Software Engineering Project Weekly Report

3D-KORN

University of Bourgogne

Luca Canalini Ezequiel De La Roza Benjamin Lalande Chatin
Roberto Paolella Umamaheswaran Raman Kumar Savinien Bonheur
Albert Clerigues Garcia Daniel Gonzalez Dell Nayee Muddin Khan Dousai
Pamir Ghimire Di Meng

Oct 10, 2016

Contents

1 Tasks completed

- Infrastructure setup which enables us to work as a team
  - Github for code repository and file sharing.
    Link for the repository - https://github.com/umaatgithub/3D-KORN
  - Trello for creating storyboards and setting up meetings
  - Facebook group and messenger group for communication
  - QT for development platform
- Decided to use Kinect as the sensor for scanning and PCL(Point Cloud Library) for point cloud processing.
- Basic UI designs and use cases are done and available in github, which are yet to be reviewed by all the members.
- PCL installation

2 Work in Progress

We have divided the team into 3 groups and working on the POC(Proof of Concept) to understand and share the knowledge on the below set of topics. The papers read and the codes developed related to these are shared in the POC folder in Github.

- Interfacing with Kinect sensor

  Tasks:

  - Understanding KinectFusion and DynamicFusion algorithms
  - Control sensor operations(Eg: start scan, change angle, zoom in/out)
  - Generate point cloud from scan

  Members: Pamir, Dani, Umamaheswaran, Eze

- Operations on point cloud

  Tasks:

  - Convert point cloud to mesh
  - Editing point cloud/mesh

  Members: Clement, Luca, Roberto, Nayeem, Meng

- User Interface

  Tasks:

  - Understand PCL library functions for handling mesh display in Qt
  - Rough UI design

  Members: Albert, Benjamin

3 Tasks for this week

- Complete the POC's and come up with a stable high level design(UseCase diagram) and low level design(Class diagram).