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University of California, San Diego
JTO/ONR HEL MRI Quarterly Report Oct 2007

Project Title: Passive Imaging System for Measuring Atmospheric Scattering and CFLOS

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1. Activities for Current Quarter

Task 1: (Experimental test site)

The lower environmental housing for the visibility system has been taken apart and sent to the shop for painting. We have met and discussed the upper environmental housing design, and the design is in progress. Portions of the design are complete, and fabrication has started. We have selected and ordered the rotary table, and coordinated logistics with the experimental site owners.

Task 2: (Weather at test site)

We have begun coordinating the logistics with the NPS team. NPS has begun designing and assembling components for the shore weather station, with completion of the station projected in December 2007.

Task 3: (Purchase IR system components)

Task 4: (Data analysis)

An analysis of the impact of deck height on the visibility determinations; the impact of the transmissometer path length; and the impact of field of view selection has been completed and documented in in-house Technical Memo AV07-046t, and is available to the sponsors upon request.

Task 5: (Visibility algorithm)

(Tasks 6, 7, and 8 are not funded for year 1)

Task 8: (Research military needs)

At the kickoff meeting, we addressed some of the issues regarding military needs.

2. Events

Kickoff Meeting: 29 August 2007, meeting at MPL to discuss plans and progress

Annual JTO Review: 27 – 28 September 2007, UCSD presentation was 28 Sep

3. Technical Results/Accomplishments

Task 1: (Experimental test site)

Task 2: (Weather at test site)

Task 3: (Purchase IR system components)

Task 4: (Data analysis)

Calculations show that the horizon should be a viable target for most visibility conditions of interest to the Navy. For details, see Memo AV07-046t, which will be sent on request.

Task 5: (Visibility algorithm)

Tasks 6, 7, and 8 are not funded for year 1

Task 8: (Research military needs)

4. Issues

We would like to field the transmissometers in January if possible; this depends on receiving them from the government.

5. Activities for Upcoming Quarter: (Nov 07 – Jan 08)

Task 1: (Experimental test site)

During the next quarter, we plan to concentrate on this task. Our goals are to complete the design in November, fabrication of parts in December, and setting up the MSI at the site in January.

Task 2: (Weather at test site)

We plan to purchase the Vaisala point scatter meter. NPS will be working on preparing the ground weather station.

Task 3: (Purchase IR system components)

Task 4: (Data analysis)

Task 5: (Visibility algorithm)

Tasks 6, 7, and 8 are not funded for year 1

Task 8: (Research military needs)

6. Cost Report : Attached

The cost report will be sent by 10 November.

7. Milestone Status

Our first milestone for this year is to have the experimental site fielded in January 2008. We started the project in early August, rather than 1 July, due to funding, but I believe we can still achieve this milestone.

8. Summary

We are concentrating mainly on Tasks 1 and 2, because other tasks, such as data analysis, depend on completion of these tasks. We believe we are making reasonable progress.