

**EUROPEAN CHAMPIONSHIPS SIMULATION - PRAGUE 2005**

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## 1 BACKGROUND AND PURPOSE

The EGC in Prague 2005 was chosen for the next simulation in this series because for the first time, a large number of Korean players attended the European Go Congress. In the top 50 positions at the end of the tournament there were 24 players from Korea and Japan and 28 players from Europe, i.e. nearly 50% of the top players were Asian. The purpose of this simulation is to examine the effect the knockout system has when this large number of Asian players participate.

## 2 THE 8 CONTENDERS

The method used here for the selection of players is exactly the same as was used in the first simulation of EGC 2010 at Tampere. It can be seen from the spreadsheet `egc_2005_r7` that at round 7, the McMahon score distribution of eligible players in the three topmost groups is as follows:

MMS	PLAYERS
30	1
29	2
28	13

We therefore require to choose 5 players out of 13 from the third group. It is clear from the table `egc_2005_r7(Contenders)` that:

1. SOS correlates well with rating.
2. The 5 players required are selected by SOS without the need for further tie-breaks.

Consequently SOS chooses the players uniquely, and it succeeds quite well in choosing the 5 strongest.

## 3 THE 2005 SIMULATION

### 3.1 Pairing

In the knockout section there were a total of 3 repeat games (in rounds 8 and 10). One player had repeat games in both these rounds (but there was no change in the game result).

### 3.2 Results

The file - gor.txt was generated from the final ratings at EGC 2005 and was used to provide the ratings for simulating the results. These were manually entered into the MacMahon program for the first 100 boards to ensure that all players in the top groups get the correct SOS.

### 3.3 Knockout Ranking

The table `egc_2005_simulation(knockout ranking)` is sorted by EC WINS then TOTAL WINS. This shows a unique selection for the top 4 players in the championship. The SOS and RATING columns show that the 5th place is uniquely chosen by using either *one* of the extra tie-breaks SOS or RATING.

The plot given in the sheet shows fair correlation of rating with position.

### 3.4 Open Ranking

There is a clear trend of increasing rating towards the higher rank positions -the correlation coefficient is 0.82. The table `egc_2005_simulation(top 40)` shows as expected, that the simulated ratings vs position graph is just a fairly mild permutation of the real ratings vs position graph.

### 3.5 Asian games

Software was produced to analyse the incidence of games between the Asian and European populations during the knockout phase of the Championships, taken from the final wall list. Tables can be found for the simulated and real tournaments in `egc_2005_simulation(asian games)`.

By the end of the knockout, EC players occupied McMahon groups from 29 to 33, so counts were gathered for all games where both players had a final  $MMS \geq 29$ . Counts are detailed for the three pairing groups between Asian(A) and European(E) countries. The following table summarises the counts for the real and simulated tournaments:

	E	A	E-E	E-A	A-A
real	28	24	9	31	11
simulated	30	22	22	15	18

Columns headed E and A are player counts in each region and the last three columns show the games played between the European and Asian regions.

Given the large number of Asian players taking part, the European knockout strategy has had the required effect of reducing the incidence of mixed European-Asian games (E-A) - roughly halving the count. The increase in the internal Asian games (A-A) reflects the extraction of top players from the Open, but its value will be influenced by the Open tournament pairing strategy.

## 4 SUMMARY - SPECIFIC TO 2005

- Exactly one simulation has been produced for the top 100 boards in rounds 8-10 of the 2005 European Go Congress in Prague.
- The top 8 EC players in the simulation were uniquely chosen by SOS.
- There would have been 13 contenders for the 8<sup>th</sup> place if tie-breaks were avoided.
- The final results of the Open simulation produced 29 Europeans in the groups with  $MMS \geq 29$  as compared with 27 players in the real tournament run under the old system. Of the 29, 21 were the same as in the real tournament. There were 3 repeat games in the European Championships.
- The ranking method suggested (EC wins, Total wins) for the EC gives a unique placement for the top 4 players in the European Championships. A plot of rating vs player rank shows ratings roughly increasing with increasing rank.
- In the Open simulation, the knockout pairing strategy roughly halves the number of mixed European - Asian games between strong players when compared to the real Prague tournament.
- The final simulation will discuss an intermediate case between the two extremes investigated so far, and the report will then draw general conclusions based on the three simulations.

## A RESOURCES

This document must be read in conjunction with the following files contained in the accompanying archive *egc\_simulation\_2005\_ods.zip* for Open Office spreadsheets, or *egc\_simulation\_2005\_xls.zip* for Excel spreadsheets:

1. *egc\_2005\_real.[ods|xls]* the wall list for both weeks of the European.
2. *egc\_2005\_r7.[ods|xls]* the wall list at the end of round 7.
3. *egc\_2005\_simulation.[ods|xls]* the tables of simulation results.
4. *gor.txt* the ratings file for 2005.