

LARS CONTRACT REPORT 080984

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QUARTERLY PROGRESS REPORT

FOR

LANDSAT-4 IMAGE DATA QUALITY ANALYSIS

FOR PERIOD INCLUDING

MAY 10 - AUGUST 9, 1984

NASA CONTRACT NAS5-26859

TO: NATIONAL AERONAUTICS & SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
GREENBELT ROAD
GREENBELT, MD 20771

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Introduction

This report covers work carried out on Landsat-4/5 data quality analysis under NASA Contract NAS5-26859 for the period May 10 through August 9, 1984. The primary activity was completion and testing of reformatting software to handle Landsat-5 data in quadrant format. Research continued on estimation of the sensor two-dimensional point-spread function from scene data.

Problems

The lack of receipt of Landsat-5 data for analysis has seriously delayed the schedule for carrying out the study. No usable data have been received, except for the Corpus Christi test scene. Since personnel costs have continued while awaiting data, there is serious concern that the project will not be completed within the funded budget. Future recalculations of budgets and project duration may be necessary after the required data are received.

Publications

Two poster papers on work done under this contract were presented at the LARS/Purdue tenth international Symposium on Machine Processing of Remotely Sensed Data, June 12-14, 1984. The material presented was from a comprehensive report published in the May 1984 IEEE Transactions on Geoscience and Remote Sensing, Vol. GE-22, No. 3. The title is "Landsat-4 MSS and Thematic Mapper Data Quality and Information Content Analysis."

Recommendations

No recommendations are made in this report.

Funds Expended

The funds expended in the project are reported periodically by the Purdue University Office of Contract and Grant Business Affairs to the sponsor on NASA Form 533M. Specific disclosure of funds expended in this report is not a policy of the University.

Significant Results

Research was continued on methods for estimating two-dimensional point-spread functions from image data. Work also continued on advanced classification methods for TM data, including updating of the implementation and training procedures for the layered classifier and further tests of the supervised ECHO classifier. Reformatting software for the new Landsat-5 data tapes was completed and tested on the Corpus Christi test frame. No other Landsat-5 data have been reformatted. At this writing, no data have been received for test sites in the planned LIDQA study of Landsat-5 data.