TRACKING PLAYERS AND THE BALL DURING A GAME BY USING VIDEO IMAGES TO DETERMINE THEIR EXACT POSITIONS, ALMOST IN REAL TIME, FOR STATISTICAL AND COACHING PURPOSES

Which strategies do teams use during a basketball game? What are the strengths and weaknesses of a given player? Can exhaustive game-related data be collected efficiently? Based on the skills developed by the Computer Vision Laboratory (CVLab), a startup called PlayfulVision was founded to offer video tracking of people playing sports. PlayfulVision recently became part of Second Spectrum, and is focusing on basketball games. Using an array of proprietary cameras, Second Spectrum is able to determine the position of players and the ball throughout a game, which helps give TV broadcasters better statistics and allows teams to enhance their performance.

By collecting data across all games during a season, the project gives coaches a long-term view of each player, which helps improve their training. It also provides the possibility of selecting teams based on players’ game profiles and those of their opponents. Second Spectrum and CVLab are able to process video images on a large scale and are developing a first-class understanding of play through automatic machine learning and data analysis techniques. The approach may be applied to more team sports in future.