

Captain and coaches playbook app: a practical display of fielding data

Theme: Statistical Approaches In Cricket

Carl PETERSEN¹, Rob Genet¹

¹ University of Canterbury, Christchurch, New Zealand

Aims: Despite the adage that ‘catches win matches’, research into fielding is sparse compared with batting and bowling (MacDonald et al., 2013). Tactically, fielder positioning is a key task undertaken by cricket captains, and contributes greatly to a team’s success, as bowling maiden overs has been shown to be more important in the later stages of an international tournament (Petersen et al., 2008). The greatest volume of data collected in cricket is on tactics - with professionalism most elite teams employ an analyst that codes every single match delivery. Yet, this data is mostly analyzed within the context of the match it was collected in. Genet and Petersen (2014) recently presented sample data combining bowling delivery (line and length) with resultant positional outcome of hit ball location across the 2013 ICC Champions Trophy One Day International Tournament. This paper outlines the scope of that data-set and describes a new tool to integrate cricket performance analysis research into the modern training and competition environment.

Methods: We developed an App with a user-interface display allowing fielding performance analysis data retrieval. Data was retrieved by choosing from six customizable options that included: bowling and batting handedness, bowling position (over / around), bowler type as well as the classified bowling line and length. The resultant percentage distribution data of hit ball locations is displayed on a field image detailing 10 fielding locations.

Results: The analyzed data resulted 576 possible data screens of hit ball locations. When limited data existed for a particular variable combination, user choices were greyed out.

Discussion and Conclusions: Coach and Captains’ may utilise the playbook App for fielding planning based on a particular bowling delivery. The App should encourage the development of bowling plans, which may result in bowlers becoming more accountable for the execution of their skill. Fielding is an essential component to winning matches, and existing knowledge may be complemented by obtaining the considered opinions and insights of coaches and players and by carrying out detailed video and notational analyses (MacDonald et al., 2013). Large fielding databases currently exist but their value depends on an appropriate query and filtering. This paper details one such query and an associated method of making fielding research accessible to the end-user. Ultimately, a captain’s field placement should exploit these known hit distributions for each delivery type (Genet and Petersen, 2014). Future work should look to update the underlying data set by localised geographic pitch conditions.

References:

Genet, R and Petersen, C. (2014). Cricket batting placement distribution analysed by bowling line and length at the 2013 ICC Champions Trophy. World Congress of Performance Analysis of Sport X, Opatija, Croatia, 3-7 Sept, 2014 (In Press).

MacDonald, D., Cronin, J., Mills, J., McGuigan, M, and Stretch, R. (2013). A review of cricket fielding requirements. South African Journal of Sports Medicine. 23 (3) 87-92.

Petersen, C., Pyne, D.B., Portus, M.R., Cordy, J., & Dawson, B. (2008) Analysis of performance at the 2007 Cricket World Cup, International Journal of Performance Analysis in Sport, 8:(1)1-8

