The William T. Pecora Memorial Symposium

PECORA 16

"GLOBAL PRIORITIES IN LAND REMOTE SENSING"

October 23 - 27, 2005

Sioux Falls Convention Center
Sioux Falls, South Dakota

Final Program

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NASA & U.S. Geological Survey

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Photogrammetry and Remote Sensing (ASPRS)

James A. Sturdevant

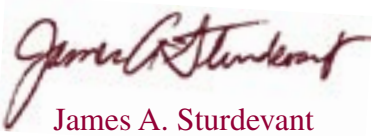
Welcome to the 16th William T. Pecora Memorial Symposium

As Steering Committee Chairman of the 16th William T. Pecora Memorial Symposium, I am delighted that you have joined us here in Sioux Falls, South Dakota, for this exciting technical exchange. This week we will examine the full range of issues around the theme of "Global Priorities in Land Remote Sensing." The Symposium continues the Pecora tradition of focusing on the applications of satellite and other land remote sensing data to study, monitor, and manage the Earth's land surface. Concurrent sessions address Land Use/Land Cover, Wildlife/ Biodiversity, Water/Wetlands, Forestry, Environment, Data Archiving, Policy Issues and more. Dr. James Merchant and his technical program team have organized an outstanding program that highlight technical accomplishments and policies of today and provide a forum for discussions of land remote sensing needs of tomorrow.

The Symposium keynote speaker is Dr. Gene Whitney, Senior Policy Analyst in the White House Office of Science and Technology Policy, on assignment from the US Geological Survey. Other Plenary sessions include: Advancing Scientific and Practical Applications of Remotely Sensed Data; Data Availability, Access and Preservation; Advancing the Technology of Remote Sensing; and Securing a Stable Future for Satellite Land Remote Sensing.

The Symposium includes a Wednesday evening reception at the USGS Center for Earth Resources Observation and Science (EROS). Don't miss this lively social event and open house! NASA and USGS officials will present the annual Pecora award. The agenda includes tours, displays, refreshments, and fun.

The combination of technical sessions, policy discussions, posters, workshops, and exhibits at Pecora 16 make for a special opportunity for you to share experiences, successes and ideas. Enjoy the Symposium.



James A. Sturdevant
Steering Committee Chair
Pecora 16 Symposium

PECORA 16
Steering Committee
Members and Affiliation

Ronald E. Beck
Raymond A. Byrnes
Ivan DeLoatch
Lawrence R. Pettinger
James A. Sturdevant
U.S. Geological Survey

James Irons *
Vincent V. Salomonson
NASA Goddard Space Flight Center

Tahara Moreno
Kevin Gallo *
National Oceanic and Atmospheric Administration

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Environmental Protection Agency

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Mitretek Systems

Scott A. Loomer *
National Geospatial-Intelligence Agency

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U.S. Department of Agriculture

Sylvia A. Edgerton *
U.S. Department of Energy
Pacific Northwest National Laboratory

Brian L. Tolk, Poster Session Chair *
SAIC, Under Contract to USGS EROS

James W. Merchant, Technical Program Chair *
University of Nebraska – Lincoln

Russell G. Congalton
University of New Hampshire

Mary O'Neill
South Dakota State University

Karisa Vlasek
University of Nebraska Omaha

Anna Marie Kinerney
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Kim Tilley
American Society for Photogrammetry and Remote Sensing

* *Technical Program Committee*

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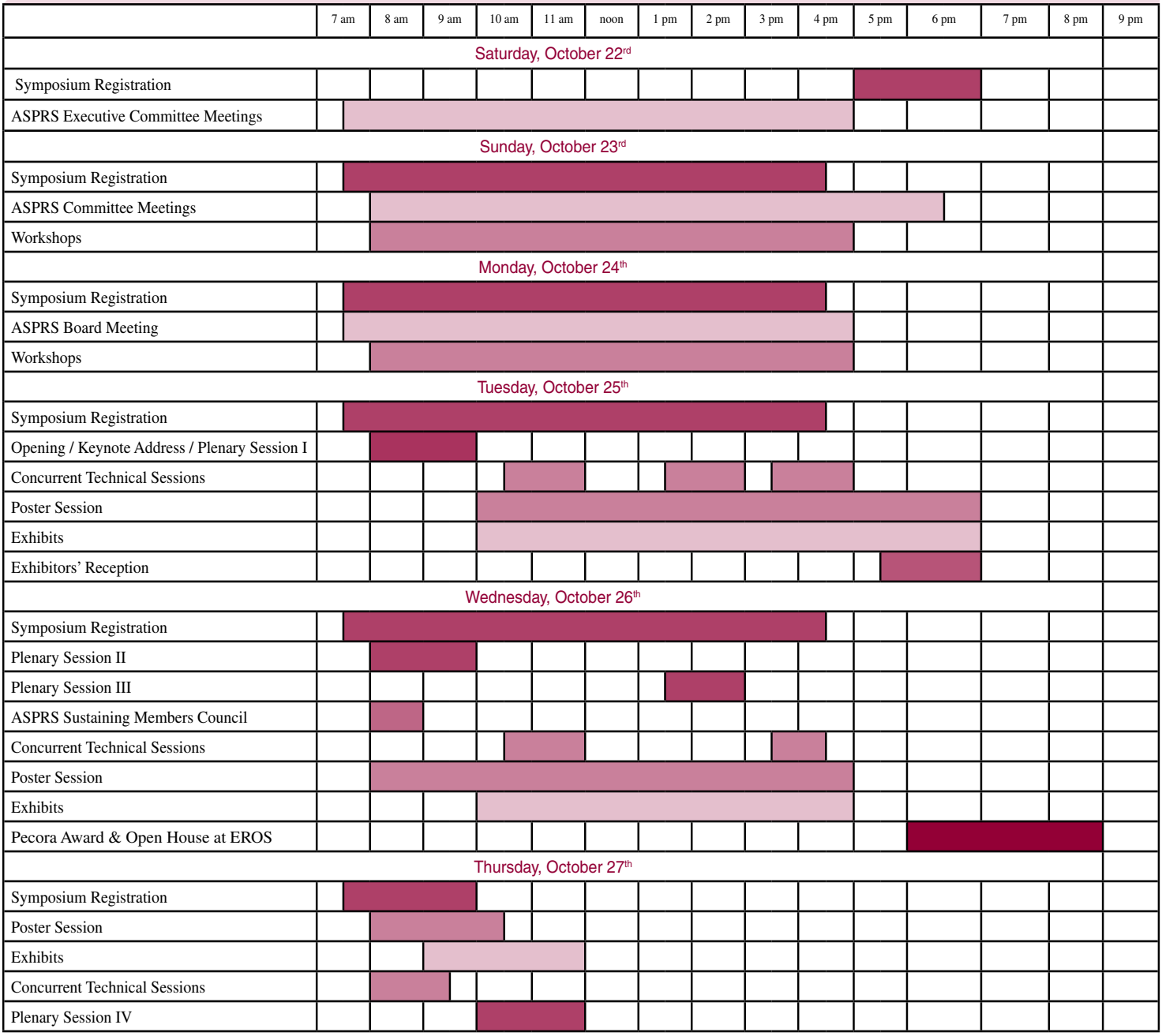
Symposium-at-a-Glance



Symposium Registration Hours

Saturday, October 22nd	5:00 pm - 7:00 pm
Sunday, October 23rd	7:30 am - 4:30 pm
Monday, October 24th	7:30 am - 4:30 pm
Tuesday, October 25th	7:30 am - 4:30 pm
Wednesday, October 26th	7:30 am - 4:30 pm
Thursday, October 27th	7:30 am - 10:00 am

FREQUENTLY ASKED QUESTIONS

What are the Registration Hours?

Saturday, October 22
5:00 pm – 7:00 pm

Sunday, October 23
7:30 am – 4:30 pm

Monday, October 24
7:30 am – 4:30 pm

Tuesday, October 25
7:30 am – 4:30 pm

Wednesday, October 26
7:30 am – 4:30 pm

Thursday, October 27
7:30 am – 10:00 am

What is included in the Full Conference Registration fee?

For ASPRS members and non-members paying the full registration fee, the following is included:

Proceedings CD
Keynote and Plenary Sessions
General, Technical and Poster Sessions
Exhibitors' Reception, Oct. 25
Prarie Fest Open House and Pecora Award at EROS, Oct. 26
Box Lunch in the Exhibit Hall, Oct. 25 and 26

Are workshops included with registration?

Workshops are not included in the full registration fees. Workshops require individual registration and additional payment to the general conference registration fees. Availability is based on space. On-site registration will be available for confirmed workshops with additional space. Please use the On-Site Registration Form (available at the Symposium Registration Desk located in the Sioux Falls Convention Center) and present it to the Registration staff with the appropriate registration fee.

What does a daily registration include?

Daily registrations include select day's educational sessions, exhibits and proceedings. Please use the On-Site Registration Form (available at the Symposium Registration Desk located in the Sioux Falls Convention Center) and present it to the Registration Staff with the appropriate fee.

What does a spouse/guest registration include?

A spouse/guest registration includes the Exhibit Hall Admission, Exhibitors' Reception, and EROS Open House. If a spouse or guest would like to attend the Keynote, General or technical sessions, they are required to pay the rate of a full registration or daily registration. Please use the On-Site Registration Form (available at the Symposium Registration Desk) and present it to the Registration Staff with the appropriate fee.

Where are the Exhibits?

The Exhibits are located in the Sioux Falls Convention Center - Exhibit Hall 2

What are the Exhibit Hall Show Hours?

Tuesday, October 25
10:00 am – 7:00 pm
Exhibitiors' Reception
5:30 pm – 7:00 pm

Wednesday, October 26
10:00 am – 5:00 pm

Thursday, October 27
9:00 am – 12 noon

Can I visit the Exhibit Hall only?

Individuals who wish admission to the Exhibit Hall only are required to pay a $50 registration fee for Tuesday that includes the Exhibitors' Reception, $25 for Wednesday or Thursday. Please use the On-Site Registration Form (available at the Symposium Registration Desk) and present it to the Registration Staff with the appropriate fee. The badge that will be supplied will allow admission to the Exhibit Hall only during show hours for the specific day.

Are extra copies of the CD-Rom Proceedings available?

Additional proceedings (CD-ROMs) may be purchased at the Registration Desk for $35 per copy. Proceedings lost, stolen or misplaced at the conference will not be replaced.

Why do I need a name badge and tickets?

Symposium name badges are required for admission to Workshops, the Keynote, General and Technical Sessions, Exhibit Hall and any social functions to identify ASPRS attendees. There is a $5.00 replacement fee for lost badges.

What are the tickets for?

In addition to your name badge, you have tickets for a beverage at the Exhibitors' Reception, beverages at the EROS Open House, and the box lunches; you may also have tickets for the workshops. Tickets are necessary to identify those who have paid for the event. There is a $5.00 replacement fee for lost tickets.

Is there a place to post my resume or job opening?

Resumes and job openings may be posted in the Exhibit Hall inside the ASPRS Career Fair Booth. Prospective employers can review resumes and those looking for job opportunities may scan the postings. It is suggested that several copies of all postings be provided.

Is there a place for speakers to prepare their presentations?

We encourage workshop instructors and technical session presenters to preview their presentation materials. The Speaker Ready Room (Room 10) is located in the Sioux Falls Convention Center. Equipment will be available throughout the conference on a first-come, first-served basis.

Is there a place for the press?

A space will be provided in the Sioux Falls Convention Center for any member of the press who would like to distribute press releases. Please check with the Symposium Registration Staff about the space location. Press personnel must contact Anna Marie Kinerney, ASPRS Meetings Manager, through the Symposium Registration Desk, located in the Sioux Falls Convention Center in advance to schedule a press conference.

Is transportation available to the Prarie Fest Open House at EROS?

Buses will run on a continuous basis from the Convention Center entrance to EROS starting at 5:00 pm until 7:30 pm. Return service from EROS to the Convention Center will be from 7:30 pm to 9:00 pm. The last bus will leave EROS promptly at 9:00 pm. See the ad on page 17 for more information.

Volunteers

Conference volunteers should report to Office 4 of the Sioux Falls Convention Center for work assignments and to receive their lunch stipend or ticket on the days they volunteer.

What is Symposium-at-a-Glance?

Symposium-at-a-Glance is designed to allow conference attendees to tailor their educational program to their particular interests. It lists daily events.

Additional Information

Emergency — Locate a Symposium Conference staff person at the Registration Desk or pick up any house phone in the Convention Center and ask for Security.

Evaluations — Your input is important to us! We want to know your thoughts on this year's speakers and topics for future conference planning. Please complete the evaluation form included in your registration packet and place it in the designated collection box at the Registration Desk. **By completing and returning the evaluation form you are eligible to win a complimentary registration for the 2006 ASPRS Annual Conference in Reno, Nevada.**

Local Information — The Sioux Falls Convention and Visitors Bureau is providing tour information at the Symposium Registration Desk area in the Convention Center.

Lost and Found — Contact Convention Center Security for all lost items.

Messages — Written messages may be placed on the Symposium message board located in the Registration Area of the Convention Center. Because of the number of attendees we cannot guarantee delivery. Please be mindful of those who need to reach you during the Symposium and provide them with detailed information on how to contact you directly.

Sioux Falls Convention Center and Sheraton Hotel
1211 West Avenue North
Sioux Falls, South Dakota 57104
(605) 331-0100

JOB FAIR

Calling all Employers looking for New Staffers and Job Seekers looking for excellent opportunities

An expanded Job Fair is a vital part of this Symposium. An interview room will be available on Tuesday, October 25 and Wednesday, October 26 for private discussions with prospective employees. Please contact Anna Marie Kinerney at through the Symposium Registration Desk to schedule a time slot.

Additionally, boards will be provided in the Exhibit Hall for posting of resumes and job openings. Envelopes will be provided for each job posting. This will allow interested candidates to submit their resumes on the spot. Employers, please check back frequently throughout the Symposium for resumes in your envelope.

Pre-Program

Saturday, October 22

7:30 am - 5:00 pm
Executive Committee Meeting
Cataract Room, Sheraton Hotel

5:00 pm - 7:00 pm
Registration
Convention Center Foyer

Sunday, October 23

7:30 am - 4:30 pm
Registration
Convention Center Foyer

Workshop 1
Professional Airborne Digital Mapping Systems - An Overview
8:00 am - 5:00 pm, 0.8 CEU
Room 11
Dave Fuhr, *Airborne Data Systems*
Brian Huberty, *U.S. Fish & Wildlife Service*

Introductory Level Workshop
The primary objective of this tutorial is to review professional airborne digital mapping camera systems. We will discuss all advantages and disadvantages of these new, dynamic systems - technical, costs, feasibility, calibration and applications. Participants will leave with a better understanding of what it takes to map their projects by either contracting or acquiring airborne digital mapping camera systems.

