

Basketball Event Recognition Technique using Deterministic Finite Automata(DFA)

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Abstract— Recently, many researchers and sport managers are trying to analyse the movement of sports players by combining sports and ICT technology, and to change the contents of the game using these analysis results. In the case of basketball, leading companies such as STATS Sports are focusing on tracking the players and analysing the players' movements. However, the recording of sports events such as shoot, foul, and rebound resulting from the players' movements is made entirely by the manual work of the recorders. In this paper, we propose a technique to automatically extract events generated by players or judges in basketball games. Experiments have shown that it is possible to automatically extract events by tracking players and referees and analysing the predefined motion of players and referees.

Keyword— Deterministic Finite Automata (DFA), Basketball, Event Recognition



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