Realizing a harmony in rugby scrum

Easy assessment of player coordination with wearable sensors

Abstract

It is crucial for team plays in sports that the players synchronize their actions, but objectively assessing player coordination is not easy. We propose a convenient measurement method to immediately evaluate and feedback some aspects of player coordination by attaching compact inertial measurement units (IMUs) to each player; we use the example of scrumming in rugby. In a scrum, a pack of eight forwards (players) are required to coordinate their forward drives, timing and direction, to maximize forward pressure. The IMU data allows us to calculate the acceleration vectors and its peak time structures for the group of players involved. Constant storage of these values can yield a useful database for understanding each player’s characteristics and developing suitable combinations of players to improve scrumming performance. This measurement system also makes it easy to visualize, as well as sonify, player coordination during various joint activities other than rugby.

Convenient wearable sensor

Feedback of player coordination

- Easy acquisition via wearable sensors
- Rapid visualization of player coordination
- Developing suitable combinations of players
- Potential of application to various activities

References


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