Pecora Symp. (1984) file

PRELIMINARY TECHNICAL PROGRAM

PECORA IX

THE NINTH WILLIAM T. PECORA MEMORIAL REMOTE SENSING SYMPOSIUM

SPATIAL INFORMATION TECHNOLOGIES FOR REMOTE SENSING TODAY AND TOMORROW

October 2, 3, and 4, 1984. Howard Johnson Convention Center, Sioux Falls, SD

TUESDAY, OCTOBER 2

(Morning)

HARDWARE

"Ultra Computers"
J. Paul Roth
IBM Thomas J. Watson Research Center

"Advanced Communications Technologies for Image Processing"
William Likens and Harry Jones
NASA-Ames Research Center

"A Parallel Processor for Analysis of Multispectral Data"
S. Chandrasekhar
Energy, Mines and Resources Canada

"A Hardware-Oriented Pattern Classifier for Remote Sensing"
Ikram E. Abdou
University of Delaware

GIS IMPLEMENTATION

(Afternoon)

"Geographic Information Systems"
Duane Marble
State University of New York at Buffalo

"Development of a Data Base Management System for Natural Resource Inventory"
Chris Johannsen, Terry Barney, Gregory Koeln, University of Missouri
and Jove Pan, Bell Labs

"Design and Development of a Geographic Information System for Illinois"
Colin G. Treworgy
Illinois Natural History Survey

"Design of Computer Software for Geographic Image Processing"
Paul Ritter, Agnis Kaugars and Tony Travlos
University of California, Berkley

"Microcomputer-Based, Statewide, Digital Land-Surface Information"
David Lusch and William Enslin
Michigan State University

SPATIAL DATA STRUCTURES

"Images as Maps/Maps from Images"
David McKeown Jr.
Carnegie Mellon University

"A General Spatial Data Structure"
Linda Shapiro and Bob Haralick
Virginia Polytechnic Institute and State University

"Topological Grid Structure: A Data Structure for Earth Science Modeling"
Michael Goldberg, Goddard Space Flight Center
Wayne A. Hallada and Richard F. Marcell, Science Applications Research
Wendy Lindboe, Computer Science Corporation

"A Hierarchical Method for Representation Terrain Relief"
Renato Barrera, Ana Maria Vazquez
Instituto de Investigaciones en Matematicas Aplicadas y en Sistemas

(Concurrent Tuesday afternoon sessions)

PROCESSING REMOTELY SENSED DATA

"MIN/MAX Autocorrelation Factors for Multivariate Spatial Imagery"
Paul Switzer, Stanford University
A. A. Green, C.S.I.R.O. Australia

"The Spatial Structure of Terrain:
A Process Signal in Satellite Digital Images"
Richard G. Craig
Kent State University

"Application of the Theory of Regionalized Variables to the Spatial Analysis of LANDSAT Data"
James R. Carr, University of Missouri
Donald E. Myers, University of Arizona

"Spatial Variation Analyses of Thematic Mapper Data for the Identification of Linear Features in Agricultural Landscapes"
R. E. Pelletier
NASA/Earth Resources Laboratory

"The Role of Spatial Resolution and Spectral Content in Change Detection"
V. A. Milazzo
U. S. Geological Survey

"GIS for Soils and Rangeland Management"
R. G. Best and F. C. Westin
South Dakota State University

"The Evolution of Map, Overlay, and Statistical System (MOSS) on a VAX 32-bit System Configuration"
R. J. Thompson and Lyndon Oleson
U. S. Geological Survey

WEDNESDAY, OCTOBER 3

(Morning)

NATURAL LANGUAGE

"Natural Language Question and Answering Systems"
Bonnie Webber
University of Pennsylvania

"Using a Menu-Based Natural Language Interface
to Ask Spatial Database Queries"
Craig W. Thompson
Texas Instruments Incorporated

"Natural Language Interfaces to Visual Sensing Systems"
Christopher Malley and Mallory Selfridge
The University of Connecticut

"Understanding Natural Language Commands"
Hubert Chin
Grumman Aerospace Corporation

(Concurrent Wednesday morning sessions)

NASA PROGRAMS IN REMOTE SENSING INFORMATION SYSTEMS

"Hyper-Spectral Image Processing"
Jerry Solomon
NASA/Jet Propulsion Laboratory

"Global Resources Information System"
Jose Urena and Fred Billingsley
NASA/Jet Propulsion Laboratory

"Pilot Climate Data System"
Paul Smith
NASA/Goddard Space Flight Center

"Pilot Land Data System"
Phil Cressy
NASA/Goddard Space Flight Center

"Pilot Ocean Data System Catalog"
John Johnson
NASA/Jet Propulsion Laboratory

GIS APPLICATIONS

"Applications of Geographic Information Systems for Analysis of Radio-Telemetry Data on Wildlife"
Gregory T. Koeln, University of Missouri
Elizabeth Cook, Missouri Department of Conservation

"An Automated Approach to Estimating Time-Specific Population Densities for Metropolitan Areas"
Jeffrey M. Young, Lockheed Engineering and Management Services Co., Inc.
Frank Gossette, University of Delaware

"Forest Fire Advanced System Technology"
Ronald G. McLeod, James R. Huning, Jet Propulsion Laboratory
John R. Warren, U. S. Department of Agriculture, Forest Service

"Spatial Analysis Requirements of the Federal Mineral Lands Information System"
J. A. Sturdevant, Technicolor Government Services, Inc.
R. L. Kleckner, U. S. Geological Survey

