عنوان مقاله:

A New Framework for Goal Detection Based on Semantic Events Detection in Soccer Video

محل انتشار:

هشتمین کنفرانس ماشین بینایی و پردازش تصویر ایران (سال: 1392)

تعداد صفحات اصل مقاله: 6

نویسندگان:

Farshad Bayat - *Department of Electrical and Computer Engineering Islamic Azad University,Qazvin Branch*

M. Shahram Moin - *Cyberspace Research Institute*

Farhad Bayat - *Department of Electrical Engineering University of Zanjan*

Mohsen Mokhtari - *Department of Electrical and Computer Engineering Isfahan University of Technology, Iran*

خلاصه مقاله:

Soccer video processing and analysis to find criticalevents such as occurrences of goal event have been one of theimportant issues and topics of active researches in recent years. Inthis paper, a new role-based framework is proposed for goal eventdetection in which the semantic structure of soccer game is used.Usually after a goal scene, the audiences' and reporters' soundintensity is increased, ball is sent back to the center and the cameramay: zoom on Player, show audiences' delighting, repeat the goalscene or display a combination of them. Thus, the occurrence ofgoal event will be detectable by analysis of sequences of aboveroles. The proposed framework in this paper consists of four mainprocedures: 1- detection of game's critical events by using audiochannel, 2- detection of shot boundary and shots classification, 3-selection of candidate events according to the type of shot andexistence of goalmouth in the shot, 4- detection of restarting thegame from the center of the field. A new method for shotclassification is also presented in this framework. Finally, byapplying the proposed method it was shown that the goal eventsdetection has a good accuracy and the percentage of detectionfailure is also very low.

کلمات کلیدی:

Soccer Video Processing; Event Detection; Shot Boundary Detection; Shot Classification; Field Extraction; Field Center Detection