



MIDDLE EAST TECHNICAL UNIVERSITY

**DEPARTMENT OF ELECTRICAL AND ELECTRONICS
ENGINEERING**

EE 494-DESIGN STUDIO 2

WEEKLY REPORT IV

revolusys

Company Name: Revolutionary Systems Inc.

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1. SUMMARY OF THIS WEEK'S PROGRESS

In this week, we have completed the main tasks of the image acquisition, image reconstruction and transportation subsystems.

2. TRANSPORTATION SUBSYSTEM

This week we have closed the control loop of the vehicle. We done this by using the distance measurements taken by the two ultrasound proximity sensors that are located on both ends of the vehicle. So now, the vehicle is capable of going back and forth between the two terminals without colliding to them (stopping away at a certain distance). During our tests we observed that the vehicle can stop about 7cm (between 5cm and 10cm) away from the terminals when it begins braking if the distance to the approaching terminal is less than 25cm. Further fine tuning of this value can be than later.

3. IMAGE ACQUISITION & RECONSTRUCTION SUBSYSTEM

For the image acquisition system, we have utilized the Python pillow library's objects. The taken photo is compressed via JPEG. Then the compressed photo is read as a base 64 file and written to a .dat file. The binary data, or byte array, is to be transmitted to the communication submodule.

Image reconstruction part is covering the display of the taken and transmitted photo. For this part's tests, the code for image reconstruction subsystem read the .dat file, output of the image acquisition subsystem. Then the image is displayed.

4. CONCLUSION

Progress has been made for the transportation, the image acquisition and image reconstruction submodules and next week, work on these submodules will continue along with communication.