Workshop 2
Assessing the Accuracy of GIS Information Created from Remotely Sensed Data: Principles and Practices
1:00 pm - 5:00 pm, 0.4 CEU
Room 12
Kass Green, President, *Alta Vista*
Russell G. Congalton, *University of New Hampshire*

Intermediate Level Workshop
In order to maximize the benefits of this course, participants should have previous experience with GIS and remotely sensed data. In addition, a good understanding of statistical principles is also strongly suggested.

This course focuses on the principles, techniques, and practical aspects of assessing the accuracy of GIS information derived from remotely sensed data. Participants will receive instruction in how to design accuracy assessment procedures, allocate accuracy assessment samples, collect both field and photo reference data, and analyze accuracy assessment results. While spatial accuracy is addressed, the course primarily focuses on methods and analysis for thematic accuracy assessment. Examples of accuracy assessment case studies based on actual project data will be presented and discussed. Each participant in this course will come away with a solid understanding of accuracy assessment procedures for spatial data, and the knowledge to properly interpret the results of such procedures.

Workshop 3
Remote Sensing of Vegetation
1:00 pm - 5:00 pm, 0.4 CEU
Room 14
Charles Olson, Professor Emeritus, *University of Michigan*

Introductory Level Workshop
The goal of this workshop is to provide an examination of morphologic and physiologic factors affecting signals upwelling from vegetated areas and their influence on remotely sensed data in the visible, near-IR, middle-IR, thermal and microwave spectral bands, with emphasis on the spectral bands of camera systems and the ETM+ sensor.

ASPRS Committee Meetings

8:00 am - 9:00 am
Division Directors
Room 8

Committee Chairs
Room 9

9:00 am - 10:00 am
External Affairs Committee
Room 1

9:00 am - 11:00 am
Evaluation for Certification Committee
Room 2

Electronic Communications Committee
Room 3

10:00 am - 12 noon
Professional Practice Division (PPD)
Room 6

11:00 am - 12 noon
Geographic Information Systems Division (GISD)
Room 7

Remote Systems Applications Division (RSAD)
Room 8

1:00 pm - 3:00 pm
Region Officers
Room 1

Lidar Subcommittee of Primary Data Acquisition Division
Room 2

Journal Policy and Publications Committees
Room 3

3:00 pm - 5:00 pm
Membership Committee
Room 6

Convention Planning and Policy Committee
Room 7

Data Preservation and Archiving Committee
Room 8

5:00 pm - 5:30 pm
Photogrammetric Applications Division (PAD)
Room 9

5:00 pm - 6:00 pm
By-Laws Committee
Room 1

Primary Data Acquisition Division
Room 2

5:30 pm - 6:30 pm
Division Directors
Room 8

Monday, October 24

7:30 am - 4:30 pm
Registration
Convention Center Foyer

Workshop 4
Preparing For ASPRS Certification
8:00 am - 5:00 pm, 0.8 CEU
Room 11
Robert Burtch, Professor, *Ferris State University*

Intermediate Level Workshop
Assumes participants have subject knowledge and are serious about taking the Certification Exam.

The purpose of this workshop is to prepare individuals who are planning to sit for the ASPRS Certification exams as a Certified Photogrammetrist or Certified Mapping Scientist in either Remote Sensing or GIS. The workshop will begin by explaining the purpose and form of the exam. It will then begin to identify key topical areas that an applicant should be aware of prior to taking the exam. Topics will begin with a review of the basic concepts and sample questions to show how these topics will be tested for on the exam. Finally, the workshop will try to identify resources in which exam takers should be aware of and study from in their preparation for the examination.

Workshop 5
Image Classification Techniques for the Development of Accurate, Detailed, Quantitative Land Cover Data
8:00 am - 5:00 pm, 0.8 CEU
Room 12
Kenneth A. Stumpf and John Koltun, *Geographic Resource Solutions*

Introductory Level Workshop
Attendees should be acquainted with the basic concepts of image classification and GIS. Attendees should be interested in learning more about how to use classification techniques in different ways to generate detailed, quantitative, and accurate results. Those considering image classification efforts will find the workshop informative and gain knowledge about useful alternative strategies. Participants actively involved in image classification projects will find the workshop challenging and useful in identifying and discussing problems that may be affecting their ongoing projects.

This workshop is designed as a workflow that takes participants through the different stages of a land cover mapping (data development) project while identifying problems, issues, and concerns and comparing and contrasting traditional and alternative techniques. The workshop is built around the four major parts of an Image Classification Project - Data Acquisition and Preparation, Image Classification, Pixel to Polygon Conversion, and Accuracy Assessment. The workshop wraps up with a comprehensive summary followed by final questions and answers.

Workshop 6
Identifying and Mapping Land Cover and Land Use Change Over Time
8:00 am - noon, 0.4 CEU
Room 14
Kass Green, President, *Alta Vista*

Introductory Level Workshop
Assumes that the participants have some experience with land cover mapping or are about to begin using these techniques

The purpose of this course is to introduce students to the concepts and techniques of change detection. Two primary questions are answered:

- How should change in land cover and land use be characterized?
- What types of GIS and remote sensing procedures can be used to locate, identify, measure, and incorporate change into land cover and land use applications?

Workshop registration is NOT included in the full Symposium registration fee. Workshops require separate registration and payment for each workshop. Availability is based on space.

Continuing Education Credits (CEUs)

In conjunction with the University of Maryland, College Park, we are pleased to offer Pecora 16 workshop attendees the opportunity to earn Continuing Education Credits (CEUs). All workshop attendees are eligible for CEUs if they attend the workshops, register for CEUs and pay the processing fee of $25. For each workshop attended, one CEU for every 10 hours of eligible sessions attended is awarded to CEU registrants. (Example: 4 hours = 0.4 CEUs). The eligible sessions and hours are noted in this program. Registration forms will be distributed at the workshops and must be returned to the Symposium Registration Desk staff with the appropriate fee during the conference. CEU participants will receive a certificate of completion awarded by the University of Maryland, College Park, approximately one month after the conference.

Please note: CEUs are awarded to workshop attendees only. Tutorials, General Sessions, Poster Sessions, or any other scheduled special event at this conference are not eligible for CEUs.

ASPRS Board of Directors Meeting
7:30 am – 5:00 pm
Room 1

Tuesday, October 25, 2005

Introductory Remarks & Welcome

8:00 am - 8:15 am

Ballroom A

Welcome to the Pecora 16 Symposium and to Sioux Falls

James Sturdevant, Chair, Pecora 16 Symposium, *U.S. Geological Survey (USGS) Center for Earth Resources Observation and Science (EROS)*
R.J. Thompson, Chief, *USGS EROS*

Keynote Address: Federal Science and Technology Policy for Land Remote Sensing: What's New?

8:15 am - 9:00 am

Ballroom A

Dr. Gene Whitney, *USGS, on assignment to the White House Office of Science and Technology Policy*

Discussion will focus on the role of the Federal government and, specifically, the Office of Science & Technology Policy (OSTP) in developing science and technology policy as it relates to land remote sensing. One of OSTP's major roles is to build strong global partnerships and domestic partnerships with government, industry, and academia to obtain advice, facilitate collaborations, and evaluate new opportunities. This allows us to maximize the benefit from our Federal investments in science and technology. OSTP also leads the interagency effort to develop science an technology policies and budgets, and oversees the coordination of interagency research and development activities. Critical to this effort is the National Science and Technology Council (NSTC). NSTC activities, led out of OSTP, are the principal means for government agencies to develop joint priorities and coordinate interagency activities in science and technology. Several NSTC activities are ongoing that contribute to developing Federal research and development priorities for land remote sensing. In particular, two high priority interagency activities will be discussed: 1) the development of a strategic plan for water availability and quality research and development, and 2) the U.S. interagency support for the intergovernmental Global Earth Observation System of Systems (GEOSS).

Gene Whitney is a Senior Policy Analyst for the Environment in the White House Office of Science and Technology Policy (OSTP), on assignment from the US Geological Survey (USGS). At OSTP, Dr. Whitney is responsible for coordinating interagency research programs and policy in a wide variety of matters relating to the environment, including serving as primary liaison between OSTP and the National Science and Technology Council's Subcommittee on Disaster Reduction and Subcommittee on Water Availability and Quality. Prior to this assignment, Dr. Whitney spent 20 years as a research scientist with the USGS in Denver, CO. Earlier in his career, Dr. Whitney served as a National Research Council postdoctoral research associate in spectral remote sensing at the National Aeronautics and Space Administration's Jet Propulsion Laboratory. He received his Ph.D. from the University of Illinois, Urbana-Champaign, focusing on mineralogy and geochemistry.

Land Remote Sensing: A USGS Perspective

9:00 am - 9:20 am

Ballroom A

Dr. P. Patrick Leahy, Acting Director, *U.S. Geological Survey*

P. Patrick Leahy is the Acting Director of the U.S. Geological Survey (USGS), U.S. Department of the Interior. Previously, he served as the Associate Director for Geology of the USGS where he was responsible for Federal basic earth science programs. He was also responsible for all international activities conducted by the USGS. He has been with the USGS since 1974 and has served in other various technical and managerial positions. He has authored or coauthored more than 50 publications on a wide array of earth science topics.

Plenary Session I: Advancing Scientific and Practical Applications of Remotely-Sensed Data

9:20 am - 10:00 am

Ballroom A

Organized by
James Irons, *NASA Goddard Space Flight Center*
James Merchant, *University of Nebraska- Lincoln*
Paul Greenfield, *USDA Forest Service*

Spaceborne Land Remote Sensing Before, During, and After the Present EOS Era

Vincent V. Salomonson, *NASA Goddard Space Flight Center (Emeritus)*

The launch of TIROS-I in 1960 when viewed sparked a remarkable interest and growth in the use of spaceborne observations for gaining better understanding of processes and trends occurring in the Earth-atmosphere system. The launch and operation of Landsat-1 (then called Earth Resources Technology Satellite/ERTS-1) in 1972, and follow-on missions extending to Landsat-7, has had a profound impact on land science and related resource management activities around the world. More recently the NASA Earth Observing System (EOS) is taking the use of spaceborne observations for studying land, ocean, and atmospheric phenomena and related applications to a new plateau of accomplishment. The EOS Terra and Aqua missions are exemplary in that regard as evidenced by the advancing and growing use and application of observations from the ASTER, MODIS, MISR, AMSR, et al. instruments for land science in particular as well as other disciplines. The future following after the EOS series and other satellite missions now operating world-wide also looks bright, but not without very significant challenges associated with limited or declining budgets concurrently accompanied by increasing needs to better understand and predict the effects of climate change and anthropogenic activities on the sustainability and maintenance of the resources of the earth. It is clear that careful and strategic development of advanced technologies to provide better observations must be undertaken in the face of fiscal and related political constraints. Some of the general possibilities include, for example, increased use of hyperspectral, laser/lidar, and active microwave technologies along with more aggressive fusion of the observations from such instruments. Related, but equally challenging, steps need to be taken to provide easily accessed and processed, content-rich observations and results into the proper hands so that quantitatively-based, rigorous and well-founded conclusions can be made subsequently by decision-makers world-wide.

Vincent V. Salomonson is a Senior Scientist and Director of Earth Sciences (Emeritus) in the Earth Sciences Directorate at the Goddard Space Flight Center, NASA. He also serves as the Science Team Leader for the NASA Earth Observing System (EOS) facility called the Moderate Resolution Imaging Spectrometer (MODIS). Prior to being Senior Scientist he was the Director of the Earth Sciences Directorate at Goddard from 1990-2000, as the Deputy Director for Earth Sciences in the Space and Earth Sciences Directorate (1988-1990), Chief of the Laboratory for Terrestrial Physics (1980-1988), Project Scientist for Landsat 4 and 5 (1977-1989), the Head of the Hydrospheric Sciences Branch (1973-1980).

Continued from Tuesday, October 25th 9:20 am - 10:00 am

7:30 am - 4:30 pm
Registration
Convention Center Foyer

10:00 am - 7:00 pm
Exhibit Hall Open
Exhibit Hall 2

10:00 am - 7:00 pm
Posters on display
Poster Schedule
Tuesday 10:00 am - 7:00 pm,
Wednesday 8:00 am - 5:00 pm,
Thursday 8:00 am - 10:30 am
Presenters will be available to discuss their posters on Tuesday from 5:30 pm - 7:00 pm

A Comparative Evaluation of ISODATA and Spectral Angle Mapping for the Detection of Saltcedar Using Airborne Hyperspectral Imagery
Sunil Narumalani, *University of Nebraska - Lincoln*
Deepak Mishra, Jared Burkholder, Paul Merani, and Gary Wilson

A Low Cost Architecture for Improving Access and Archiving
Jeff Bradley, *SAIC*, *Under Contract to USGS EROS*
Barry Eberhard and Jim VerMeer

Access to Metadata Catalogs Replicated from LP DAAC
Calli Jenkerson, *SAIC*, *Under Contract to USGS EROS for EROS*

Advanced Land Imager Assessment System (ALIAS)
Jim Nelson, *SAIC*, *Under Contract to USGS EROS*
Jon Christopherson and Doug Hollaren

Application of Interferometric Synthetic Aperture Radar (InSAR) to Study Ground-Surface Deformation Above Aquifer
Zhong Lu, *SAIC*, *Under Contract to USGS EROS*
Russ Rykhus and Ohig Kwoun

Assessing Alpine Glacial Lake Conditions in the Hindu Kush and Himalaya Using ASTER
Michael Bishop, *University of Nebraska - Omaha*
David Kovar, John Shroder, Jeffrey Olsenholler and Jeffrey Kargel

Assessing Land Surface Dynamics Across the Nebraska Sand Hills Using Advanced Microwave Scanning Radiometer (AMSR-E) Data Products
Marcela Doubková, *University of Nebraska - Lincoln*
Geoffrey Henebry

Assessing Short-term AVHRR-NDVI Change Using an Expert Classifier
Roberto Bonifaz, *University of Nebraska - Lincoln*
James Merchant, David Stensrud, and Christoper Godfrey

Assessment of Oak Wilt Incidence and Distribution Over Time Using Color Infrared Aerial Photography and Logistic Regression
Kathleen Ward, *USDA Forest Service, North Central Research Station*
Susan Burks

Burned Land Mapping from Remote Sensing Imagery
Claudio Conese, *CNR IBIMET*
Bonora Laura

A Comparative Analysis of Land Use and Impervious Surfaces Between Brownsville and Matamoros
Jean Parcher, *U.S. Geological Survey*

