FUTSAL

N°: 21411601 Charles NOYAL

Purpose of the project

The project FUTSAL is a simulation of futsal. Thanks to a kinect camera and a large screen of 180° people will be able to live a game of futsal as if they were players. The pictures project on the screen come from real games of futsal and they are not virtual images. That is why this project is a realistic simulation of futsal. With this we want to allow people to discover what is futsal and with a bigger difficulty it can become training for futsal players.

Video recording

For the project we needed to record some futsal plays, for the first step we only want to get the point of view of the goal keeper. To give to the player the sensation to be the keeper himself we use a GoPro camera fix on a helmet wore by the keeper. After recording the video I use a software to modify it to keep only the most interesting part, the shoot sequences. On this sequences I slow the video during the shoot and stop the image when the ball is in the air. On this image you can see, in addition with the original picture, the movement the player have to do to block the ball. Then the image go back in the good speed and the result depends on the block that the player has made.

Position Recording

To respect the different kind of block that a keeper do on a game we ask to the keeper of Tama futsal team to help us for recording those blocks.

Those position are also important for the work on kinect because we want to use this device to compare the position of the player with the position of a good block.

Kinect

We work with the kinect camera to be able to compare the position of the player with the position he should be to block the ball. Thanks to the camera I get the coordinate of the player in front of the camera, and with those coordinates I manage to compute the vectors made by the different part of the body. In fact with only the coordinate even if the player manage to do the good movement but he is not in the good position in the space (for example he make the good movement but he is on the left of the camera) then the camera will not recognize the movement as a good movement. That is why thanks to the vectors I record the movement of the player and not his position on the space.

What we want to do

Now for the final project we would like to offer the possibility to play all the position that you want during a futsal game and not only the keeper. And be able to play during a whole game and maybe play against another player too. The training will be more efficient with two player I guess and if you want use FUTSAL only for fun I think it is more fun to play with someone too.