

UNIVERSITY OF BURGUNDY

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# Software Engineering Project Weekly Report

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*Authors:*

Roger Pi  
Amjad Khan  
Farid Ben Ali  
Natalia Herrera

*Supervisors:*

Dr. Yohan Fougerolle  
Cansen Jiang  
David Strubel

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# Contents

1	Task completed	2
2	Work in progress	3

# 1 Task completed

A previous captured RGB and depth map (retrieved by using Kinect with OpenNI and OpenCV libraries) were provided. Based on that, the following tasks were accomplished:

- Using the data from the RGB and depth images a colored pointcloud was generated. For this purpose, the x, y and z values are calculated for each point (z comes from the depth pixel).

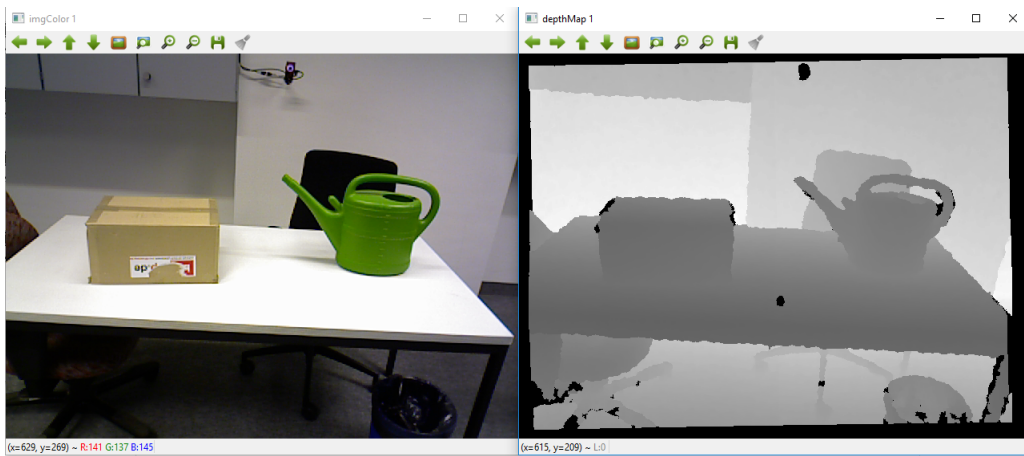


Figure 1: RGB and depth images

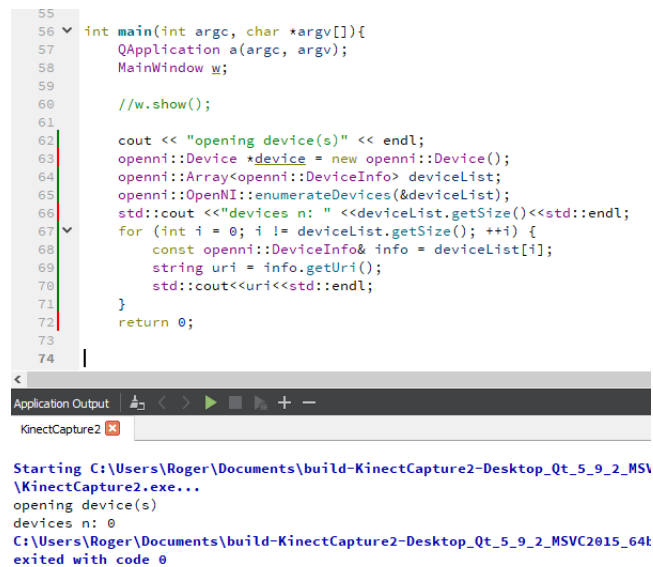
- Displaying the point cloud using PCL library.



Figure 2: PCL Viewer

## 2 Work in progress

The main task in progress is to capture our own images using OpenNI and OpenCV libraries; however there is a problem because at the moment the Kinect is not being recognized.



```
55
56 int main(int argc, char *argv){
57     QApplication a(argc, argv);
58     MainWindow w;
59
60     //w.show();
61
62     cout << "opening device(s)" << endl;
63     openni::Device *device = new openni::Device();
64     openni::Array<openni::DeviceInfo> deviceList;
65     openni::OpenNI::enumerateDevices(&deviceList);
66     std::cout << "devices n: " << deviceList.getSize() << std::endl;
67     for (int i = 0; i != deviceList.getSize(); ++i) {
68         const openni::DeviceInfo& info = deviceList[i];
69         string uri = info.getUri();
70         std::cout << uri << std::endl;
71     }
72     return 0;
73
74
```

Application Output

KinectCapture2

Starting C:\Users\Roger\Documents\build-KinectCapture2-Desktop\_Qt\_5\_9\_2\_MSVC2015\_64l\KinectCapture2.exe...

opening device(s)

devices n: 0

C:\Users\Roger\Documents\build-KinectCapture2-Desktop\_Qt\_5\_9\_2\_MSVC2015\_64l\KinectCapture2.exe exited with code 0

Figure 3: Kinect capture

After being able to capture images, we will be able to work on identification of key points, extraction of features for those keypoints and correspondences estimation.