Comparing ASTER and Landsat-7 ETM+ Data for Seasonal Wetland Mapping in the Lower Kentucky Lake Basin
Qiaofeng (Robin) Zhang, *Murray State University*

Detecting Bare Earth and Vegetation Change Using Pre- and Post-Hayman Fire Lidar at Cheesman Lake, CO
Jason Stoker, *SAIC*, *Under Contract to USGS EROS*

Elevation Derivatives for National Applications
Sandra Franken, *SAIC*, *Under Contract to USGS EROS*

Evaluating MODIS Data to Estimate Irrigated Crop Production in Afghanistan Using a Simplified Energy Balance Model
Gabriel Senay, *SAIC, Under Contract to USGS EROS*
Mike Budde, Jim Verdin, Jim Rowland and Christine Adams

Mapping Urban Land Use / Land Cover Using QuickBird NDVI Imagery for Runoff Curve Number Determination
Pravara Thanapura , *Engineering Resource Center, South Dakota State University*
S. Burckhard, M. O' Neill, D. Galster, and E. Warmath

From Tokyo To Tahoe: The Making Of Aster Science
Bhaskar Ramachandran, *SAIC, Under Contract to USGS EROS*

Generating Individual Film Frame Records From Photo Indices
Kent Lethcoe, *SAIC*, *Under Contract to USGS EROS*
Roger Sneve

High Resolution Ocean Color Remote Sensing of Benthic Habitats: A Case Study at the Roatan Island, Honduras
Deepak Mishra, *University of Nebraska - Lincoln*
Sunil Narumalani, Donald Rundquist, and Merlin Lawson

Hybrid Image Classification Using a Shared Memory Parallel Algorithm
Rhonda, D. Phillips, *Department of Computer Science, Virginia Polytechnic Institute and State*
Layen T. Watson and Randolph H. Wynne

Improved DEM Estimation of the Sulzberger Ice Shelf Region, West Antarctica Using SAR Interferometry and ICESat Laser Altimetry
Sangho Baek, *SAIC*, *Under Contract to USGS EROS*
Oh-Ig Kwoun, Alexander Braun, Hyongki Lee, Zhong Lu, and C.K. Shum

InSAR and The Hector Mine Earthquake: Crustal Deformation vs Atmospheric Anomaly
Jim Calzia, *U.S. Geological Survey*

Lake Watersheds as Hydro-ecological Basis for the Classification of Nebraska Reservoirs
Henry N. N. Bulley, *University of Nebraska - Lincoln*
James W. Merchant, David B. Marx, John C. Holz and Aris Holz

Land Management Applications of the EROS Digital Photo Archive
Randy McKinley, *SAIC*, *Under Contract to USGS EROS*

Landsat Data Products from EROS: Recent Updates and Future Enhancements
Rynn Lamb, *SAIC*, *Under Contract to USGS EROS*
Linda Jonescheit

Landsat-Based Fire Atlases for Land Management
Donald Ohlen, *SAIC*, *Under Contract to USGS EROS*

Steve M. Howard and Zhiliang Zhu

Level 1 Data Product Availability from Earth Observing-1 (EO-1)
Jeffrey Danielson, *SAIC*, *Under Contract to USGS EROS*

Rynn Lamb, Todd Taylor, Pam Van Zee, and Jared Shaw

Mapping Percent Vegetation Cover for Shrublands and Grasslands in the Southwestern United States using In-situ Reflectance Spectra and Satellite Imagery
Brian Tolk, *SAIC*, *Under Contract to USGS EROS*

Kurtiz Nelson and Xeuxia Chen

Mapping the Vertical Component of Landscape Change
Dean Gesch, *U.S. Geological Survey*

Minnesota Forest Change
William Befort, *Minnesota Department of Natural Resources*

Dennis Kepler

Next Generation Historical Film Access and Data Delivery
Max Borchardt, *SAIC*, *Under Contract to USGS EROS*

Ryan Longhenry, Tim Smith, Mike North, and Ken Boettcher

Object-oriented Classification of High-resolution Coastal Wetland Imagery
Jiyul Chang, *South Dakota State University*

Carol Johnston

Regional Groundwater Recharge Assessment using Remote Sensing Driven Models
Richard Fernandes, *Natural Resources Canada, Canada Centre for Remote Sensing*

Rasim Latifovicm, Shusen Wang, Alex Chicagov, Gunnar Fedosejevs, Khurshid Shahid, and Yinsuo Wang

Remapping the Geology and Tectonics of Afghanistan using Landsat ETM+ and ASTER Imagery
Philip Davis, *U.S. Geological Survey*

Robert Bohannon

Remote Detection of a Saltcedar Infestation near Lake Sakakawea, North Dakota, using Airborne Hyperspectral Imagery
Bradley Rundquist, *University of North Dakota*

David Brookman and Paige Baker

Remote Sensing Derived Urban/Rural Development Mapping for Local and Regional Planning
Kevin Dobbs, *University of Kansas*

Paul Liechti

Remotely Sensed Data on the Study of the Wide Area of a Lake
Maria Lazaridou, *Aristotle University of Thessaloniki,* Greece

Patmios Evangelos

Riparian and Wetland Mapping using Multiple Sources of Digital Data, Decision Tree Models, and Valley Bottom Delineation
Jay Kost, *SAIC*, *Under Contract to USGS EROS*

Greg Dillon

SAR Polarimetric Band Analysis, Statistics, and Signal Scattering Parameters for Terrain Characterization
Edmundo Simental, *U.S. Army Engineer Research and Development Center*

Verner Guthrie and Bruce Blundell

Satellite Images Intra-pixel Classification: Solving Under-determined Models in Linear Unmixing; Mix-unmix Classifier
Thomas Ngigi, *Center for Environmental Remote Sensing, China University*

Tateishi Ryutaro

Spatial Assessment of Two Satellite-based Land-cover Datasets over the Continental U.S.
Pei-yu Chen, *Blackland Research and Extension Center, Texas Agricultural Experiment Station*

Mauro Di Luzio and Jeffery Arnold

Study of the November 2002 M7.9 Denali Fault Earthquake with Satellite Radar
Zhong Lu, *SAIC*, *Under Contract to USGS EROS*

Tim Wright and Chuck Wicks

Management of LP DAAC Data
Karla Sprenger, *SAIC*, *Under Contract to USGS EROS*

The EROS Data Capture and Processing Facility Captures and Processes the World's Data with Exceptional Reliability
Timothy Flahaven, *SGT*, *Under Contract to USGS EROS Center*

William McElroy, Jayson Holter, and Keith Alberts

The use of a Satellite Image Archive to Assess the Impact of Grazing Management on Inaccessible Public Lands
Robert Washington-Allen, *Utah State University*

Douglas R. Ramsey, Neil West

Uses of Remote Sensing, GPS and GIS for Lagoon Marine Resource Management in the Solomon Islands
Matthew Lauer, *University of California*

USGS Topographic Science Websites and Viewers: Communicating Scientific Data
Sandra Franken, *SAIC*, *Under Contract to USGS EROS*

Using Changes in Spatial Reflectance Patterns to Target Tropical Forest Stands for Field Surveys of Indicators of Ecological Sustainability
Naikoa Aguilar-Amuchastegui, *University of Nebraska - Lincoln*

Geoffrey Henebry

Using Remotely Sensed Vegetation Condition Index to Rate Drought Insurance for Smallholder Farmers in Zimbabwe
Ephias Makaudze, *Ohio State University*

Mario Miranda, and Brent Sohngen

10:00 am - 10:30 am
Break - Beverages available in Exhibit Hall

Continued from Tuesday, October 25th 10:00 am - 10:30 am

10:30 am – 12:00 noon

Concurrent Technical Sessions I

1. Land Use and Land Cover Mapping

Chair: Thomas Loveland, *U.S. Geological Survey*
Room 11

Applications of the 2001 National Land Cover Database
Collin Homer, *SAIC, Under Contract to USGS EROS*

The Future Face of Land Cover Mapping: Merging Medium and High Resolution Imagery to Produce Large Area Land Cover Maps
Michael Palmer, *The Sanborn Map Company*

Andrew Brenner

Land Cover Mapping for a Five State Region: A Retrospective of the SWReGAP Project
John Lowry, *Utah State University*

Douglas Ramsey, Lisa Langs and Jessica Kirby

2. Invasive Plants

Chair: Bradley Rundquist, *University of North Dakota*
Room 12

Using MODIS Data for Cheatgrass (Bromus tectorum) Identification and Mapping
Christopher McGinty, *Utah State University*

Douglas Ramsey and John Lowry

Detection and Monitoring of Invasive Plants using Low-cost UAV: A Case Study using Squarrose Knapweed
Mark Jackson, *Brigham Young University*

Perry Hardin

Remote Sensing of Phragmites Australis with Hyperion Imagery
Bruce Pengra, *South Dakota State University*

Using a Self-Built Hyperspectral Library for Identifying and Mapping Purple Loosestrife
Guoxiang Liu, *Clemson University*

Jeff Allen, Kang Lu, Jeff Parkey, and Donald Van Blaricom

3. Photogrammetry and Image Analysis

Chair: Jie Shan, *Purdue University*
Room 13

A Statistical Approach to Multiresolution Image Fusion
Oguz Gungor, *Purdue University*

Jie Shan

Resolving Parameter Dependencies in Geometric Sensor Models
In-seong Jeong, *Purdue University*

James Bethel

Performing Geometric Assessment of Remote Sensed Data Sets
Michael Choate, *SAIC, Under Contract to USGS EROS*
Michael Coan, Gregory Stensaas
and Jon Christopherson

Wavelet Analysis of Images for Stereo Matching
Hongwei Zhu, *University of Wisconsin-Madison*

Paul Miller, Frank Scarpace, and K.G. Karthikeyan

4. Disaster Response and Mitigation

Chair: Jesslyn Brown, *SAIC, Under Contract to USGS EROS*
Room 3

The Role of Remote Sensing in Improving Drought Decision Support
Jesslyn Brown, *SAIC, Under Contract to USGS EROS*

Tsegaye Tadesse and Michael Hayes

USGS EROS Tsunami Response
Brenda Jones, *SAIC, Under Contract to USGS EROS*

Remote Sensing of Eco-climatic Conditions Associated with the 2004 Desert Locust Outbreak in West Africa
Assaf Anyamba, *Goddard Earth Sciences and Technology Center, UMBC, NASA Goddard Space Flight Center*

Keith Crossman, Compton Tucker, Jennifer Small and Tim Love

ASTER Data Applications in Times of Crisis
Kenneth Duda, *SAIC, Under Contract to USGS EROS*

5. Remote Sensing Policy I

Chair: Bruce Quirk, *U.S. Geological Survey*
Room 14

Future of U.S. Commercial Remote Sensing from Space
Raymond Heidner, *The Aerospace Corporation*

Joe Straus

The Dynamic Market for Remotely Sensed Data
Kass Green, *The Alta Vista Company*

USGS Product Characterization Program
Philip Rufe, *U.S. Geological Survey*

6. Education and Knowledge Transfer

Chair: Milda Vaitkus, *University of Nebraska-Lincoln*
Room 8

Bringing Land Remote Sensing to the Public and the Classroom
Jeannie Allen, *NASA Goddard Space Flight Center*

The USGS AmericaView Program: Facilitating the Science and Use of Remote Sensing through a Joint Federal-State Education and Training Initiative
Theresa Crooks, *AmericaView, Inc.*

Buck Sharpton

SDView: Remote Sensing Partnerships, Infrastructure and Data for South Dakota
Mary O'Neill, *South Dakota State University*

Kevin Dalsted, Pravara Thanpura, David Clay, Sung Shin, Cheryl Reese, Jae H. Lee, Jungyeon Kim and Hee J. Jeon

GeoWall: Low-cost 3-Dimensional Display Technology for Land Remote Sensing
Brian Davis, *SAIC, Under Contract to USGS EROS*

Paul Morin

7. Lidar

Chair: Jason Stoker, *SAIC, Under Contract to USGS EROS*
Room 9

Traffic Flow Estimate from LiDAR data: Operational Experiences
Shahram Moafipoor, *The Ohio State University*

Charles K. Toth and Dorota A.Grejner-Brzezinska

12:00 noon - 1:30 pm

Lunch in the Exhibit Hall

Included with full registration - ticket required

1:30 pm - 3:00 pm

Concurrent Technical Sessions II

8. U.S. Land Cover Change

Chair: Brian Wardlow, *University of Kansas*
Room 11

Monitoring United States Land Use and Land Cover Change with Historical Landsat Data
Thomas Loveland, *U.S. Geological Survey*

Terry Sohl, Kristi Sayler, Mark Drummond, Roger Auch, and Rachel Kurtz

National Land Cover Database Change Product
Michael Coan, *SAIC*, *Under Contract to USGS EROS*

Collin Homer

Oregon Forestland Change Mapping
Stephen Lennartz, *The Sanborn Map Company*

Maria Fiorella

Projecting Land Use Change Through 2020 Using Theoretical, Statistical, and Deterministic Modeling Techniques
Terry Sohl, *SAIC*, *Under Contract to USGS EROS*

Kristi Sayler and Thomas Loveland

9. Forestry I

Chair: James Vogelmann, *SAIC*, *Under Contract to USGS EROS*
Room 12

Using Multiple Satellite Sensors to Compare Temporal Longleaf Pine Leaf Area
Ryan Jensen, *Indiana State University*

Perry Hardin and Mark Jackson

Remote Sensing of Mangrove Forest Composition, Distribution, and Response to Environmental Stressors
Le Wang, *Texas State University - San Marcos*

Wayne Sousa

A Spectral Library of the Native Forests of New Zealand
Mike Tuohy, *Massey University,* New Zealand

Andreas Hueni

Expert Classification Technique for Mapping Teak Plantation Areas in Thailand
Siripun Taweesuk, *Thammasat University,* Thailand

Prasong Thammapala

10. Image Processing

Chair: Dennis Helder, *South Dakota State University*
Room 13

Landsat 7 SLC-Off Gap-Filled Product Development
James Storey, *SAIC, Under Contract to USGS EROS*

Pasquale Scaramuzza, Julia Barsi and Gail Schmidt

Tasseled Cap Coefficients for the QuickBird-2 Sensor: Multiple Derivation Techniques and Comparison
Lance Yarbrough, *University of Mississippi*

Greg Easson and Joel Kuszmaul

Study on the Relative Radiometric Gain Correction over the Dynamic Range of all Reflective Channels of the Landsat 5 Thematic Mapper
Sriharsha Madhavan, *South Dakota State University*

Dennis Helder

11. Panel Discussion: Multi-Platform Sensing and Sensor Networks in the Face of Large Scale Natural Disasters: What could have our profession done to better prepare for the Tsunami disaster?

