



Minutes of Meeting

Bachelor's Thesis: 3D Object Recognition Using Kinect

April 25, 2013

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Supervisor:

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This meeting was due on April 17, but it was postponed.

1 Points discussed:

1.1 Mendeley

It was discussed the usefulness of using Mendeley program to effectively organize the papers and create bibliographies.

1.2 Descriptors

It was commented the necessity of developing a deeper knowledge regarding the basis of descriptors and the internal algorithms used in the OpenCV demo code.

1.3 OpenCV Demo

Some videos demonstrating the functioning of the developed code were shown. Also, flow diagrams of the different applications developed were presented and explained.

The limitations of the code were discussed as well and some possible directions of improvement, such as:

- Computation of the keypoints and descriptors only on the largest set of foreground elements extracted using the BackgroundSubtractorMOG2.
- Usage of more than one template per object to improve the recognition.
- Possibility of recognizing the objects in different situations with partial occlusion

The code demonstrated a much higher speed in the computation and matching of the keypoints and descriptors of the images with respect to the previous delivering. Another improvement is that both keypoints and descriptors of each template are stored in YAML files, making the matching faster.

1.4 PCL Demo

It was commented the necessity of a Kinect cam to work on the PCL part. Access to the laboratory and the resources were granted [to ISN]. In the next weeks the PCL Demo will be developed.

2 Decisions made:

2.1 Start of the PCL Demo

2.2 OpenCV Demo

The improvements above presented will be implemented in the final thesis code.



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3 To-Do List:

3.1 PCL Demo Development [ISN]

Next Meeting: May 9, 10:15h