

A visual analytics system for team sports

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Abstract

In recent research, visualization systems are well used in field sports. Those systems help coaches and managers to make decisions about plans concerned with game strategies and tactics.

However, when it comes to use these systems by players, there comes a problem. The players often discuss their performance, strategies and tactics with each other. They also analyze their games to find out why they lose and whether their tactics were effective with experience.

In this research, we focus on lacrosse since the first author plays lacrosse and strongly motivated by the development in this system. It is a challenging work because lacrosse strategies and tactics are complicated compared with sports on which previous systems have focused. In this paper, we present Lacrosse Vis to visualize lacrosse games especially intended to be used by players. Lacrosse Vis is composed of several panels shown in main system screen. A panel represents each move. This system helps players to analyze games easily, interactively and intuitively. The main characteristics of this system are as follows: 1, The system requirements have been specified by interviewing lacrosse players. 2, The system provides with an interactive user interface to explore the game data. 3, The system helps players to find a good or bad point by arranged and colored panels.

We presented Lacrosse Vis to some lacrosse players in Kyoto University, and tested this system.

Finally, we confirm LaxVis's validity from lacrosse players in Kyoto University. As a future work, this system may apply for any other sports when other sports' players need analytics system.