COVER PHOTO



TM image subsets of Iowa (upper) and Georgia (lower), and the corresponding U.S. Geological Survey 1:24,000 quadrangle segments illustrate the possibilities for defining the location of high contrast road intersections to a fraction of a pixel, whereas natural points such as the tip of the small peninsula are more difficult to identify (see article by Welch, Jordan and Ehlers).

Second-class postage paid at Falls Church, Virginia and at additional mailing offices.

Photogrammetric Engineering and Remote Sensing (ISSN 0099-1112) is published monthly by the American Society for Photogrammetry and Remote Sensing, 210 Little Falls Street, Falls Church, Virginia 22046. Publication Office-The Sheridan Press, Hanover, Pa. 17331. (Also see Notice on second following page.)

Copyright 1985 by the American Society for Photogrammetry and Remote Sensing. Reproduction of this issue or any part thereof (except short quotations for use in the preparation of technical and scientific papers) may be made only after obtaining the specific approval of the Editor.

The Society is not responsible for any statements made or opinions expressed in the technical papers, advertisements, or other portions of this Publication.

## PHOTOGRAMMETRIC **ENGINEERING &** REMOTE SENSING



JOURNAL OF THE AMERICAN SOCIETY FOR PHOTOGRAMMETRY AND REMOTE SENSING

Number 9 Volume LI September 1985

Foreword, Special LIDQA Issue
Brian L. Marknam and John L. Barker1245
Guest Editors
Comparative Evaluations of the Geodetic Accuracy
and Cartographic Potential of Landsat-4 and
Landsat-5 Thematic Mapper Image Data
Exceptional geometric fidelity is a characteristic of
Landsat IM data.
R. Weich, T. R. Jordan, and M. Emers1249
Landsat-4 and Landsat-5 MSS Concrent Noise:
Characterization and Removal
Low-level coherent noise in Landsat MSS data can be
effectively removed by intering after acquisition, inters
reduced the noise sufficiently to eliminate
additional filtering.
James C. Tilton, Brian L. Markham, and
William L. Alford1263
Interpretation of Landsat-4 Thematic Mapper and
Multispectral Scanner Data for Forest Surveys
Color composites containing Thematic Mapper Bands 3,
4, and 5 are best for discriminating forest types.
Andrew S. Benson and
Stephen D. DeGloria1281
Investigation of Landsat-4 Thematic Mapper Line-to-
Line and Band-to-Band Registration and Relative
Detector Calibration
Various A-type and P-type images (France, USA) are
analyzed in order to test Landsat-4 Thematic Mapper
geometric accuracy, detector-to-detector relative
Lacky Doogoby Gorard Begni Benoit Boissin
Jacky Desacry, Gerard Degrin, Denon Doissin,
Thematic Manner: Operational Activities and Sensor
Development of ESA/Forthant
Thematic Manper data acquired and processed in
Europe are characterized in respect to NASA/NOAA
performance specifications.
L. Fusco, U. Frei, and A. Hsu1299

(Continued on page 1199)

MEMBERSHIP RATES: Membership in the American Society for Photogrammetry and Remote Sensing is open to any person actively engaged in the practice of Photogrammetry, Photointerpretation, and Remote Sensing, or who by means of education or profession is interested in the application or development of these arts and sciences. The annual dues for Regular members are \$40.00 which includes a \$20.00 member subscription to the Society's official journal, Photogrammetric Engineering and Remote Sensing. The annual dues for accredited student members are \$15.00 which includes an \$8.00 student subscription to the official journal. (All memberships are on a calendar year basis.) Add \$5 for all international memberships to cover cost of postage. Postmaster: send address changes to the American Society for Photogrammetry and Remote Sensing, 210 Little Falls Street, Falls Church, Virginia 22046.

SUBSCRIPTION RATES: Persons or organizations that are not affiliated with the Society may obtain non-member subscriptions to *Photogrammetric Engineering and Remote Sensing* in accordance with the following schedule:

Non-member subscription . . . \$65.00 per year (calendar)

Add \$5 for international subscriptions.

Printed in the United States of America.

PERMISSION TO PHOTOCOPY

The appearance of the code at the bottom of the first page of an article in this journal indicates the copyright owner's consent that copies of the article may be made for personal or internal use or for the personal or internal use of specific clients. This consent is given on the condition, however, that the copier pay the stated per copy fee of \$2.25 through the Copyright Clearance Center, Inc., 21 Congress Street, Salem, MA 01970, for copying beyond that permitted by Sections 107 or 108 of the U.S. Copyright Law. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale.

Landsat-5 Thematic Mapper Data Engineering analyses of Thematic Mapper image data from Landsats 4 and 5 were performed with an emphasis on radiometric performance. Michael D. Metzler and William A. Malila .. 1315 Intraband Radiometric Performance of the Landsat Thematic Mappers Detailed characteristics of the Thematic Mapper were determined using only natural scene detail; correction procedures are described. Hugh H. Kieffer, Debra A. Cook, Eric M. Eliason, and Patricia T. Eliason ......1331 Thematic Mapper Thermal Infrared Calibration Landsat thermal infrared data is evaluated through comparison with underflight and ground truth data. John R. Schott and William J. Volchok .....1351 Assessment of Radiometric Accuracy of Landsat-4 and Landsat-5 Thematic Mapper Data Products from Canadian Production Systems Thematic Mapper data from Landsat-4 and Landsat-5 processed by the Canadian production system are analyzed for variability within-scenes and betweensensors; comparisons are also made to U.S. processed data. Jennifer M. Murphy, Francis J. Ahern, Paul F. Duff, and Anthony J. Fitzgerald ......1359 Methods for Destriping Landsat Thematic Mapper Images—A Feasibility Study for an Online Destriping Process in the Thematic Mapper Image Processing System (TIPS) The level of Thematic Mapper detector-to-detector striping does not warrant online processing given the required 60 percent increase in computer time. Demetrios J. Poros and Chris J. Peterson ......1371 Thematic Mapper Radiometric Correction Research and Development Results and Performance Results of the research and development period for Thematic Mapper radiometric correction and performance benchmark for relative radiometric correction. Amrendra Singh ......1379

(Continued from page 1197)

Characterization and Comparison of Landsat-4 and

(Continued on page 1201)

NOTICE: Correspondence relating to all business and editorial matters pertaining to this and other Society publications should be directed to the American Society for Photogrammetry and Remote Sensing, 210 Little Falls Street, Falls Church, VA 22046, including inquiries, memberships, subscriptions, changes in address, manuscripts for publication, advertising, back issues, and the MANUALS OF PHOTOGRAMMETRY AND REMOTE SENSING. The telephone number of the Society Headquarters is (703) 534-6617.