

THE GRID: EXPLANATION

Introduction

This document explains The Grid for WSDC 2011. The Grid plays an essential *supporting role* for the process of randomly drawing teams and their opponents. It does this in two ways.

- First, The Grid simplifies the process of the random draw. It ensures that participants in the random draw need only to randomly match a team name with a ‘grid position’ (for example, “Team A1 this year will be... Azerbaijan”). Once this is done for all 48 positions, the draw is complete. There is no need to perform the much longer and much more complicated process of randomly drawing debates directly (for example, “In Round 1, the Proposition will be... Azerbaijan. The Opposition will be... Zimbabwe”, and so on).
- Second, The Grid ensures *balance* across various important aspects of the draw. That is, The Grid allows the draw to be *random* while also ensuring a basic *equality* in various dimensions of the draw. This is explained in more detail shortly.

How to read The Grid

The key and abbreviations for The Grid are summarised on the right-hand side of The Grid document. Please note the example provided there of Team A1 being Opposition against Team A2 in Round 8 (an unprepared round).

The pre-tournament rankings

The pre-tournament rankings are provided with The Grid. The ranking formula is explained below the table; this is the same formula as was used before WSDC 2010 (with the years updated, of course). Note that a team that has never attended WSDC is (implicitly) treated as having achieved zero wins and zero judges.

The *sole purpose* of the pre-tournament rankings is to assign every team a ‘group’. This is necessary to ensure balance across ‘opponent quality’ (discussed shortly). In particular, note that there is *no* relationship between ranking *within* a group and the assignment of teams on The Grid; this is precisely the part that must be done randomly in the draw. (For example, England is ranked 1 in Group A. This means that England will be assigned the position of either A1, A2, A3, A4, A5 or A6 by the random draw. England will *not* necessarily take position A1 on The Grid.)

Balance in The Grid

The Grid achieves four separate kinds of ‘balance’. They are as follows.

- **Balance across ‘opponent quality’:** Every participant at WSDC knows that teams’ fortunes vary between tournaments, often substantially. For this reason, nobody can ever know with any certainty which will be the ‘stronger’ teams in any given year. However, experience has showed

that there is a reasonable correlation between teams' performances over time; teams that have been successful in the past tend – *on average* – to be successful in the future. The most important balance achieved by The Grid is balance on the past record of opponents. The pre-tournament rankings assign every team to one of eight 'Groups' (A to H); in the preliminary rounds, every team is guaranteed exactly one debate against an opponent from each Group.

- **Balance across 'pools':** In many tournaments, teams are grouped into discrete 'pools', with a balance of opponent quality within each pool. This is the case, for example, at the FIFA World Cup. However, there are several important weaknesses with this approach. First, the approach is particularly susceptible to 'small sample effects', where several teams together face a low probability of making the knock-out stages because they happen to have strong opponents in the same pool (the so-called 'pool of death' phenomenon in football tournaments). Second, the approach can exacerbate the importance of particular match-ups, because a result in one debate can have important 're-ordering' effects on an entire pool; rather than having a single 'cut-off point' for the break, we can effectively end up with as many cut-off points as there are pools. To avoid this, The Grid balances across would-be pools – and hence the coloured squares are distributed across the entire grid, rather than grouped in large contiguous blocs. This ensures, for example, that if Team A1 debates Team A2 (which it does), A1 and A2 will debate *different* teams from Group B (indeed, A1 debates B3, whereas A2 debates B5).
- **Joint balance across Proposition and Opposition and across prepared and impromptu:** As the 'totals' column on the right of The Grid shows, every team has two debates as Proposition on a prepared motion, two debates as Proposition on an impromptu ('unprepared') motion, two debates as Opposition on a prepared motion and two debates as Opposition on an impromptu motion.
- **Joint balance across prepared and impromptu motions and opponent quality:** One of the unanticipated aspects of The Grid in 2010 was a strong alignment between the likely quality of an opponent and whether the debate was prepared or impromptu – for example, teams in group A debated opponents from groups A, B, C and D on impromptu motions and opponents from groups E, F, G and H on prepared motions. Arguably, this diminished the importance of prepared motions. The Grid for 2011 seeks to avoid this problem; for example a team in group A will debate on impromptu motions against opponents from groups A, D, F and G and on prepared motions against opponents from groups B, C, E and H.

Modularity

Finally, note that The Grid is modular; i.e. divided into contiguous blocs of four teams. This is important from a logistical point of view, because it ensures that no teams need to change venue in the middle of the day. It achieves this without requiring any venue to take more than four teams at any time.

Simon Quinn, June 2011