Sponsored by ISPRS WG I/3 - Multi-Platform Sensing and Sensor Networks
Room 1
Organizer and Chair: Raad Saleh, *Global Sensing Group*

We, as humans, often wonder, what could we have we done to lessen the enormity of the Tsunami disaster? And for us, as remote sensing professionals, the question becomes far more imposing, if not guilt inducing Did we have the pieces, from a technological point of view, to precisely anticipate the time of the first wave to overcome the shores of these unassuming cities and villages?

The short answer is that available imaging systems alone can not provide the data required for an adequate early warning system for a disaster of this kind. But to combine traditional remote sensing with other systems, such as seismological detectors and ocean wave sensors, would certainly provide a far better early warning system. Such a system would possibly be adequate to avert the enormous humanitarian, economic and environmental impact a similar disaster may bring about.

The premise for this panel session is that the integration of ground- and ocean-based sensors, with airborne and space-borne systems, can provide an enhanced capability in comprehensive monitoring, modeling, validation, and early warning. This panel will discuss the concept of Multi-Platform Sensing and Sensor Networks, the technological issues, operational aspects and potential funding sources.

Panelists:
Khaled S. Al-Damegh, *Astronomy and Geophysics Research Institute,* Saudi Arabia
Tarek Rashed, *University of Oklahoma*
José L. Colomer, *Institut Cartographic de Catalunya,* Spain
Brenda K. Jones, *SAIC, Under Contract USGS EROS*

12. Policy II
Panel Discussion: Commercial Remote Sensing Space Policy - 2 Years Later

Organizer and Chair: Tahara Moreno, *NOAA*
Room 6

The President authorized a new national policy on April 25, 2003 that establishes guidance and implementation actions for commercial remote sensing space capabilities. This goal of this policy is to advance and protect U.S. national security and foreign policy interests by maintaining the nation's leadership in remote sensing space activities, and by sustaining and enhancing the U.S. remote sensing industry.

This panel will focus on various implementation challenges and achievements over the past 2 years to foster economic growth, contribute to environmental stewardship, and enable scientific and technological excellence.

Panelists:
Jay Feuquay, *U.S. Geological Survey*
Joanne Gabrynowicz, *University of Mississippi*
Michael Hales, *NOAA*
Kevin O'Connell, *Center for Intelligence Research and Analysis*
Matthew O'Connell, *ORBIMAGE*

13. Geology and Soils

Chair: Charles Trautwein, *U.S. Geological Survey*
Room 3

Geologic Mapping through Linear Spectral Unmixing of MTI Imagery
Paul Pope, *Los Alamos National Laboratory*

Mary Greene

Soil Cohesion Analysis in the Tableland Coast in Northeast Region of Brazil through ASTER Images (VNIR and SWIR)
Rosangela Santos, *Universidade Estadual De Feira De Santana,* Brazil

José Alberto Quintanilha

Continued from Tuesday, October 25th 1:30 pm - 3:00 pm

Exploitation of ASTER Imagery in Mining-related Environmental Management
Stephane Chevrel, *BRGM,* France

Anne Bourguignon, Francis Cottard and Yann Itard

Investigating Environmental Problems in the Khorat Plateau, NE-Thailand
Friedrich Kuehn, *Federal Institute for Geosciences and Natural Resources (BGR),* Germany

Namphon Khampilang, Sakda Khundee, Tippawan Onsongchan, Suree Teerarungsigul, Akkhapun Wannakomol, and Weerachat Wiwegwin

14. Sensors I

Chair: David Meyer, *SAIC*, *Under Contract to USGS EROS*
Room 14

Results of USGS Testing of Digital Aerial Systems: Products and Future Characterization Methods
Donald Moe, *SAIC*, *Under Contract to USGS EROS*

Philip Rufe and Jon Christopherson

ALOS: Filling the Gap for Earth Observations
Donald Atwood, *Alaska Satellite Facility*

Scott Arko

An Inexpensive Unmanned Aerial Vehicle for Limited-Area Photography
Perry Hardin, *Brigham Young University*

Mark Jackson and Ryan Jensen

On-Orbit Generic Sensor Modeling and Modulation Transfer Function (MTF) Simulation
Taeyoung Choi, *South Dakota State University*

Dennis Helder

3:00 pm - 3:30 pm
Break - Beverages available in Exhibit Hall

3:30 pm - 5:00 pm
Concurrent Technical Sessions III

15. Land Use/Land Cover Assessment

Chair: Guoxiang Liu, *Clemson University*
Room 11

Enhanced Land Cover Classification in a Tropical Kenya Landscape
T.J. Baldyga, *University of Wyoming*

S.N. Miller, K.L. Driese, R. Sivanpillai, and C. Maina-Gichaba

Tracking Environmental Change in Southern Senegal using High Resolution Satellite Imagery
Gray Tappan, *SAIC*, *Under Contract to USGS EROS*

Eric Wood

Detection of Land Cover Change in the National Parks of the Northeast Temperate Network
Y.Q. Wang, *University of Rhode Island*

Joy Nugranad, Greg Bonynge, Christine Slinko, and Greg Shriver

National Land Use Change by Remote Sensing in China: A Five-year Survey
Yonghong Zhang, *Chinese Academy of Surveying and Mapping,* China

Jixian Zhang, Jicheng Zhao, Jin Ma, Yinxuan Cao, and Yan Long

16. Forestry II

Chair: Paul Greenfield, *USDA Forest Service*
Room 12

Assessing Biomass and Forest Area Classifications from MODIS While Increasing the Number of Forest Inventory Data Panels
Dumitru Salajanu, *USDA Southern Research Station, Forest Inventory and Analysis*

Dennis Jacobs

Efficacy of Radarsat-1 Synthetic Aperture Radar Imagery for Improving Landsat Thematic Mapper-based Image Classification of Forest Cover Types
Mark Nelson, *USDA Forest Service, North Central Research Station*

Marvin Bauer and Kathy Ward

Classification and Forest Parameter Extraction of Patagonian Lenga Forests with ASTER and Landsat ETM+ Data
Sandra Eckert, *University of Zurich,* Switzerland

José Lencinas and Tobias Kellenberger

Forestry Coverage Multitemporal and Multispectral Study in Dolomiti Territory
Bruno Marcolongo, *C.N.R. - I.R.P.I.,* Italy

Alessandro Angerer

17. Water Resources I

Chair: Robert Vincent, *Bowling Green State University*
Room 13

Mapping the Bacterial Content of Surface Waters with Landsat TM Data: Importance for Monitoring Global Surface Sources of Potable Water
Robert K. Vincent, *Bowling Green State University*

R. McKay, L. McKay, Mamoon Al-Rshaidat, Kevin Czajkowski, Thomas Bridgeman, and Jeffrey Savino

Computer Animation of Cyanobacteria Blooms in Lake Erie from July-October, 2003 As Mapped from SeaWiFS Data with a New Phycocyanin Algorithm
Padmanava Dash, *Bowling Green State University*

Robert K. Vincent

Perennial/Intermittent Stream Classification using GIS and Remote Sensing Information in the Upper Midwest
Miguel Restrepo, *SAIC*, *Under Contract to USGS EROS*

Pamela Waisanen and Bruce Worstell

Current and Future Applications of Remote Sensing for Routine Monitoring of Surface Water
Kwabena Asante, *SAIC*, *Under Contract to USGS EROS*

James Famiglietti

18. Biophysical Characterization

Chair: Marguerite Madden, *University of Georgia*
Room 3

Time Lag and Seasonality Considerations in Evaluating AVHRR NDVI Response to Precipitation
Lei Ji, *Cooperative Institute for Research in the Atmosphere, Colorado State University*

Albert Peters

Retrieval of Vegetation Biophysical Characteristics from Remotely Sensed Data
Anatoly Gitelson, *University of Nebraska-Lincoln*

Andres Vina and Donald Rundquist

Retrieval of Leaf Biochemical Concentrations from Leaf Reflectance Data by Genetic Algorithm-Partial Least Square Regression
Lin Li, *Indiana University-Purdue University*

Susan Ustin

19. Integrated Resources Analysis

Chair: Brian Huberty, *U.S. Fish and Wildlife Service*
Room 6

UNESCO Crosscutting Project on the Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa: Achievements and Challenges
Jimmy Adegoke, *University of Missouri-Kansas City*

Justin Ahanhanzo

Land Management Applications of the EROS Digital Photo Archive
Randy McKinley, *SAIC, Under Contract to USGS EROS*

Kenneth Boettcher and Tim Smith

Creating detailed Land Management Units based on High-Resolution Remote Sensing Data and DEM - derived Terrain Attributes using Spatially Weighted Multivariate Classification
Georgina Warren, *Curtin University of Technology,* Australia

Graciela Metternicht and Jane Speijers

The Canadian Moderate Resolution Mapping System
Rasim Latifovic, *Canada Centre for Remote Sensing*

Richard Fernandes, Alex Trischtchenko, and Bill Park

20. Panel Discussion: Future of the Nation's Land Remote Sensing Archive

Sponsored by the ASPRS Data Preservation and Archive Committee and the Department of the Interior's Archive Advisory Committee
Room 1

This will be an interactive session whereby the session participants will be asked to provide input to the U.S. Geological Survey on the future user requirements for the Nation's long-term land remote sensing archive (i.e.,what should be included as part of the long-term remote sensing record for the earth's land surfaces?)

The session will include a brief summary on the current land remote sensing archive and a rationale on the need for defining the future data requirements of the land remote sensing archive (i.e., the acquisition, preservation; and distribution needs.)

Co-moderators:
Thomas Holm, *U.S. Geological Survey*
Joanne Irene Gabrynowicz, *National Remote Sensing and Space Law Center, University of Mississippi School of Law*

Speakers:
Amy Budge, *Earth Data Analysis Center, University of New Mexico*
Jay Feuquay, *U.S. Geological Survey*

21. Sensors II – Advanced Land Imager

Chair: Karen Zanter, *U.S. Geological Survey*
Room 14

Improved Leaky Detector Correction for EO-1 ALI Imagery
Ron Morfitt, *SAIC*, *Under Contract to USGS EROS*

Gyanesh Chander, Brian Markham, Dennis Helder, and James Storey

Advanced Land Imager (ALI) Relative Gain Characterization and Correction
Amit Angal, *South Dakota State University*

Dennis Helder

Radiometric Characterization and Performance Assessment of the Advanced Land Imager Using Bulk Trended Data
Timothy Ruggles, *South Dakota State University*

Dennis Helder, Doug Hollaren, Ron Morfitt, and Jim Nelson

Radiometric Processing and Calibration of EO-1 Advanced Land Imager Data
Brian Markham, *NASA Goddard Space Flight Center*

Lawrence Ong, Jeff Mendenhall, Gyanesh Chander, Ron Morfitt, and Doug Hollaren

5:30 pm - 7:00 pm

Exhibitors' Reception

Exhibit Hall 2

Poster Session

Presenters will be with their displays for discussion.
See page 8 for poster descriptions

Plenary Session II: Data Availability, Access and Preservation

8:00 am – 10:00 am

Ballroom A

Embracing the overall theme of the Pecora 16 Conference this plenary session will discuss the possibilities for data availability, access, and preservation as related to the new initiative of the Global Earth Observation System of Systems. Lessons learned as well as new opportunities related to data availability, access, and preservation will be discussed within this session.

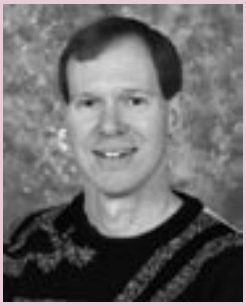
Organized and chaired by
Kevin Gallo, *National Oceanic and Atmospheric Administration*, Sylvia Edgerton, *Department of Energy* and
Greg Withee, Assistant Administrator for Satellite and Information Services, *NOAA*, and Co-Chair of the *U.S. Interagency Committee on Earth Observations*

Speaker

Gregory W. Withee
Assistant Administrator for Satellite and Information Services, *NOAA, National Environmental Satellite, Data, and Information Service*

Gregory W. Withee is the Assistant Administrator for Satellite and Information Services of the National Oceanic and Atmospheric Administration (NOAA). He leads the U.S. civil operational environmental satellite programs which supply the Nations weather and environmental satellite data; and also leads three National environmental data centers, which archive and make accessible climate, ocean, and geophysical data and products. He has worked in other areas at NOAA, the private and university sectors and the UN system, has authored more than 100 publications and reports, and has received numerous awards, including the Presidential Distinguished Rank Award for extraordinary performance in the Senior Executive Service

Panelists:



JOHN FAUNDEEN
Archivist,
U.S. Geological Survey

RAYMOND MCCORD
Environmental Information Manager,
Environmental Sciences Division,
Oak Ridge National Laboratory

RICHARD REYNOLDS
Electronics Engineer,
NOAA

7:30 am - 4:30 pm
Registration
Convention Center Foyer

8:00 am – 9:00 am
Sustaining Members Council Meeting
Room 1

8:00 am - 5:00 pm
Posters on display
See page 8 for poster descriptions

10:00 am – 5:00 pm
Exhibit Hall open
Exhibit Hall 2

10:00 am – 10:30 am
Break - Beverages available in Exhibit Hall.