"The Application of a Geographic Information System to Management of the Penn State University Experimental Forest"
Wayne L. Myers and John Kolemik
The Pennsylvania State University

ADVANCED TECHNIQUES

(Afternoon)

"Advanced Computer Interpretation Techniques for Earth Data Information Systems"
Philip H. Swain
Purdue University

"Classification Using Context"
Robert M. Haralick and Ming Chuan Zhang
Virginia Polytechnic Institute and State University

"ASP: An Algorithm and Sensor Performance Evaluation System"
Tom Henderson
The University of Utah

"Segmentation of Computer-Classified LANDSAT Multispectral Scanner Data into Spatially-Connected Regions of Elk Habitat Components"
R. Jay Murray
Oregon State University

"Algorithmic Development of Spatial Operators"
R. W. Claire
U. S. Geological Survey

"Processing of Scanned Imagery for Cartographic Feature Extraction"
S. P. Benjamin and L. Gaydos
U. S. Geological Survey

ARTIFICIAL INTELLIGENCE

"Future Expert Systems in Regional Resource Evaluation - Lessons from PROSPECTOR"
Richard B. McCammon
U. S. Department of the Interior

"Interactive Aids for the Development of Computer Vision Rule Bases"
Brian T. Mitchell and John F. Lemmer
PAR Technology Corporation

"An Application of Expert Systems Technology to Remotely Sensed Image Analysis"
W. K. Erickson, and W. C. Likens
NASA/Ames Research Center

"Applications of Artificial Intelligence for the Earth Science Community"
William J. Campbell and Larry H. Roelofs
Goddard Space Flight Center

THURSDAY, OCTOBER 4

(Morning)

GIS CONCEPTS

"Terrain Elevation and Surface Feature Data Display"
Marshall B. Faintich
Defense Mapping Agency

"Spatial Knowledge Representation in a Geographic Querying System"
Micha I. Pazner and Terence R. Smith
The University of California, Santa Barbara

"An Attribute-Driven Statistics Generator for a G. I. S. Environment"
Randy Thomas, Paul Ritter, and Agnis Kaugars
University of California, Berkley

"Accuracy in Geographic Information Systems: An Assessment of Inherent and Operational Errors"
John D. Vitek, Stephen J. Walsh, and Mark S. Gregory
Oklahoma State University

"The Map Library - A Large Scale Data Structure for Geographic Information Systems"
Peter Aronson
Environmental Systems Research Institute

"The Application of Spatial Information Technology to Petroleum Resource Assessment Analysis"
Betty M. Miller
U.S. Geological Survey

(Concurrent Thursday morning sessions)

GRAPHICS

"Parallel Coordinates for Multi-Dimensional Displays"
Alfred Inselberg
IBM Scientific Center, and University of California

"A Device Independent Interface for Image Display Software"
M. R. Szczur, D. C. Perkins, J. Owings and S. Contractor
Goddard Space Flight Center

"A Table-top, Microcomputer Approach to the Management, Analysis and Display of Geographic and Image Data Using a Map-oriented, Geo-referenced Framework"
L. D. Miller, T. Cheng, M. Unverferth, Y. K. Yang, M. G. Kim, B. Elliot
Nebraska Remote Sensing Center

"Digital Image Display and Analysis of Polar Orbiting Meteorological Satellite AVHRR Data"
T. Hotrabhavananda, W. McFarland, L. Johnson, M. Lyon and T. Barney
University of Missouri

"Image Processing for Data Integration in Mineral Exploration"
Stan Aronoff
DIPIX Systems Limited

SPATIAL NAVIGATION

"Convex Hulls, Voronoi Diagrams, and Terrain Navigation"
Joseph O'Rourke
The John Hopkins University

"Two Dimensional Mobile Robot Positioning Using Onboard Sonar"
David Miller
Yale University

"Automated Map Transformation for Unmanned Planning and Navigation"
A. Meystel
University of Florida

CLASSIFICATION

(Afternoon)

"Using Spatial Logic in Classification of LANDSAT TM and MSS Data"
James W. Merchant
University of Kansas

"Analysis of a Classification Error Matrix Using Categorical Data Techniques"
George H. Rosenfield and Katherine Fitzpatrick-Lins
U. S. Geological Survey

"A Comparison of LANDSAT Point and Rectangular Field Training Sets for Land-Use Classification"
Craig H. Tom, Hughes Aircraft Company
Lee D. Miller, Nebraska Remote Sensing Center

"An Evaluation of the Accuracies of Five Algorithms for Machine Classification of Remotely Sensed Data"
Michael H. Story, James B. Campbell and Glenn Best
Virginia Polytechnic Institute and State University

"Monitoring Federal Minerals with the Use of LANDSAT Albedo Difference and Ancillary Data"
Raymond E. Arndt
U. S. Department of the Interior, Bureau of Land Management

ELEVATION

"Automated Drainage Line Delineation from Raster Elevation Data"
Susan K. Jenson
Technicolor Government Services, Inc.

"An Interactive Technique to Generate Digital Elevation Data
Using a Vidicon Camera"
Jayanta K. Sircar and Robert M. Ragan
University of Maryland

"Generation of Digital Elevation Models on a Microcomputer"
John S. Nelson and Stephen W. Miller
Louisiana State University

For information on Pecora IX registration and accommodations, contact
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