# Seeding and Draws for the Knockout Phases of Australian Croquet Tournaments

#### **Abstract**

This paper details the method for conducting the draw for knockout phases of Australian Croquet Tournaments. It is based on the WCF seeding method. It provides a uniform and well-documented method for the allocation of players to positions in the draw. The method has been updated after trial usage and consultation with members of the ACA Tournament Committee in regard to a number of suggestions.

#### Introduction

The Australian Open Singles provides for a knockout phase containing a maximum of 32 players drawn from the results of block play. The Men's Singles and Women's Singles both consist solely of knockout play and currently cater for up to 48 players.

In both tournaments a number of best-of-three (BO3) knockout singles matches are played in a tight timeframe. It is important that the matches be played as expeditiously as practical. In light of this it the draw is constructed in such a way as to minimise the likelihood of drawn out games in the early stages placing time pressure later in the tournament.

In early 2003 the World Croquet Federation (WCF) tasked a group consisting of a number of international croquet players (Chaired by Louis Nel, Canada) with determining a seeding and draw method for the knockout phase of WCF World Championship tournaments. This Committee reported back and their recommendations adopted. The WCF method is described in *Appendix D* of the "WCF Sports Regulations" (available at

http://www.wcfcroquet.org/Regulations/WCFSportsRegulations.pdf), and summarised below.

# WCF Seeding & Draw Method

This section details in brief relevant parts of the WCF method as it applies to World Championships.

There will be 32 players in the knockout. Players will be ranked in order from 1 to 32 using the world ranking system. Player 1 will be the top seed. A standard Bagnall-Wild knockout ladder is used (rows 1 to 32). The following steps are used to place all players on that draw sheet:

- 1. Players 1 to 8 are placed on the draw sheet in the normal order. That is at positions 1, 32, 17, 16, 9, 24, 25 and 8.
- 2. Players 9 through 12 are then randomly ordered and placed at positions 5, 12, 21 and 28.
- 3. Players seeded 13 to 16 are then randomly ordered and placed at positions 4, 13, 20 and 29.
- 4. The first round opponents of seeds 1 to 8 are then randomly selected from players 25 to 32, and entered at positions 2, 7, 10, 15, 18, 23, 26 and 31.
- 5. The first round opponents of seeds 9 to 16 are then randomly selected from players 17 to 24, and entered at positions 3, 6, 11, 14, 19, 22, 27 and 30.

Within this process during steps 4 and 5 manual determination is used to minimise players from the same country, or who played in the same block, meeting in the first round of the knockout. This is done by sorting these un-seeded players by country and listing the countries with greater numbers above those with smaller numbers. The WCF Regulations give a worked example of this method.

The WCF method permits some randomisation of the fixed pairings 1 vs 32, 2 vs 31, etc, that would otherwise be found in the first round of the knockout.

#### Modification of the WCF Method

The WCF method is suitable as a basis for the knockout phase of Australian tournaments. Some modification is required as the WCF method applies to an International tournament with a fixed and known number of 32 players in the knockout phase.

The method is able to be used directly for the Australian Open where there are 32 players in the knockout. The ACA has been using this method for the past few years for the Open knockout. Where the WCF method aims to minimise players from the same country meeting in the first round we substitute state.

A modification to the current WCF method is used to assist in the minimisation of same state clashes. The WCF method sorts the un-seeded players in each group before drawing the numbers, starting with the country (state) with the greatest number first. This is done but added to each are the number of seeded players they are being placed against. The state with the largest combined number is drawn first. This means it is less likely that clashes will occur.

If two or more states have equal numbers the one with the highest ranked players is drawn first.

For the Men's and Women's Singles it is highly unlikely that there will be exactly 32 entries. There may be less, or there may be more (currently to an upper limit of 48). For these cases it is required to modify the WCF method in such a way that the format is retained. Below are detailed the possible cases.

## **Less Than 32 Players**

This is reasonably straightforward. The draw sheet will contain the usual 32 places, and there will simply be a number of byes in the first round. It is only the placement of the byes that need concern us. Due to the aforementioned time constraints it is proposed that the byes not go to the top seeds but be randomly distributed amongst the middle-ranked players. This should lead to fewer holdups in the first round.

The draw will be done as described as per the WCF method with a number of "phantom" players placed starting at ranking position 17 and filling spaces from there such that the number of players appears as 32. For example, if there are 27 players there will be five "phantoms" at places 17 to 21.

### 33-64 Players

Even with up to 64 players only the first 8 seeds will be placed directly onto the draw. Seeds 9-16 are randomly ordered – as for the 32 or less case. The 64 person draw is an expansion of the 32 person draw in all other respects. If there are less than 64 players the "phantom" players are placed starting at ranking position 33.

Same state clashes will be minimised in both the rounds of 64 and 32. For example, 33 entrants leads to a single match in the round of 64 and minimising for the first round only makes little sense. It is appropriate to look at the round of 32 with the assumption that seeds will win their first round matches and do the usual same state minimisation including the round of 32. Minimisation in the round of 32 is done during steps 3 and 4 below. Minimisation during the round of 64 is done in steps 5 and 6.

#### It follows that:

- 1. Players 1 to 8 are placed on the draw sheet in the normal order. That is at positions 1, 64, 33, 32, 17, 48, 49 and 16.
- 2. Players 9 to 16 are then randomly ordered and placed at positions 8, 9, 24, 25, 40, 41, 56, and 57.

- 3. Players 17 through 24 are then randomly ordered and placed at positions 5, 12, 21, 28, 37, 44, 53 and 60.
- 4. Players seeded 25 to 32 are then randomly ordered and placed at positions 4, 13, 20, 29, 36, 45, 52, 61.
- 5. The first round opponents of seeds 1 to 16 are then randomly selected from players 49 to 64, and entered at positions 2, 7, 10, 15, 18, 23, 26, 31, 34, 39, 42, 47, 50, 55, 58 and 63.
- 6. The first round opponents of seeds 17 to 32 are then randomly selected from players 33 to 48, and entered at positions 3, 6, 11, 14, 19, 22, 27, 30, 35, 38, 43, 46, 51, 54, 59, and 62.

## Summary

The use of the WCF draw method with a number of small modifications is shown to be suitable for the Australian Open singles with a knockout phase involving 32 players. The method can be logically expanded to cater for up to 64 players and as such is suitable for both the Australian Men's and Women's singles which may have up to 48 players.

This draw process may also be used for Golf Croquet events.