10:30 am – 12:00 noon
Concurrent Technical Sessions IV

22. Mapping Urban Environments

Chair: Michael Crane, *U.S. Geological Survey*
Room 11

Mapping Urban Land Use / Land Cover Using Quickbird NDVI Imagery for Runoff Curve Number Determination
Pravara Thanapura, *South Dakota State University*
S. Burckhard, M. O'Neill, D. Galster, and E. Warmath

Multi-sensor Analysis of an Urban Ecosystem
Kevin Gallo, *NOAA, NESDIS*
Lei Ji

Assessing Urban Growth and Environmental Change Using Remotely Sensed Data
George Xian, *SAIC*, *Under Contract to USGS EROS*
Mike Crane and Cory McMahon

Segmentation of Urban Built-up Areas using an Expansion Scheme of Landsat Multispectral Images
Jorge Lira, *Instituto de Geofisica-UNAM,* Mexico
Lourdes Hidalgo

23. Agriculture I

Chair: Benjamin Richason III, *St. Cloud State University*
Room 12

Cropland Data Layer Program Update
Rick Mueller, *USDA, NASS*
Dave Johnson and Patrick Willis

Increasing the Detail of Land Use Classification – the Iowa Experience
R. Peter Kollasch, *Iowa Department of Natural Resources*

Moving Research to Operations: Status of Global Monitoring of Food Production at USDA
Bradley Doorn, *USDA Foreign Agricultural Service*

State-Level Crop Mapping in the U.S. Central Great Plains Agroecosystem Using MODIS 250-Meter NDVI Data
Brian Wardlow, *University of Kansas*
Stephen Egbert

24. Water Resources II

Chair: Henry Bulley, *University of Nebraska - Omaha*
Room 13

Effect Assessment of Two Land-cover Datasets on Stream Flow Simulations Using A Spatially Distributed Hydrologic Mode
Pei-Yu Chen, *Blackland Research and Extension Center, Texas Agricultural Experiment Station*

Mauro Di Luzio and Jeffrey Arnold

Monitoring Changes to Water Resources in the Rio Grande/Rio Bravo Basin in Texas and Northern Mexico Since 1985
Gordon Wells, *University of Texas at Austin*

Teresa Howard, Gayla Malson, Linda Prosperie, Larry Teng, Solar Smith, and Craig Tapley

Riparian and Wetland Mapping Using Multiple Sources of Digital Data, Decision Tree Models, and Valley Bottom Delineation
Jay Kost, *SAIC*, *Under Contract to USGS EROS*

Greg Dillon

Assessing Impacts on Everglades Ecosystems using Remotely Sensed Data
Marguerite Madden, *University of Georgia*

Thomas Jordan and Louis Manglass

25. Wildlife and Biodiversity

Chair: Allan Falconer, *George Mason University*
Room 8

Mapping Ecological Systems in Western Washington for the USGS Gap Analysis Program (GAP)
Thomas Miewald, *The Sanborn Map Company*

Jocelyn Aycrigg, Rex Crawford, Chris Chappell, and Alexa McKerrow

Refining Biodiversity Conservation Priorities
Grant M. Harris, *USDA Forest Service*

Clinton N. Jenkins and Stuart L. Pimm

Establishing a Data Framework for Calculating Consistent and Sensitive Measures
Gene Fosnight, *SAIC*, *Under Contract to USGS EROS*

Holly Strand and Benjamin White

Managing Human-Leopard Conflicts in Pauri Garhwal, Uttaranchal, India using a Geographical Information System
Manoj Agarwal, *Wildlife Institute of India*

Devendra Singh, S.P. Goyal, and Qamar Quershi

26. MODIS

Chair: Matthew Hansen, *South Dakota State University*
Room 9

Monitoring Global Land Cover using Sub-pixel Cover Estimations
Matthew C. Hansen, *South Dakota State University*

John R. G. Townshend, Mark Carroll, and Charlene Dimiceli

Land Cover Mapping of Greater Mesoamerica using MODIS data
Chandra Giri, *SAIC*, *Under Contract to USGS EROS*

Clinton Jenkins

Monitoring Post-Fire Vegetation Recovery of Wildland Fire Areas in the Western United States Using MODIS
Brad Quayle, *USDA Forest Service*

Ken Brewer and Kelly Williams

Global Mapping of Fire-Affected Area Using Multi-Temporal MODIS Data
David Roy, *South Dakota State University*

L. Boschetti and C.O. Justice

27. Data Archive and Access I

Chair: Gilbert Rochon, *Purdue University*
Room 3

U.S. Geological Survey Preserves the National Archive of Landsat Data
Cheryl Greenhagen, *SAIC*, *Under Contract to USGS EROS*

Footprint Coverages: A Land Remote Sensing Research Analysis Tool
John Faundeen, *U.S. Geological Survey*

Americas ALOS Data Node: Providing Earth Observation Data
Scott Arko, *Alaska Satellite Facility*

Don Atwood and Nettie La Belle-Hamer

Enhancement of a Multi-National Decision Support System in Mesoamerica

Jessica Coughlin, *IAGT*

28. Surface Modeling

Chair: Michael Oimoen, *SAIC*, *Under Contract to USGS EROS*
Room 6

Using LiDAR to Study Surface Water Runoff and Impervious Surface Delineation
Thomas Pagh, *i-TEN Associates, Inc.*

Carol Murdock

Elevation Determination by Shadow Measurements from Vertical Monoscopic Aerial Imagery
Henry Cordova, *Broward County Government, Florida*

Temporary Floodwater Storage Volume Estimations Using 1-m LiDAR and 30-m NED DEMs in the Red River Basin of the North
Sarita Pachhai, *Univerity of North Dakota*

Bradley C. Rundquist and Wesley D. Peck

Some Aspects of Using Fourier Analysis to Support Surface Modeling
Nora Csanyi, *The Ohio State University*

Charles Toth

12:00 noon - 1:30 pm
Lunch in the Exhibit Hall
Included with full registration - ticket required.

Continued from Wednesday, October 26th 12 noon - 1:30 pm

Plenary Session III: Advancing the Technology of Remote Sensing: A Roundtable Discussion

1:30 pm - 3:00 pm

Ballroom A

Previous Plenary talks have illustrated the advent of Global Earth Observation Systems of Systems, the current and future state of satellite remote sensing, and the good that we have done with past and current systems. We now want to dream about what future systems can potentially do to harness the power of remote sensing for the benefit of society, and the leadership of government, academia, and industry to shape the vision in to reality.

Organized and chaired by Scott Loomer, *National Geospatial-Intelligence Agency* and
John Lyon, *U.S. Environmental Protection Agency*

Panelists:

RUSSELL CONGALTON
Professor,
University of New Hampshire

MITCHELL GOLDBERG
Chief, SMCD,
NOAA

KASS GREEN
President,
The Alta Vista Company

THOMAS LOVELAND
Research Geographer,
U.S. Geological Survey

WALTER S. SCOTT
Executive Vice President &
Chief Technical Officer, DigitalGlobe

3:00 pm - 3:30 pm
Break - Beverages available in Exhibit Hall.

3:30 pm – 4:30 pm

Concurrent Technical Sessions V

29. Mapping Impervious Surfaces

Chair: George Xian, *SAIC*, *Under Contract to USGS EROS*
Room 11

Estimation, Mapping and Change Analysis of Impervious Surface Area by Landsat Remote Sensing
Marvin Bauer, *University of Minnesota*
Brian Loeffelholz and Bruce Wilson

Mapping Urban Imperviousness Using Remotely Sensed Data and Regression Tree Models
Cory McMahon, *SAIC*, *Under Contract to USGS EROS*
George Xian and Mike Crane

Estimation of Impervious Surfaces in Difficult Terrain for Assessing Urban Growth
Mike Crane, *U.S. Geological Survey*
George Xian and Cory McMahon

30. Agriculture II

Chair: Bradley Doorn, *USDA Foreign Agricultural Service*
Room 12

Analysis of AWIFS Imagery for Crop-Specific Classifications
Mike Craig, *USDA NASS*
Martin Ozga and Claire Boryan

Using Remote Sensing to Measure Yield Losses Due to Water and N Stress
David Clay, *South Dakota State University*
Jiyul Chang, Sharon Clay, and Ki-In Kim

A Global Map of Irrigated Area at the End of the Last Millennium using Multiple Satellite Sensor Data
Prasad Thenkabail, *International Water Management Institute (IWMI)*
C. Biradar, H., Turral, and M. Schull

31. Time Series Analysis

Chair: Bradley Reed, *SAIC*, *Under Contract to USGS EROS*
Room 13

A Comparative Analysis to Understand the Influence of Dataset Choice for Land Surface Phenology Research in the Northern Latitudes
Kirsten de Beurs, *University of Nebraska-Lincoln*
Geoffrey Henebry

Trends in Eurasia Vegetation Dynamics
Bradley Reed, *SAIC*, *Under Contract to USGS EROS*

Phenological Monitoring of Climate Change Impacts in Shenandoah National Park
Jonathan Smith, *U.S. Geological Survey*
Douglas Muchoney, Bradley Reed and Sharon Hamann

32. Rangeland Resources

Chair: Douglas Ramsey, *Utah State University*
Room 6

Rangeland Biocomplexity and Cattle Stocking Rates In Kansas
Jonathan Thayn, *University of Kansas*
Kevin Price and Randall Boone

Modeling Biophysical Factors in Grassland using Remote Sensing: Seasonal Effects
Matthew Ramspott, *University of Kansas*
Kevin Price, Cheryl Murphy, and Bryan Foster

Assessing A Multitemporal and Multiscale Remote Sensing Approach for Characterizing Rangeland Condition on the Central Great Plains
Geoffrey Folker, *University of Kansas*
Kevin Price and Loren Graff

33. Environmental Remote Sensing

Chair: Le Wang, *Texas State University - San Marcos*
Room 7

Early Detection of Oak Wilt Disease: A Hyperspectral Approach
Blake Weissling, *University of Texas at San Antonio*
Hongjie Xie

Light Absorption Model for Water Content to Improve Soil Mineral Estimates in Hyperspectral Imagery
Michael Whiting, *University of California-Davis*
Alicia Palacios Orueta, Lin Li, and Susan Ustin

Impact of Sub-pixel Parameterization of Land Cover on Evapotranspiration Patterns Across Canada
Vladimir Korolevich, *Canada Centre for Remote Sensing*
Richard Fernandes, Shusen Wang, Anita Simic, and Fanfei Gong

34. Data Archive and Access II

Chair: Karla Sprenger, *SAIC*, *Under Contract to USGS EROS*
Room 3

An Archive of Satellite Imagery for the Intermountain Region of the United States
Chris Garrard, *Utah State University*
Douglas Ramsey

U.S. Geological Survey Commercial Remote Sensing Data Contract
Mike Duncan, *U.S. Geological Survey*

Dissemination of LANDFIRE Data
Jeffrey Eidenshink, *U.S. Geological Survey*

35. SRTM/DEM

Chair: Kristine Verdin, *SAIC*, *Under Contract to USGS EROS*
Room 8

A New Approach for DEM Void Filling used to Fill SRTM Voids
Gregory Grohman, *National Geospatial-Intelligence Agency*

Evaluation of Different Solutions to Fill Voids in SRTM Elevation Data
Megan Delaney, *Intermap Technologies Corp.*
Trina Kuuskivi and Xiaopeng Li

Hydrologic Derivatives from SRTM: Prototype for the Rio Grande Basin
Kristine Verdin, *SAIC*, *Under Contract to USGS EROS*

6:00 pm – 9:00 pm
Pecora Award and Prarie Fest Open House
at the Center for Earth Resources Observation and Science (EROS).

Presentation of the 2005 William T. Pecora Award

The William T. Pecora Award is presented annually by the Department of the Interior (DOI) and the National Aeronautics and Space Administration (NASA) to recognize outstanding contributions by individuals or groups toward the understanding of the Earth by means of remote sensing. We are pleased to present the 2005 Pecora Award at the USGS EROS Open House on Wednesday, October 26.

The Pecora Award was established in 1974 to honor the memory of Dr. William T. Pecora, former Director of the U.S. Geological Survey and DOI Under Secretary. Dr. Pecora was a motivating force behind the establishment of a program for civil remote sensing of the Earth from space. His early vision and support helped established what we know today as the Landsat satellite program. The Award consists of a citation and plaque that are presented to each recipient by representatives from DOI and NASA. The name of each recipient is also inscribed on permanent plaques that are displayed by the sponsoring agencies.

Symposium name badges, driver's license or passport, and tickets will be required for all attendees at this event.

Buses will run on a continuous basis from the entrance to the Convention Center to EROS starting at 5:00 pm until 7:30 pm. Return service from EROS to the Convention Center will be from 7:30 pm to 9:00 pm. The last bus will depart EROS promptly at 9:00 pm.

Thursday, October 27, 2005

7:30 am - 10:00 am
Registration
Convention Center Foyer

8:00 am - 10:30 am
Posters on display
See page 8 for poster descriptions

7:30 am - 10:00 am
Registration
Convention Center Foyer

8:00 am – 9:30 am
Concurrent Technical Sessions VI

36. Carbon Assessment
Chair: Mark Jackson, *Brigham Young University*
Room 11

Using Time-Series Airborne Multispectral Sensor Imagery to Characterize Grassland Cover and Land Management Practices Influencing Soil Carbon Stocks
Kevin Price, *University of Kansas*
Matthew Ramspott, Bryan Foster, and Cheryl Murphy

Comparative Analysis of NPP/GPP Products Estimated from Empirical and Biogeochemical Models
Li Zhang, *SAIC*, *Under Contract to USGS EROS*
Bruce Wylie and Shuguang Liu

Remote Estimation of Net Ecosystem Carbon Dioxide Exchange in Crops: Principles, Algorithm Calibration and Validation
Anatoly Gitelson, *University of Nebraska-Lincoln*
Andrés Viña, Shashi Verma, Donald Rundquist, Galina Keydan, Bryan Leavitt, Timothy Arkebauer, George Burba and Andrew Suyker

New 25-year, 4-km resolution AVHRR Data Set for Land Cover and Climate Studies
Felix Kogan, *NOAA, NESDIS, ORA*
Guo Wei

37. Radar Remote Sensing
Chair: Russell Rykhus, *SAIC*, *Under Contract to USGS EROS*
Room 12

Flood Monitoring Using SAR Imagery in an Emergency Response Environment
Russell Rykhus, *SAIC*, *Under Contract to USGS EROS*
Oh-Ig Kwoun, Brenda Jones, and Ron Risty

An Overview of Studies of Aleutian Volcanoes with Satellite Radar Interferometry
Zhong Lu, *SAIC*, *Under Contract to USGS EROS*

C-Band Differential InSAR Observations of Water-Level Change Under Swamp Forests
Oh-Ig Kwoun, *SAIC*, *Under Contract to USGS EROS*
Zhong Lu

The Use of Satellite Radar Remote Sensing Imagery in the Detection of Archaeological Sites in the Central Mesopotamian Plain of Iraq
Benjamin Richason III, *St. Cloud State University*

38. Data Comparisons, Validation and Accuracy
Chair: Sunil Narumalani, *University of Nebraska - Lincoln*
Room 8

The Use of EOS Land Validation Test Sites for the Comparison of Vegetation Indices Derived from Different Earth Remote Sensing Satellites
John Dwyer, *SAIC, Under Contract to USGS EROS*
Jeff Morisette

Modeling Land Surface Phenology using NDVI, EVI, and WDRVI: A Comparative Analysis
Geoffrey Henebry, *University of Nebraska-Lincoln*

Evaluating the Effects of Spatial Scale on Remotely-Sensed Mapping of Burn Severity: A Comparison of Landsat and MODIS Data
Kurtis Nelson, *SAIC*, *Under Contract to USGS EROS*
Zhiliang Zhu, Lee Vierling, and Donald Ohlen

39. Wildfires
Chair: Jeffrey Eidenshink, *U.S. Geological Survey*
Room 9

A General Approach to Updating Vegetation, Fire Fuels and Ecosystem Conditions for LANDFIRE Project
Zhiliang Zhu, *U.S. Geological Survey*
James Vogelmann, Daniel Steinwand, and Matthew Rollins

