

# PE&RS

Photogrammetric Engineering

Remote Sensing

Volume LVIII

June 1992

Number 6

## The 1990 Conterminous U.S. AVHRR Data Set

Using NOAA-11 Advanced Very High Resolution Radiometer (AVHRR) 1-km data, a time series of 19 biweekly maximum normalized difference vegetation index (NDVI) composites of the conterminous United States for the 1990 growing season has been produced.

*Jeffery C. Eidenshink* ..... 809

## Accuracy of SPOT Digital Elevation Model and Derivatives: Utility for Alaska's North Slope

A SPOT DEM can provide a fairly accurate representation of ground elevations, slope, and aspect even in low relief areas and with imagery acquired at less than optimum acquisition angles.

*Kathryn Connors Sasowsky, Gary W. Petersen, and Barry M. Evans* ..... 815

## A Research Paradigm for Propagating Error in Layer-Based GIS

The paradigm enables researchers to formulate, manipulate, and experiment with components of error propagation to determine their implications for decision making.

*David P. Lanter and Howard Veregin* ..... 825

## Accuracy of Spatial Data Used in Geographic Information Systems

An outline of the different types of errors encountered in the primary and secondary methods of data collection is presented.

*Khagendra Thapa and John Bossler* ..... 835

## Sensitivity of Wildlife Habitat Models to Uncertainties in GIS Data

A sensitivity analysis confirmed the robustness of a GIS-based model of California condor feeding habitat preferences.

*David M. Stoms, Frank W. Davis, and Christopher B. Cogan* ..... 843

## Variation of Distortion within the Photographic Field

An empirical correction factor can be used to accurately compensate for the change in radial lens distortion.

*Clive S. Fraser and Mark R. Shortis* ..... 851

## Reducing the Registration Time for Photographs with Non-Intersecting Cross-Arm Fiducials on the Analytical Plotter

When combined with single measurements to the center of the fiducial marks, this approach reduces the registration time for diapositives equipped with non-intersecting cross-fiducial marks by about 50 percent.

*J. Olaleye and W. Faig* ..... 857

## Commentary: A Call to Action: Standards for the GIS Community

The groundwork must be laid now—particularly in the areas of data exchange and benchmarking—by establishing a standards committee to ensure that GIS remains a vital and useful tool.

*Lawrie E. Jordan, III and Jeffrey L. Star* ..... 863

### PE&RS

PE&RS (Photogrammetric Engineering & Remote Sensing) (ISSN 0099-1112) is published monthly by the American Society for Photogrammetry and Remote Sensing, 5410 Grosvenor Lane, Suite 210, Bethesda, MD 20814-2160. Second-class postage paid at Bethesda, Maryland and at additional mailing offices.

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Subscription rate for nonmembers is \$120.00 per calendar year (add \$25.00 for international subscriptions). Membership dues include annual subscription to PE&RS (Photogrammetric Engineering & Remote Sensing) (\$34 members and \$15 student member). This subscription price is part of membership benefits and cannot be deducted from annual dues. Foreign Airmail subscription is \$215.00, US First Class Mail subscription is \$160.00. POSTMASTER: Send address changes to PE&RS, ASPRS Headquarters, 5410 Grosvenor Lane, Suite 210, Bethesda, MD 20814-2160

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Cover image—This image depicts the maximum normalized difference vegetation index (NDVI) of North America for 11-20 August 1990. The high vegetation index values are colored in shades of green with a transition to brown for low index values. Blue represents water and white represents clouds, snow, other bright features, and the missing data in South America.

The image was produced jointly by the USGS EROS Data Center (EDC) and the Canada Centre for Remote Sensing (CCRS) using 1-km NOAA-11 AVHRR data. CCRS produced a maximum NDVI composite of Canada, Alaska, and Greenland and EDC processed the data for the conterminous U.S., Mexico, and Central America using standardized procedures. The two regional composite data sets were merged using maximum NDVI compositing.

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