Motion Prediction of a Ping Pong Ball

Eileen Salhofer,
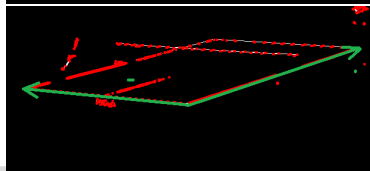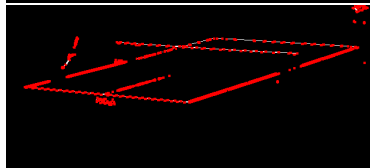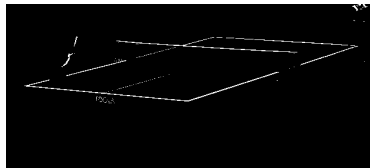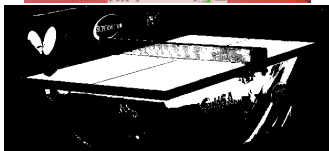**Felix Warmer**

27. November 2017

Problems Overview

2

- Data and Condition
- Finding the Ping Pong table
- Finding the Ping Pong
- Calculating the current position of the ball
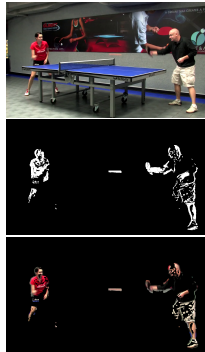- Calculate the future position of the ball

3 Data and Condition

- Prerecorded videos mostly form tournament.
- Static camera.
- Equal illuminate room.
- Good resolution.
- Few objects with the color of the Table or Ball.
- Side view with now blocking objects.

Finding the Ping Pong table

Finding the Ping Pong Ball

- Use background subtraction to find moving objects.

- Use color thresholding to find the Ball.

Calculating the current position of the Ping Pong ball in relation to the Ping Pong Table

- Use table corners to calculate relative position of the camera.
- Calculate the relaive position of the ball in the szene.

Calculate the future position of the ball

- Use two frames and the blure to calculate the moving direction of the ball.

- Calculate the speed of the ball thorough position change between frames.

- Use speed and direcion to calculate future position of the ball.

Questions?

Thank you for your attention