

How are the handicaps calculated?

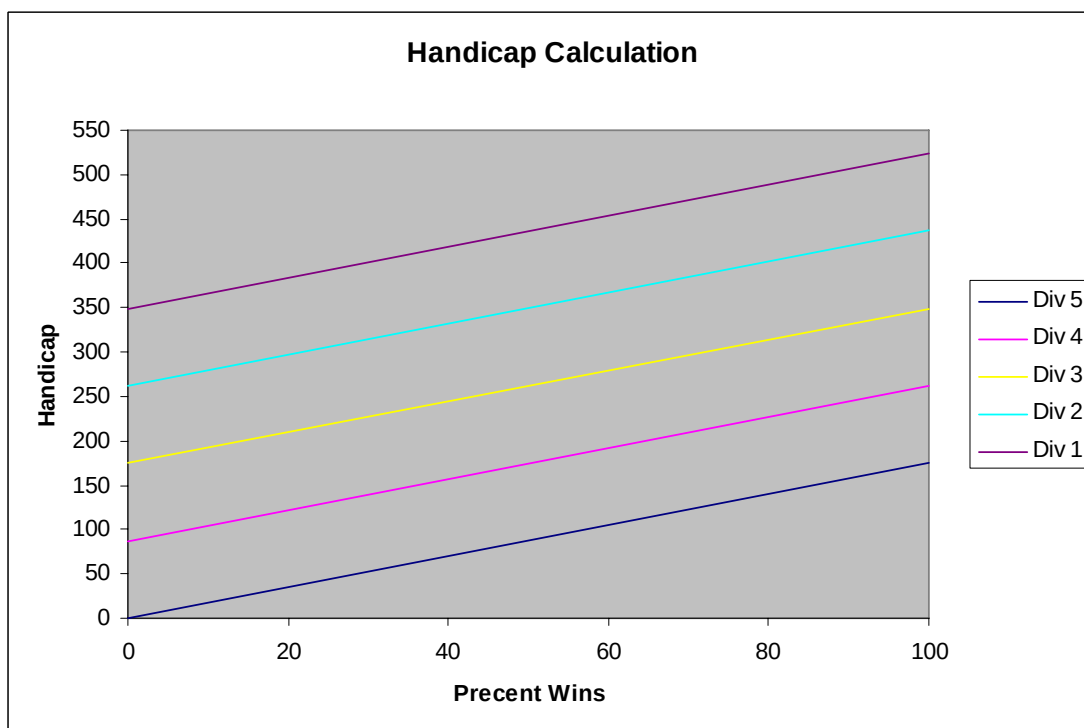
The handicaps are purely a mathematical calculation based upon league form.

The starting point is a player who has a win percentage of 0% in Division 5 will have a handicap of 0. It is assumed that there is 50% overlap between divisions, i.e. a player who has won 100% in Division 5 would be expected to win 50% in Division 4 etc. (previous systems assumed 33% overlap).

The other assumption (although based upon a calculation and from other league's experience) is the slope, i.e. the difference between the top and bottom player in a division. The slope used for the 08/09 season is 1.75, i.e. a player with 100% in division 5 would have a handicap of 175, a player with 50% in division 4 would have a handicap of 175 as well and a player with 0% in division 3 would also have a handicap of 175.

These two assumptions can be adjusted each season based upon whether there is any bias towards one end of the league. An adjustment factor can also be introduced to spread out or squish up the numbers as required. For the 08/09 season the adjustment factor is 1.00, i.e. no adjustment.

This can be illustrated in a graph.



Each line shows the range of handicaps for each division based upon league form.

Once these base figures are worked out, it's just a case of working out where each player lies on the line for their division. The system adopted for DDTTA uses weighted league form from the current season and the previous two seasons. It uses 100% weight of the current season's form, 75% of the previous season's and 50% of the season's before that.

This weighting should smooth out any jumps in form. It also ensures players moving between divisions have representative handicaps. These players can have handicaps that fall outside of the normal range for their current division.

Rapidly improving players, as in all previous systems, will often have an advantage as the system can underestimate their handicap. That's just their good luck. Occasionally there will be new players who would likely have a win percentage >50% in the next higher division and their handicaps could be seen to be too low. Conversely a new player struggling in a division who would likely have a win percentage <50% in the next lower division could be seen to have too high a handicap.

Players in their first season will only have a small amount of data, but this can work both for or against them depending on how representative their form has been or which teams they have played.

Let's take a calculation as an example. Player Adam Apple has played in Division 3 for the last three seasons.

In 08/09 Adam has won 5/27 matches played

In 07/08 he won 13/57

In 06/07 he won 16/48

The base value for Division 3 is 175 and the ceiling is 350.

The calculation is...

$$1*175*(27*((2.5-0.5*3)+(5/27))+0.75*57*((2.5-0.5*3)+(13/57))+0.5*48*((2.5-0.5*3)+(16/48)))/(27+0.75*57+0.5*48) = 217.47$$

Therefore Adam's handicap (rounded) is 217.

All the sum is doing is working out where Adam's weighted league form from the last three seasons puts him on the straight line from the division's base value with a slope of 1.75.

The calculated handicap of 217 is 24% of the way up the 3rd division scale from 175 to 350 which ties in quite nicely with his total win %age of $34/132 = 26\%$ over the past three seasons.

The advantage of this system is it removes the arbitrary allocation of numbers by the handicapper. Previous systems meant handicaps were allocated manually with insufficient knowledge in many cases. Also with the extra division the gap between divisions 1 and 5 had grown too large in the old system with insufficient overlap. This had made it almost impossible for top division teams to progress using the old system. Handicaps are now solely based upon the player's own league form.

The system may need some tweaking in future seasons if DDTTA choose to adopt the system in the future. As this is the first season for DDTTA using this system it is unknown if the slope number is quite right yet. Only the results can prove this.

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15th January 2009