

Board games have been the everlasting amusement of mankind. During the last few decades, there were many attempts to recognize the state of the games or even track the whole matches using an RGB camera. In this thesis, we use low-cost sensor containing both RGB camera and depth sensor, namely Kinect v2 from Microsoft Corporation, to do such a task. The goal is to analyze properties of depth sensor on small scenes and propose ways in which can depth data improve results of existing solutions used to locate game board and chess pieces. To demonstrate those techniques, we developed a program able to track the chess match. It can locate the chessboard, detect the presence of black and white chess pieces on individual squares, validate movements, and record game so that it can be saved and loaded later.