System Scope Document

3D Modeling using Autonomous Robot

Project Description

Mount a 3D camera to a self-powered chassis controlled with a programmed microcontroller. The chassis will be autonomously navigated via programming on the microcontroller. The 3D camera will record point cloud data on a laptop also attached to the chassis. The point cloud data will then be turned into a 3D model rendered off site then used to create an applet version of the 3D model viewed by the end user on a web page.

System Capabilities

Autonomously navigate a self-propelled robot with its own power

Capture point cloud data using a 3D camera

Render point cloud data to a 3D model

Display the 3D model on a web page that the end user can navigate