Hierarchical Classification of Vegetation Cover Using Decision Tree Methods
Xuexia Chen, *SAIC*, *Under Contract to USGS EROS*
Zhi-Liang Zhu, James Vogelmann, Brian Tolk, and Jay Kost

Improving the Conterminous U.S. Greenness Data Set for Fire Monitoring
Jeffrey Eidenshink, *U.S. Geological Survey*
Roberta Bartlette and Debra Tirmenstein

Mapping Burn Severity with Satellite Data: An Analysis of Ecosystem Differences and Time Lapse Since Fire
Zhiliang Zhu, *U.S. Geological Survey*
Donald Ohlen, Stephen Howard, Carl Key, and Nate Benson

40. Policy III
Chair: James Irons, *NASA Goddard Space Flight Center*
Room 6

Integrating Landsat Sensors onto National Polar-orbiting Operational Environmental Satellite System Platforms
James Irons, *NASA Goddard Space Flight Center*
William Ochs

Progress in Implementing the U.S. Commercial Remote Sensing Space Policy
Jennifer Willems, *U.S. Geological Survey*

Digital Imagery Policies, Standards, Guidelines
Philip Rufe, *U.S. Geological Survey*
Greg Stensaas and George Lee

41. Data Archive and Access III
Chair: Laura Rocchio, *Science Systems and Applications (SSAI), Goddard Space Flight Center*
Room 3

The Landsat Legacy: Tracking Down Three Decades of Knowledge
Laura Rocchio, *SSAI, NASA Goddard Space Flight Center*
Gail Hodge, Terry Arvidson, Darrel Williams, and James Irons

The Landsat Long Term Data Record: Characterization and Compilation
Terry Arvidson, *Lockheed Martin*
Samuel Goward, Darrel Williams, John Faundeen, Brian Markham, James Irons, Jeffrey Masek, Shannon Franks, Laura Rocchio, Gail Hodge, and Jeanne Allen

Distribution, Retrieval and Processing Capabilities Available through the Land Processes Distributed Active Archive Center
Thomas Kalvelage, *U.S. Geological Survey*
Jennifer Willems

Atmospheric Radiation Measurement (ARM) Thumbnail Browser – A New Way to Browse and Order ARM Data Files
Giriprakash Palanisamy, *Oak Ridge National Laboratory*
Raymond McCord, Richard Ward, Betsy Horwedel, and Dale Kaiser

42. Climate and Atmosphere

Chair: Jimmy Adegoke, *University of Missouri-Kansas City*
Room 2

Influence of Local Land cover/land use Change on U.S. Climate Normal Temperatures
Robert Hale, *CIRA/Colorado State University*
Kevin Gallo

The Use of Land Surface Remote Sensing Data in Weather and Climate Models
Xubin Zeng, *University of Arizona*
Mike Barlage and Wang Zhuo

Voxel-based Analysis and Visualization of Rainfall Data
Shalini Venkataraman, *Louisiana State University*
Kwabena Asante

9:00 am - 12 noon
Exhibit Hall open

9:30 am – 10:00 am
Break - Beverages available in Exhibit Hall.

Plenary Session IV: Securing a Stable Future for Satellite Land Remote Sensing

10:00 am – 12:00 noon
Organized and chaired by James Irons, *NASA Goddard Space Flight Center* and Andrew Bruzewicz, *U.S. Army COE*
Ballroom A

Man and nature are altering global land cover at unprecedented rates. The 1999 launches of the Landsat 7, Terra, and IKONOS satellites ushered in a new era of land observations from multiple platforms that has dramatically advanced capabilities for monitoring change at multiple scales. As these three satellites reach the end of their design lives, plans to sustain and advance land observing capabilities have faced challenges and uncertainties. Our distinguished speakers will address the evolving roles of government, academia, and private industry as the national and international communities strive to formulate strategies for the future of Earth observations.

Future of Land Remote Sensing: Time to Think Again

Samuel Goward, Professor, *University of Maryland*

Monitoring the Earth with remote sensing technologies began in earnest a half century ago. Visionaries such Pecora, Nordberg and many others began to recognize the significant value that monitoring the continents from space would bring to understanding our planet as our home. The first great initiative in this direction was the Landsat mission, which has continued (mostly) unabated, because (and despite) of the best intents of US engineers, scientists, businessman and bureaucrats. Many further steps in this direction followed that innovation, including the EOS Terra/Aqua series and the more recent governmental declarations about "operational" US land remote sensing programs.

Considering the technological advances that have occurred in the last half century, it is nothing short of astonishing that so little forward progress have been achieved in spaceborne land remote sensing systems in recent decades. We know full well the limitations of the first generation technologies including radiometry, geometry and temporal coverage. However, much of our time is spend simply keeping mission alive. There is much more to do. Today, there are broad and substantial opportunities to move from our 1950's heritage to 21st century innovative thinking.

What is currently missing and terribly needed, is the type of innovative thinking, free from political or economic constraints, that would permit us to explore anew how to monitor the continents. The last time great minds really got together to think about land space observatories was about 1960. It is time to clear the slate and begin again to think creatively about observing our planet as our home.

Responding to the Challenge of a New Generation of Earth Observations

Jay Feuquay, *Coordinator, Land Remote Sensing Program, U.S. Geological Survey*

A new era for moderate resolution land observation satellite data has arrived. The recently adopted declaration by the third Earth Observations Summit coupled with the US 10-year Strategic Plan for Earth Observations show that the systematic observation and recording of the state of the earth is more important than ever. The USGS' Land Remote Sensing Program will support a global Earth observation program through data capture, research, and partnerships with commercial, federal and international institutions.

The December 2004 tsunami disaster, while a terrible human tragedy,

Samuel Goward, professor in Geography, also holds a joint appointment with the Institute for Advanced Computer Studies, University of Maryland College Park. He pursues biophysical applications of land remotely sensed data. The goal of this research is to improve our understanding of state and dynamics of land conditions, as influenced by natural variability and human activities. Dr. Goward also explores advanced geographic data systems to facilitate access to and exploitation of large volume remote sensing data sets. He recently served as the Team Leader for the NASA Landsat Science Team (1997-2001) and continues to work with the Landsat Project Science Office at NASA Goddard Space Flight Center on mission operation. He is also the science co-chair of the advisory committee for the USGS National Land Satellite Remote Sensing Data Archive (NSLRSDA) at USGS EROS. He has published extensively in professional journals and books and serves a variety of advisory panels including an associate editor for Remote Sensing of Environment.

Jay Feuquay manages the Land Remote Sensing Program at USGS Headquarters in Reston, VA. Major activities within his oversight include the operation of the Landsat satellites, archiving and distribution of land remotely sensed data, and the development of the ground processing system for the Landsat follow-on sensor. Prior to taking his current position, Jay held a variety of technical and management positions in the areas of remote sensing, data visualization, high performance computing, and high-speed data communications at USGS EROS in Sioux Falls, South Dakota. Jay holds an M.A. and a B.S. in Physics from Indiana State University in Terre Haute, Indiana.

William Gail received his undergraduate degree in physics and his PhD in Electrical Engineering from Stanford University, where he focused his research on the physics of the Earth's magnetosphere. Prior to his career at Ball Aerospace, he managed radar processing and adaptive systems projects at the Aerospace Corporation. Gail has authored many publications, holds two synthetic aperture radar patents, and actively supports the remote sensing community through numerous committee and board affiliations, including membership on several National Research Council committees and the recently chartered NASA Earth Science and Applications from Space Strategic Roadmap Committee.

Plenary Session IV continued on the next page

was a good example of the utility of land remote sensing data applied to emergency response. In this case the 30-year record of Landsat observations proved useful for comparing pre- and post disaster conditions. The tsunami event is one of many examples of the value of data capture and archiving. However, attention must be directed to planning for the future and the USGS' Land Remote Sensing Program will take a leadership role in that future.

It is encouraging that the Administration, in a tight budget environment, continues to support Landsat activities and development of replacement systems. Plans for a Landsat continuity mission, hosted on a NOAA National Polar-orbiting Operational Environmental Satellite System strengthen a viable future in the post Landsat 7 era. New processing systems, developed by commercial operators and by the USGS are proving effective in maximizing the utility of current Landsat 7 data. Data buys by federal agencies will encourage the development of commercial systems. In all these dimensions (and others), the USGS' Land Remote Sensing Program will support and lead in the development, coordination and applications of the next generation of Earth observing programs.

Building the Future of Land Remote Sensing One Pixel at a Time

William B. Gail, *Vice President, Mapping and Photogrammetric Solutions, Vexcel Corporation*

The prosperity and security of society depend increasingly on our ability to obtain remotely sensed land information and apply it effectively. Governments rely on this information for treaty verification, urban planning, and resource management. Businesses require it to improve the efficiency of their operations. Location-based information accessed over the Internet has become indispensable to us all. What actions must we take today to ensure that needed land remote sensing capabilities are available in the future? Recent long-term planning activities, including the GEOSS 10-year plan, the NASA Roadmap, and the NRC Decadal Study have attempted to address this issue. Yet the more sophisticated our needs become, the more complex the challenges we face in building the future. These challenges are many: anticipating the needs of future generations; building observing systems that meet these needs; efficiently transforming scientific advances into real-world applications; leveraging the power of the private sector; harnessing advances in information and telecommunications technologies. We face a new world in which everything is digital, consumer use of remote sensing data is greatly expanded, the boundary between remotely-sensed and in-situ information is blurred, and the value of a provider is measured by how quickly they adapt to evolving user demands. Our ability as a community to successfully address these issues will have a substantial impact on society.

12:00 noon
Conference Adjournment

Save the Dates

ASPRS 2006
Annual Conference
May 1 - May 5, 2006
Reno Hilton Hotel
Reno, Nevada
Book a Room in advance:
www.caesars.com/reservations/main.aspx?hotelid=06&specialgroupcode=ASPRS

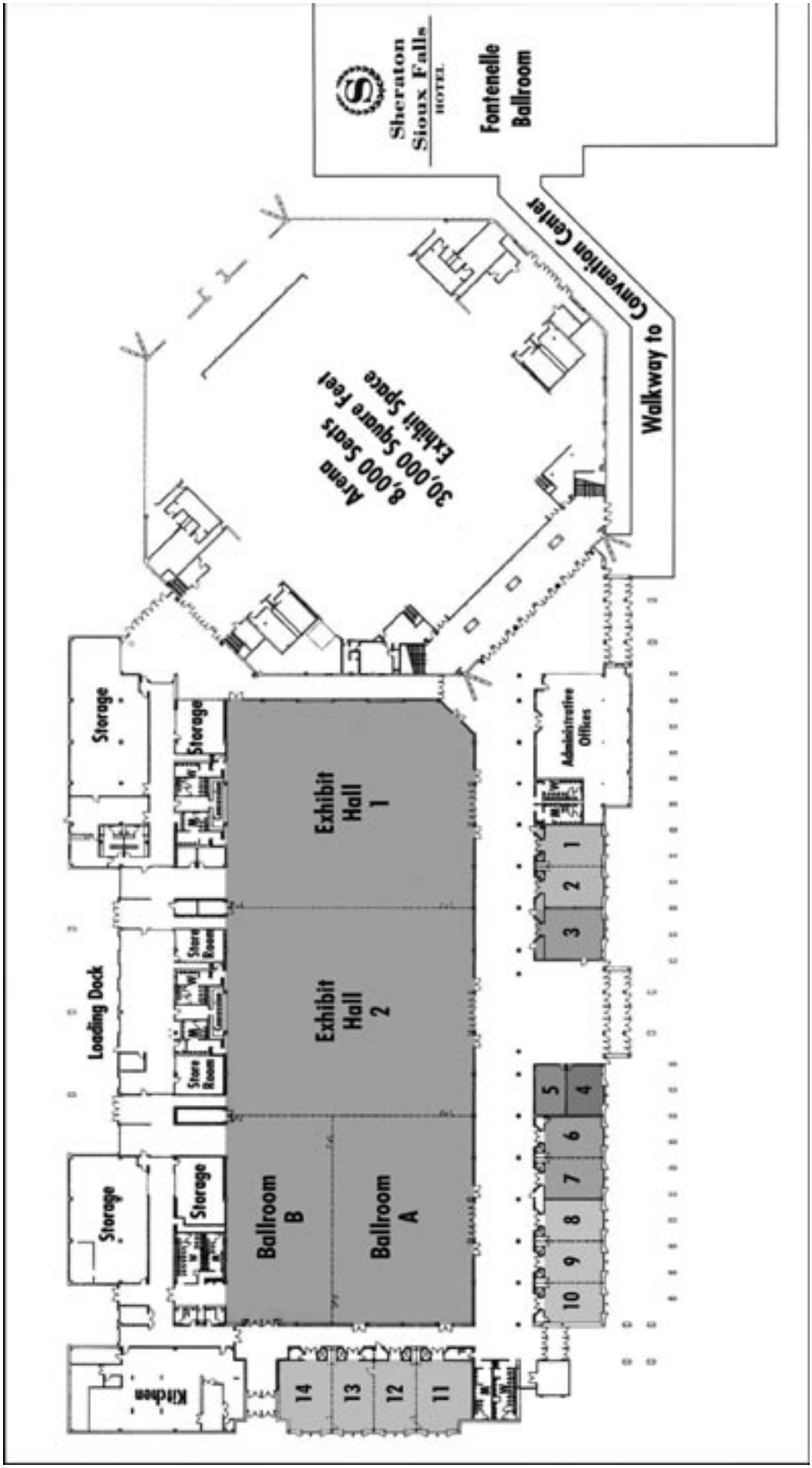
ASPRS 2006 Fall Meeting
(Theme TBD)
November 6-10, 2006
Crowne Plaza Hotel
Riverwalk
San Antonio, Texas

ASPRS 2007
Annual Conference
Marriott Tampa Waterside Hotel and Marina
Tampa, Florida
May 7-11, 2007

