USCF Swiss Tie-Break Systems

This is an attempt to explain the United States Chess Federation (USCF) Swiss Tie-Break system (Rule 34E) used for awarding the non-monetary prizes – trophies, medals, books, etc…

The USCF rule is any monetary prizes must be split equally between the tied players. However, usually there is only one trophy for each place. Well, some sort of good and objective system must be used to award the trophy/medal.

Let's take a look at the USCF recommended Swiss Tie-Break systems.

Swiss Tie-Break Systems

We utilize the USCF recommended Tie-Break systems for Swiss tournaments:

1. Modified Median
2. Solkoff
3. Cumulative
4. Cumulative of Opposition
5. Most Blacks
6. Head-to-Head Results

If the first tie break system is unable to break the tie, the second is used for the players that are still tied, and so on, until the non-monetary prize is decided. The Tie-Breaks are only used for the players that have the same score within the same section.

Here is an example of the tie break systems from a recent tournament. The 6 players were playing for the top 3 prizes. Final Standings: BHAM Tournament:

#	Rd 1	Rd 2	Rd 3	Rd 4	Tot	TBrk [M]	TBrk [S]	TBrk [C]	TBrk [O]	TBrk [T]	Trophy
1	W4	D2	W3	L5	**2.5**	6.5	7.5	7.5	18.5	2	2nd
2	W5	D1	W6	L3	**2.5**	6.5	8.5	7.5	19.5	3	1st
3	W6	L4	L1	W2	**2.0**	4.5	8	5	22	2	3rd
4	L1	W3	L5	L6	1.0	6	8.5	3	19.5	2	
5	L2	L6	W4	W1	**2.0**	4.5	8	3	22	1	
6	L3	W5	L2	W4	**2.0**	4	7.5	4	19.5	2	

First, we have a two-way tie for the first place trophy, that needs to be resolved. Then we will deal with the three-way tie for the third place trophy.

1. Modified Median

The Modified Median system evaluates the strength of a player's opposition by summing the final scores of his or her opponents and then discarding either the highest of these scores, the lowest, or both, depending on the tied player's score.

We will take a detailed look at Modified Median system. It has some conditions:

A.1. Players who tie with even scores (an even score is equal to exactly one half of the maximum possible score), will have the highest- and lowest-scoring opponents' scores excluded. *See Example #2.*

A.2. Players who tie with non-even scores (a plus or minus score of the maximum possible score), will have a modification to the system to discard only the least significant opponents' scores.

   A.2.1. For tied players with a plus score, the lowest-scoring opponents' score is excluded. *See Example #1.*

   A.2.2. For tied players with a minus score, the highest-scoring opponents' score is excluded.

Using the BHAM Tournament results, we will first use the Modified Medium system tie-break to decide the award between the two players tied for first with a plus score - 2.5 points:

Example #1 (Tied with Plus Score).

Modified	Player #1:		Player #2:	
	P# Opp	Score	P# Opp	Score
Round 1	#4	~~1~~	#5	~~2~~
Round 2	#2	2.5	#1	2.5
Round 3	#3	2	#6	2
Round 4	#5	2	#3	2
	Total	6.5	Total	6.5

After applying the Modified Median system tie break, the two highest scorers are still tied. Now, we go to the Solkoff to determine which player gets the first place trophy.

2. Solkoff

The Solkoff system is just like the Modified Median except that no opponents' scores are discarded. It is popular with tournaments of only a few rounds.
Thus, with the Solkoff, the BHAM tournament *Example #1* would look like this:

Solkoff	Player #1:		Player #2:	
	P# Opp	Score	P# Opp	Score
Round 1	#4	1	#5	2

Round 2	#2	2.5	#1	2.5
Round 3	#3	2	#6	2
Round 4	#5	2	#3	2
	Total	7.5	Total	8.5

The Solkoff tie-break awards the 1st place trophy to Player #2. And, Player #1 wins the 2nd place trophy.

If after using the Solkoff system there is still a tie, the Cumulative system is used. In the BHAM tournament, there were three players tied for the third place trophy. Now, the Cumulative system is needed to decide the third place winner.

3. Cumulative

The Cumulative system works by adding together the players' own (running) score for each round to get a cumulative tally. The system rewards players who win in the early rounds, but lose in the later rounds against the [presumably] tougher opposition.

The theory is that players who win their games in the early rounds (and therefore end up with higher cumulative scores than players with the same score who win later rounds) have had to face tougher opposition throughout the tournament.

The BHAM tournament third place contenders' tie-break calculations would be:

Example #2 (Tied with Even Score)..

	Player #3:		Player #5:		Player #6:	
	P# Opp	Score	P# Opp	Score	P# Opp	Score
Round 1	#6	2	#2	2.5	#3	2
Round 2	#4	1	#6	2	#5	2
Round 3	#1	2.5	#4	1	#2	2.5
Round 4	#2	2.5	#1	2.5	#4	1
	Total	4.5	Total	4.5	Total	4

Since Players #3 and #5 are still tied, we will use the Solkoff system.

	Player #3:		Player #5:	
	P# Opp	Score	P# Opp	Score
Round 1	#6	2	#2	2.5
Round 2	#4	1	#6	2
Round 3	#1	2.5	#4	1
Round 4	#2	2.5	#1	2.5
	Total	8	Total	8

Again, because Players #3 and #5 are still tied, we will use the Cumulative system.

Cumulative	Player #3:			Player #5:		
	P#	Res	Score	P#	Res	Score
Round 1	#6	W=1	1	#2	L=0	0
Round 2	#4	L=0	1	#6	L=0	0
Round 3	#1	L=0	1	#4	W=1	1
Round 4	#2	W=1	2	#1	W=1	2
	Total		5	Total		3

Therefore, Player #3 would receive the third place trophy.

4. Cumulative of Opposition

The Cumulative of Opposition uses the cumulative scores calculated as above, but for the tied players' opponents rather than for the tied players themselves.

5. Most Blacks

This straightforward method gives the edge to players who have had to contend with playing with the black pieces more.

6. Head-to-Head Results

The head-to-head results between the tied players is still a popular tie-break in some circles. However, when the tied players draw their game, this system has no advantage.

Conclusion

I hope this explanation was helpful in explaining the confusing tie-break systems used in a swiss chess tournament.