetrate the black position he did so immediately. With queen and rook on the seventh rank and another rook on the d-file and a bishop looking at the black king, there was no hope for black to survive. The game was over soon after penetration.

Shredder – Hiarcs played a theoretical variation, which both programs have in their book. There were complications with indirect exchanges of pieces, which seems nowadays quite common for computer programs. 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. The outcome was good for Hiarcs since it obtained actively placed pieces and some clear initiative in the end game. For one moment looked Shredder controlled its won but Hiarcs convincingly showed it was not the case. The win by Hiarcs was deserved.

At the start of this round Junior was in the lead by a full point. Number two was Jonny who had to fight Merlin. Junior used the Schliemann variation of the Ruy Lopez as his weapon to surprise Pandix. It was a game fully in the style of Junior with unexpected moves, exchange sacrifices and not counting pawns. The slogan was: activity, dynamics and king attack. After enlarging the pressure Pandix collapsed and Junior went into a won position. But winning a won position is even at this level of performance difficult. 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. As the game went now Junior believed that it was still up some 500 points. However it was unclear what he counted such even after a search process of 24 plies. His problem was that the queen was out of play and that the black 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 is leading with 0.5 point before Jonny. In the last round these programs will meet each other.

Standing: 1. Junior 7; 2. Jonny 6.5; 3. Pandix 5.5; 4. Hiarcs 4.5; 5. Shredder 3.5; 6. Merlin 0.

### Round 10

How difficult it is to play an opponent that is stronger than your own program was felt Balasz Jako when he played Hiarcs. White did well in the opening and in the middle game. For winning 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 formation. Hiarcs succeeded in enforcing a different pawn formation. Black had four pawns on the king side whereas white had three and one on the queenside. The question is now whether the passed pawn on the queenside was weak or strong. After some maneuvers it turned out to be weak. Finally white lost the pawn and somewhat later the game.

The game Shredder – Pandix saw a revival of Shredder. They played a Ruy Lopez with almost all standard maneuvers 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 taken as continuation. Black returned the pawn for active play. However the white pair of bishop awakened and gained power. Although black was able to exchange one bishop, the bishop versus knight end game with rooks and queens was in favor of white. A break through at the black king's bastion was more dangerous than black's analogous trial towards the white king. The final complications were exhaustively computed and resulted in a win for Shredder.

By the unexpected draw Pandix-Junior in round 9, the outcome of this game directly decided for the world championship since the difference between the opponents was just 0,5 point. This observation sets the conditions for the fight. However Junior did not aim at a draw via quiet play and exchanging pieces as much as possible. It was an open contest with aggressive moves from both sides. Junior played as it had played all nine rounds so far. Yet for the spectators it looked that Jonny had the upper hand on the board. In such cases Junior is on its best to find unexpected resources that are hidden in the position. The battle is a joy to replay and analyzing the situations requires a computer or grandmaster strength. Jonny was able to materialize his small advantage. The compensation for Junior was a hand full of pawns, which were dangerous and formed a threat to the black king. The resultant end game was more clear and notwithstanding the unbalanced material on the board it was a draw which was fought for to the very end. The draw gave Junior the title of World Computer Chess Champion, by winning the 20<sup>th</sup> championship convincingly with 7.5 out of 10.

Final standing:

1 and World Champion: Junior 7.5

2: Jonny 7

3: Pandix, Hiarcs 5.5

5: Shredder 4.5

6: Merlin 0