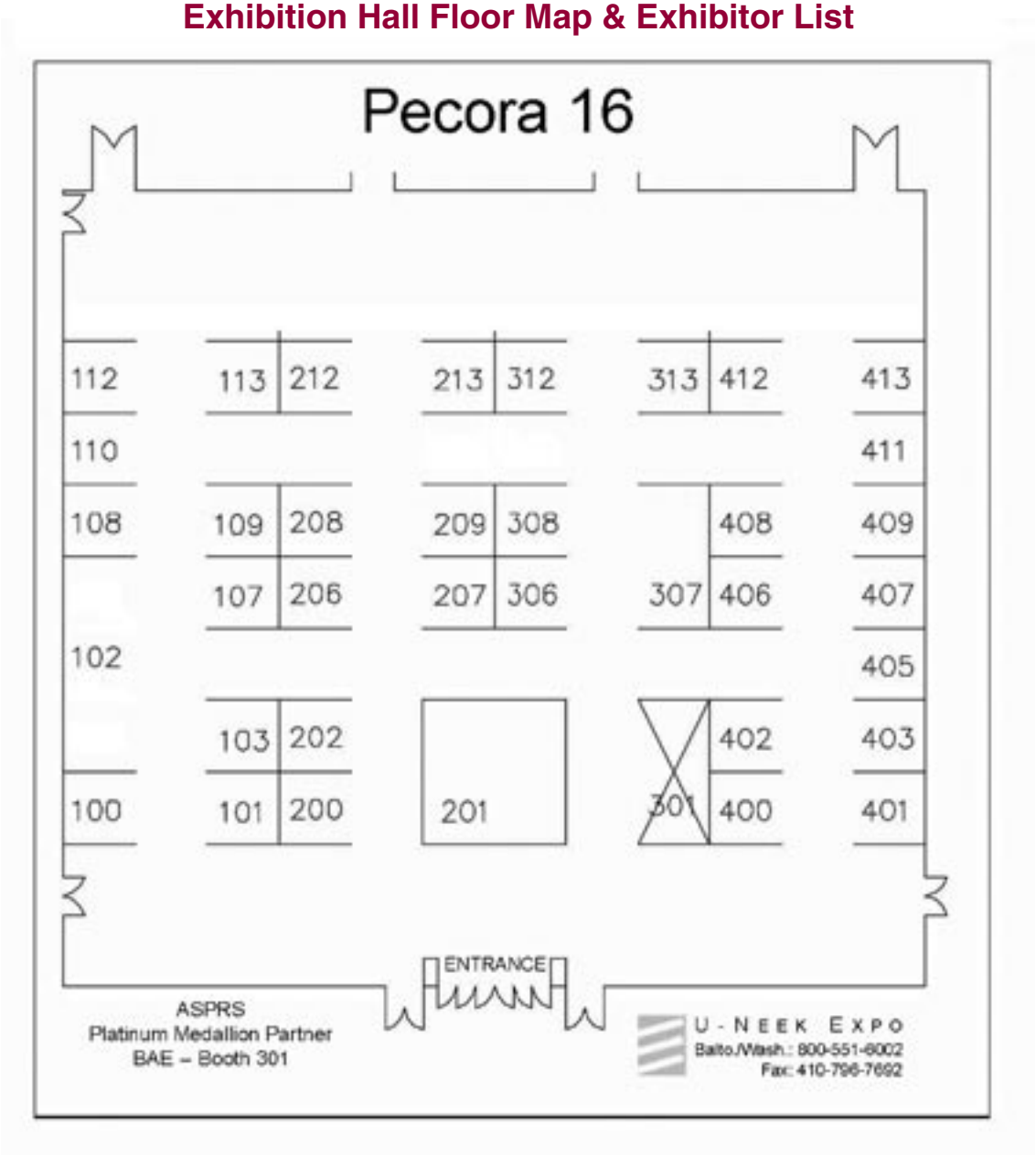
ASPRS 2008
Annual Conference
Portland Oregon
April 27 - May 2

ASPRS 2009
Annual Conference
Baltimore, Maryland
March 8 - 13 (Tentative)

Sioux Falls Convention Center Map



Exhibition Hall Floor Map & Exhibitor List



American Society for Photogrammetry and Remote Sensing (ASPRS) ..... Booth 102
American Society for Photogrammetry and Remote Sensing ..... Booth 103
Analytical Spectral Devices, Inc. ..... Booth 101
Applanix Corporation ..... Booth 207
BAE Systems ..... Booth 301
Cardinal Systems, LLC ..... Booth 400
Directions Media ..... Booth 108
Dynamic Aviation ..... Booth 200
E. Coyote Enterprises, Inc. ..... Booth 402
GeoInformatics ..... Booth 108
GeoWorld/GeoTec Media ..... Booth 108
Imaging Notes/Blueline Publishing LLC ..... Booth 108
Institute for Advanced Education in Geospatial Sciences ..... Booth 306
Intergraph ..... Booth 208
International Society for Photogrammetry and Remote Sensing (ISPRS) ..... Booth 108
Leica Geosystems ..... Booth 307
MDA Federal Inc. (EarthSat) ..... Booth 202
National Geospatial-Intelligence Agency (NGA) ..... Booth 107
National Geospatial-Intelligence Agency (NGA) Basic and Applied Research Office, InnoVision Outreach Program ..... Booth 109
NASA Land Processes Distributed, Active Archive Center, NASA Earth-System Division, U.S. Geological Survey, National Center for Earth Resources Observation and Science (EROS) ..... Booth 411
NOAA Satellite and Information Service National Environmental Satellite, Data, and Information Service (NESDIS) ..... Booth 201
Photonics Spectra ..... Booth 108
Professional Surveyor Magazine ..... Booth 108
Science Applications International Corporation (SAIC) ..... Booth 407
Space Imaging ..... Booth 406
US Army Engineer Research and Development Center (ERDC) ..... Booth 100
U. S. Department of Agriculture Remote Sensing Activities ..... Booth 110
U. S. Geological Survey (USGS) ..... Booth 401
U. S. Geological Survey (USGS) ..... Booth 405
U. S. Geological Survey (USGS) ..... Booth 403
Vexcel Corporation ..... Booth 206
Western Air Maps, Inc. ..... Booth 209

Exhibitor Descriptions

American Society for Photogrammetry and Remote Sensing (ASPRS) — Booth 102

5410 Grosvenor Lane
Bethesda, MD 20814
(301) 493-0290; Fax: (301) 493-0208
www.asprs.org

Visit the ASPRS Bookstore, browse through our variety of publications, and take advantage of discounts during the show. This is a great opportunity to review the *Manual of Photogrammetry, Fifth Edition* and other ASPRS publications available for purchase. You can also learn more about upcoming ASPRS conferences, including the 2006 ASPRS Annual Conference scheduled for May in Reno, Nevada. ASPRS staff members are available to answer questions on certification, membership, awards and scholarships, and more. Make sure to pick up your free copy of PE&RS – The official journal for imaging and geospatial information science and technology.

American Society for Photogrammetry and Remote Sensing — Booth 103

Upper Midwest Chapter of the St. Louis Region
RJ Thompson, President
USGS EROS
Sioux Falls, SD 57198
Tel: (605) 594-6118; Fax: (605) 594-6529

Please join us for the official kick-off of the Upper Midwest chapter on Wednesday, October 26 at 12:30 pm in Booth 103! Member states include South Dakota, North Dakota, Nebraska, and Iowa. Chapter officers will be there to answer questions and refreshments will be served.

Analytical Spectral Devices, Inc. — Booth 101

5335 Sterling Drive, Suite A
Boulder, CO 80301 USA
(303) 444.6522; Fax: (303) 444.6825
www.asdi.com

Founded in 1990, ASD is the undisputed world leader of self-powered, truly portable, full range, field spectrometer and spectroradiometer systems for the remote sensing arena. ASD instruments are used worldwide, in a variety of environments and applications—in the field, laboratory, and more. All the performance you expect in a laboratory system, yet easy to handle and portable, ASD's systems dramatically enhance the quality, efficiency, and scope of countless applications requiring measurement of radiance, irradiance, reflectance or transmission.

Applanix Corporation — Booth 207

85 Leek Cres,
Richmond Hill ON,
Canada L4B 3B3
(905) 709-4600; Fax: (905) 709-6027
www.applanix.com

Applanix, a wholly owned subsidiary of Trimble, develops, manufactures, sells and supports precision products that accurately and robustly measure the position and orientation of vehicles operating in dynamic environments. Applanix' Position and Orientation Systems (POS) are used in a variety of applications including road profiling, GIS data acquisition, aerial survey and mapping, railroad track maintenance and seafloor mapping. Established in 1991, Applanix strives to support customers around the world with exceptional service, anywhere at anytime.

BAE Systems — Booth 301

10920 Technology Place
San Diego, CA 92127
(858) 592-5721; Fax: (858) 592-5309
www.socetgxp.com

BAE Systems provides geospatial intelligence software products for defense and commercial use. SOCET SET®, BAE Systems' market-leading software for digital photogrammetry, enables customers to make digital terrain models, image maps, GIS databases and more from a wide range of airborne and satellite imagery. SOCET for ArcGIS®, the latest SOCET SET breakthrough, delivers photogrammetric capabilities directly into the ESRI® Geodatabase and allows standard ArcGIS tools to capture height information in real time from stereo imagery.

Cardinal Systems, LLC — Booth 400

701 North Oceanshore Boulevard
Flagler Beach, FL 32136
386 439-2525; Fax: 386 439-0259
www.cardinalsystems.net

With a long and successful history of developing photogrammetric and mapping solutions, Cardinal provides the most efficient, pragmatic mapping tools available today. Now offering VrOne, VrTwo, VrOrtho, VrAirTrig, VrMosaic, VrBalance, VrAtAdjust and VrVolumes we are continually developing fresh new programs for the industry in which Vr is fast becoming the standard. Come see a demo!

Directions Media — Booth 108

Glencoe, IL
(256) 650-0205; Fax: (240) 250-7257
www.DirectionsMag.com

Directions Magazine is the worldwide resource for GIS news, location technology applications, and more. Directions publishes information regarding products, companies, and events in three weekly editions, plus two monthly magazines. Directions also presents the conference "Location Intelligence" which strives to bring together many sectors of the information technology industry that leverages location technology. On the web at www.LocationIntelligence.NET. Point your browser at Directions Magazine everyday, www.DirectionsMag.com, and for "breaking new" go to www.AllPointsBlog.com

Dynamic Aviation — Booth 200

P.O. Box 7 / 1402 Airport Road
Bridgewater, VA 22812
(540) 828-6070; Fax: (540) 828-4031
www.dynamicaviation.com

Dynamic Aviation specializes in providing aircraft and aviation infrastructure to agencies and organizations with exacting data needs, but lacking aviation assets and expertise. We do not own aerial cameras or remote sensors. We lease versatile, superior aerial platforms for both short and long term projects into which existing and emerging technologies can be installed to acquire data of all types. Our aerial platforms can be deployed to validate satellite information, obtain LIDAR, multispectral and hyperspectral data. The aircraft may be used for remote sensing, aerial photography, geophysical survey and for ISR scopes of work.

E. Coyote Enterprises, Inc. — Booth 402

P. O. Box 1119
Mineral Wells, TX 76068
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As a company specializing in aerial data acquisition instruments and peripherals, we are proud to be representing the Jenaoptronic second-generation digital aerial camera, the JAS 150. Important elements of a total system are the GSM 3000 gyrostabilized mount from SOMAG a.g., Jena, Germany, and the CCNS4 flight management system with AEROcontrol precise positioning option from IGI, Kreuztal, Germany.

GeoInformatics — Booth 108

P.O. Box 231
8300 AE Emmeloord
The Netherlands.
+31 527 619000; Fax: +31 527 620989
www.geoinformatics.com

GeoInformatics provides coverage, analysis and commentary with respect to the international surveying, mapping and GIS industry. Recognizing the integrated nature of the geospatial information industry, GeoInformatics presents thought provoking and useful information. GeoInformatics provides valuable and insightful information to its readers, so that they remain on the cutting edge of the geospatial industry, thereby enabling them to learn, create and develop new opportunities for society. GeoInformatics is published eight times per year.

GeoWorld / GeoTec Media — Booth 108

6666 Gunpark Drive, Suite 102
Boulder, CO 80301
(847) 381-4621; Fax: (847) 381-4617
www.GeoPlace.com

GeoTec Media, the essential voice of the industry, has been providing guidance for practitioners and a voice for vendors for 20 years as the publisher of GeoWorld magazine, the developer of the GeoPlace.com Web portal, distributor of the weekly "GeoReport" e-newsletter, and the organizer of the annual GeoTec Event tradeshow and conference.

Imaging Notes — Booth 108
Blueline Publishing LLC

P.O. Box 11569
Denver, CO 80211
(303) 778-0660; Fax: (720) 855-7021
www.imagingnotes.com

Imaging Notes magazine was recently acquired by Blueline Publishing from Space Imaging, providing independent ownership to serve the industry. While the focus remains on commercial remote sensing, we'll be expanding data sources to include more aerial, LiDAR, and RADAR, as well as satellite imagery. Watch for a new name when the magazine is re-launched soon. Imaging Notes will remain a quarterly publication committed to providing the highest quality editorial product for decision-makers within commercial remote sensing.

Institute for Advanced Education in Geospatial Sciences — Booth 306

370 Kinard Hall
University, MS 38677
(662) 915-3900; Fax: (662) 915-3901

IAEGS OFFERS GEOSPATIAL ONLINE EDUCATION. Visit our booth to view multiple courses currently being offered. IAEGS has developed an innovative approach to online instruction by exposing learners to a dynamic, expert-led environment. Academia, businesses, and government agencies of any size or budget will benefit from a curriculum, rich in breadth and depth, to meet the growing demand for an educated and trained pool in the Geospatial arena. IAEGS course production can be your training solution.

Intergraph — Booth 208

170 Graphics Drive
Madison, AL 35758
(800)791.3357 (US Toll Free); Fax: (256)730.2080
www.intergraph.com/earthimaging/

Intergraph provides complete, open, Windows-based imaging solutions to commercial photogrammetry firms and customers. From data acquisition to exploitation to distribution, our solutions make up a completely digital workflow that can streamline your processes while greatly increasing return on investment.

International Society for Photogrammetry and Remote Sensing (ISPRS) — Booth 108

Orhan Altan, Secretary General of ISPRS
Istanbul Technical University
Department of Geodesy and Photogrammetry
34469 Ayazaga-Istanbul
TURKEY
90 212 285 3810; Fax: 90 212 285 6587
www.isprs.org

In 1910, the ISPRS was founded by Eduard Dolezal in Vienna. ISPRS is an international NGO devoted to the development of international cooperation for the advancement of knowledge, research, development and education in the Photogrammetry, Remote Sensing and Spatial Information Sciences (P&RS&SIS), their integration and application, to contribute to the well being of humanity and sustainability of the environment. Therefore, ISPRS recognizes individual accomplishment in photogrammetry and remote sensing by seven sponsored awards which are presented at the quadrennial congresses of ISPRS.

Leica Geosystems — Booth 307

5051 Peachtree Corners Circle
Norcross, Georgia 30092
(770) 776-3400; Fax: (770) 776.3500
gi.leica-geosystems.com

Leica Geosystems is Powering Geospatial ImagingSM by streamlining workflows, enabling users to work more efficiently and accurately. Offering an array of airborne sensors, photogrammetric mapping and remote sensing software solutions, Leica Geosystems Geospatial Imaging facilitates the efficient capture of data, accurate referencing of imagery, easy measurement and analysis, and versatile presentation of spatial information. Powering Geospatial Imaging with precision, integration and service from Leica Geosystems.
When it has to be right.

MDA Federal Inc. (EarthSat) — Booth 202

6011 Executive Boulevard, Suite 400
Rockville, MD 20852
240-833-8200; Fax: 240-833-8201
www.earthsat.com

MDA Federal Inc. (EarthSat), of Rockville, Maryland, is a leading provider of remote sensing and GIS services to federal, state and local agencies, international organizations, and private companies. Established as EarthSat in 1969, MDA Federal Inc. specializes in all-source satellite image processing (orthorectification, multi-resolution merging, mosaicking, digital printing), advanced image interpretation, landcover mapping, change detection, GIS modeling, weather forecasting, crop monitoring, geological interpretation, feature extraction, hyperspectral applications, and continuous monitoring of Earth's resources.

National Geospatial-Intelligence Agency (NGA) — Booth 107

4600 Sangamore Road
Mail Stop D-143
Bethesda, MD 20816-5003
(301) 227-1403; Fax: (301) 227-0117
www.nga.mil

The National Geospatial-Intelligence Agency (NGA) is a major combat support agency of the Department of Defense and an integral member of the Intelligence Community. NGA provides timely, relevant, and accurate geospatial intelligence (a combination of imagery, imagery intelligence, and geospatial information) to the military warfighter and our nation s civilian senior policy and decision makers. NGA s geospatial intelligence provides the knowledge foundation our customers need for planning, decision, and action.

National Geospatial-Intelligence Agency (NGA) — Booth 109

Basic and Applied Research Office, InnoVision
Outreach Program
4600 Sagamore Road
Bethesda, MD 20816-5003
(703) 735-3062

National Geospatial-Intelligence Agency Academic Research Program - learn about how NGA supports basic research in the US academic community"

NASA Land Processes Distributed Active Archive Center — Booth 411
NASA Earth-System Division
U.S. Geological Survey
National Center for Earth Resources Observation and Science (EROS)

47914 252nd St.
Sioux Falls, SD 57198-0001
(605) 594-6116l Toll Free: (866) 573-3222; Fax: (605) 594-6963
http://lpdaac.usgs.gov/main.asp

NASA's goal in Earth-Sun System science is to explore, discover, and understand our Earth-Sun system processes and their response to natural or human-induced changes. NASA distributes data useful for studying urbanization, deforestation, farming, and natural hazards such as wildfires, volcanic activity, vegetation succession, and flooding. These data are useful in resource management, policy making, geology, agrology, tourism, demography, sociology, forestry, and land development.

NOAA Satellite and Information Service — Booth 201
National Environmental Satellite, Data, and Information Service (NESDIS)

1335 East West Highway
SSMC I, Room 8268
Silver Spring, MD 20910
(301) 713-3578; Fax: (301) 713-1249
www.noaa.gov; www.nesdis.noaa.gov

NOAA's National Environmental Satellite, Data, and Information Service (NESDIS) is dedicated to providing timely access to global environmental data from satellites and other sources to promote, protect and enhance the Nation's economy, security, environment, and quality of live.
To fulfill its responsibilities, NESDIS acquires and manages the Nation's operational environmental satellites, provides data and information services, and conducts related research.

Photonics Spectra — Booth 108

2 South Street
Berkshire Common
Pittsfield, MA 01201
413-499-0514; Fax: (413) 442-3180
www.Photonics.com/spectra

Photonics Spectra is the leading photonics magazine serving industries that use photonic technology: lasers, imaging, fiber optics, optics, electro-optics, and photonic component manufacturing. It presents the latest news articles and in-depth reports on photonics technology. It is distributed free to those who use or apply photonics.

Professional Surveyor Magazine — Booth 108

GITC America, Inc.
100 Tuscanny Drive, Suite B-1
Frederick, MD 21702-5958 USA
(301) 682-6101; Fax: (301) 682-6105
www.profsurv.com

Professional Surveyor Magazine is the premier U.S. resource for surveying, mapping, engineering, GPS, and GIS professionals. Monthly articles feature technology, product reviews, hands-on solutions, business management, trade show recaps, and more. Professional Surveyor Magazine is going into it's 25th year of publication. GITC America, Inc. also publishes Earth Observation Magazine Online (EOM), and GIS Monitor, a popular online newsletter that provides coverage and analysis of the GIS industry.

Science Applications International Corporation (SAIC) — Booth 407

Corporate Headquarters
10260 Campus Point Drive
San Diego, CA 92121
(858) 826-6000
www.saic.com

Founded by J. Robert Beyster and a small group of scientists in 1969, SAIC, a Fortune 500® company, now ranks as the largest employee-owned research and engineering firm in the United States. SAIC and its subsidiaries have more than 43,000 employees with offices in over 150 cities worldwide. From science to solutions, SAIC engineers and scientists solve complex technical problems in national security, homeland security, energy, the environment, space, telecommunications, health care, and logistics.

Space Imaging — Booth 406

12076 Grant Street
Thornton, CO 80241
303-254-2000; Fax: 303-254-2125
www.spaceimaging.com

Space Imaging is the premier provider of high-resolution satellite imagery. Based in Denver, Colorado, Space Imaging launched IKONOS, the world's first commercial high-resolution imaging satellite in 1999. Using imagery captured from IKONOS and other sensors, Space Imaging creates map-accurate, imagery products ranging from 1-meter to 180-meter resolution. The results are decision support tools for national security and intelligence, transportation, forestry, telecommunications, facilities management, urban planning, and environmental monitoring.

US Army Engineer Research and Development Center (ERDC) — Booth 100

Topographic Engineering Center
7701 Telegraph Road
Alexandria, VA 22315
(703) 428-6635; Fax: (703) 428-6656
www.tec.army.mil

The U.S. Army Engineer Research and Development Center's (ERDC) Topographic Engineering Center (TEC) is located in Alexandria, Va. TEC's mission is to provide the warfighter with superior knowledge of the battlefield, and support the nation's civil and environmental initiatives through research, development, and the application of expertise in the topographic and related sciences.

U. S. Department of Agriculture Remote Sensing Activities — Booth 110

1400 Independence Ave, SW
Washington, DC,
(202) 690-0131
www.usda.gov/agency/oce/waob/rscc/welcome.htm

U. S. Geological Survey (USGS) — Booth 401

National Center for Earth Resources
Observation & Science (EROS)
47914 252nd Street
Sioux Falls, SD 57198-0001
800-252-4547; Fax: 605-594-6589

Discover the wealth of products available through the United States Geological Survey (USGS) Land Remote Sensing (LRS) Program. Featured data products include Landsat and Advanced Land Imager (ALI) and Hyperion (hyperspectral) from Earth Observing-1 (EO-1). Technical experts will be available to provide up-to-date, detailed information on Landsat 7 SLC-off gap-filled products and future enhancements. For decades, the USGS has been a world leader in archiving and distributing remotely sensed data.

U. S. Geological Survey (USGS) — Booth 405

National Center for Earth resources Observation and Science (EROS)
Sioux Falls, SD 57198
(605) 594-6511
http://eros.usgs.gov

The Earth's surface constantly changes, but it's difficult to see these changes from ground level.

Satellites that capture images of the Earth's surface at regular intervals provide a broader view. By comparing these images, changes and effects can be seen and understood. EROS staff manages and distributes archived images to scientists, policy makers, and educators who use them to study natural hazards, environmental change, economic development, and conservation issues. Researchers also process and analyze satellite data in new ways. Every advance enhances our understanding of the Earth, its changes, and impacts of those changes.

U. S. Geological Survey (USGS) — Booth 403

100 National Center
Reston, VA 20192
(888) ASK-USGS (1-888-275-8747); Fax: (703)-648-4454
http://www.usgs.gov/

The USGS serves the Nation by providing reliable scientific information to describe and understand the Earth; minimize loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; and enhance and protect our quality of life.

Vexcel Corporation — Booth 206

1609 38th Street
Boulder, Colorado 80301
(303) 583-0200; Fax: (303) 583-0246
www.vexcel.com

Vexcel Corporation is a global remote sensing company with offices in the US, United Kingdom, Canada, Austria, and the Netherlands, and sales operations in China and Australia. Vexcel offers an end-to-end aerial photogrammetric solution that includes the UltraScan5000 precision scanner, UltraCam digital aerial camera, and UltraMap Server for data archiving, cataloging and post-processing. Additional areas of specialization include GIS system solutions; SAR research, exploitation software and services; hyperspectral data processing solutions; and satellite ground systems solutions.

Western Air Maps, Inc. — Booth 209

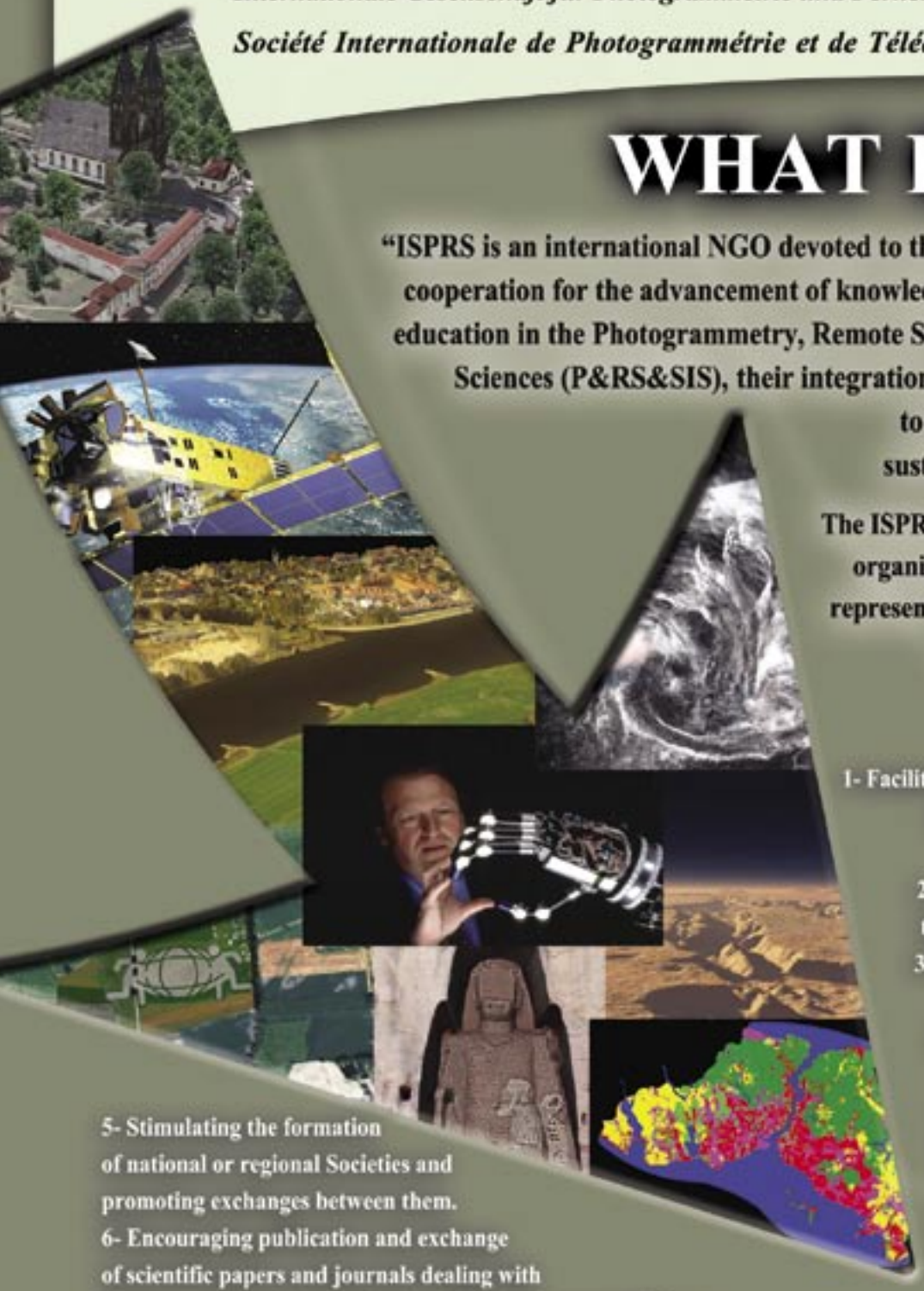
9401 Reeds Road
Overland Park, KS 66207
(800) 643–5177; Fax: (913) 652–9933
www.westernair.com

Western Air Maps, Inc. (WAM), is a privately owned full service aerial photography, surveying, and photogrammetric firm incorporated in the State of Kansas. Established in 1950 by Donald E. Wigger, R.L.S., C.P., WAM provides high-quality solutions to public and private sector clients. Photogrammetric services are performed in-house at WAM headquarters. WAM's dedication to providing detailed quality services and superior client relations is demonstrated by our positive ACASS ratings, repeat clients, and steady business growth.

International Society for Photogrammetry and Remote Sensing

Internationale Gesellschaft für Photogrammetrie und Fernerkundung

Société Internationale de Photogrammétrie et de Télédétection



WHAT IS ISPRS?

"ISPRS is an international NGO devoted to the development of international cooperation for the advancement of knowledge, research, development and education in the Photogrammetry, Remote Sensing and Spatial Information Sciences (P&RS&SIS), their integration and applications,to contribute to the well being of humanity and sustainability of the environment."

The ISPRS membership comprises national organizations and professional Societies representing over 100 nations and regions covering all continents.

Principal Activities are:

1- Facilitating excellence in R&D and the use of proper and appropriate technologies in P&RS&SIS.

2- Initiating and coordinating research through eight Technical Commissions.

3- Holding International Symposia and Congresses at regular intervals.

4- Ensuring worldwide circulation of news, records of discussion and the results of research by publication of the ISPRS Journal, the International Archieves of the Photogrammetry, Remote Sensing, Spatial Information, Sciences, ISPRS Book Series and ISPRS Highlights.

5- Stimulating the formation of national or regional Societies and promoting exchanges between them.

6- Encouraging publication and exchange of scientific papers and journals dealing with Photogrammetry, Remote Sensing, SIS and Computer Vision.

7- Promoting and facilitating education, training and technology transfer.

8- The ISPRS Foundation has been founded to raise, administer and grant funds to meet the objectives of the Society to improve its ability and to satisfy its aims and objectives.

for more information visit
www.isprs.org

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