The "New West" is no longer a trendy catchphrase but an accepted part of our region's lexicon. It has come to represent the transformation of the West from dependence upon agricultural and natural resources to increased reliance on technology and information services. The Intermountain GIS Users' Conference will address many of the issues involved in this transformation and help promote intelligent uses for GIS into the 21st Century.

Concurrent sessions will feature natural resources, local government, Native American issues, remote sensing, new technology, education, public health and safety, vendor presentations, and more.

This year's GIS Users' conference marks the fourth annual meeting attended jointly by Montana and Idaho, and is again sponsored by the Montana GIS Users' Group and the Northern Rockies Chapter of URISA. Check the conference website for scheduling updates and other information.

Register By April 10th

The GeoSpatial Conference

NEW WEST

INTERMOUNTAIN GIS KALISPELL 2000

USERS' CONFERENCE ▶ KALISPELL, MONTANA ▶ MAY 1–4, 2000

CONFERENCE HIGHLIGHTS

PRE- AND POST- CONFERENCE WORKSHOPS
Monday, May 1 and Thursday, May 4
Attendees may choose from a variety of pre- and post- conference workshops covering GIS and related technologies, with options for all skill levels.

PLENARY SESSION
Tuesday, May 2, 9am–12pm
Tom Jentz, Director of the Flathead County Regional Development Office, will present the welcome address. The keynote speakers will include S.J. Camarata, Jr. of the Environmental Systems Research Institute, Inc., and we are also pleased to have Steven L. Hock of The Chaordic Alliance.

PUBLIC NIGHT
Monday, May 1, 6-9pm
Public Night is a great opportunity for GIS Professionals to showcase their work for the general public. The event is free and open to anyone that would like to attend. There will be several geography and mapping activities for a variety of K12 skill levels, with small prizes for all K12 participants and a few large prizes for the lucky K12 lottery winners. The Physical GIS Toolbox and Curriculum Guide (available to any Montana K12 teacher) will be showcased. Public Night promises to be bigger and better than ever in 2000—plan to attend!

POSTERS AND ELECTRONIC DISPLAYS
Monday-Wednesday
For the first time at a Montana conference we are including Internet Mapping Applications in the poster session. During Public Night, posters and electronic displays will be judged and awards given. All categories will be judged separately according to whether they were submitted by students or professionals.

EXHIBITORS
Monday-Wednesday
Wonder how to add that special component to your GIS? Ask the experts! Exhibitors from all over the Pacific Northwest and Canada will be showcasing the latest technology and services offered in the field of GIS. You won't want to miss meeting with these companies and individuals, which include software vendors, hardware vendors, consulting firms, organizations (nonprofit groups), and vendors of related products and services.

Conference Scheduled Events

MONDAY, MAY 1
PRE-CONFERENCE WORKSHOPS
8am–5pm

PUBLIC NIGHT
6–9pm

TUESDAY, MAY 2
WELCOME AND KEYNOTE ADDRESSES
9am–12pm

CONCURRENT SESSIONS
1:30–5pm

BANQUET AND ENTERTAINMENT
6:30pm–Midnight

WEDNESDAY, MAY 3
CONCURRENT SESSIONS
8am–5pm

THURSDAY, MAY 4
POST-CONFERENCE WORKSHOPS
8am–5pm

Welcoming and Keynote Addresses

TOM JENTZ
is the Director of the Flathead Regional Development Office with a staff of 12. This office provides land use planning services to the three cities of Kalispell, Whitefish, and Columbia Falls and to Flathead County.

S.J. CAMARATA, JR.
is the Director of Corporate Strategies at ESRI, Inc. He works closely with ESRI's CEO and focuses on ESRI's worldwide corporate strategies and directions. He has been one of ESRI's key executives and has been instrumental in its growth and development since he started with the company in 1984.

STEVEN L. HOCK
began working with The Chaordic Alliance (TCA) in the 1990's, a nonprofit 501(c)(3) corporation created to develop, disseminate and implement new concepts of organization which more equitably distribute power and wealth and are more compatible with the human spirit and biosphere. He is currently working with TCA on major organizational efforts in the fields of health care, geo data mapping, fisheries and agriculture, and project management.

PRE-CONFERENCE WORKSHOPS

MONDAY, MAY 1, 2000

A GIS User's Practical Projections Primer
Monday, May 1 • 8am–12pm or 1–5pm ($25)
Instructors: Gerry Daumiller of the Natural Resource Information System and Bryant Ralston of ESRI-Olympia
Maximum 25/session

Confused about map projections? If so, this is the workshop for you. An understanding of the sometimes puzzling world of map projections is crucial to success with GIS. Central in creating, updating, utilizing, or cataloging geographic data, map projections are a practical and conceptual issue for every GIS user. This informal half-day workshop is meant to provide useful conceptual and practical information for understanding map projections and their effective use.

Topics Include:
Geographic and projected coordinate systems • Understanding and predicting distortion • Choosing the right projection • Performing projections • Determining a geodataset's projection • Geographic transformations • Datums • Finding true north • and, Projection tips.

Format will be part lecture and part instructor demonstration.

A Hands-on Guide to Understanding GMM
Monday, May 1, 8am–5pm ($50)
Instructor: Rick Breckenridge of Montana Mapping Associates and of Flathead County GIS
Maximum 20

The Geographic Measurement Management (GMM) software provides a rigorous, least squares analysis of measurement data. It is a dynamic means of generating geographic coordinate representation of the Public Land Survey System utilizing existing public information supplemented with either observed or digitized control. The software was designed to support the Geographic Coordinate Data Base (GCDB) project for the Bureau of Land Management. This software provides a powerful means of analysis when the end user understands what the data represents. Estimates as to the quality of the measurement data and the points that have been produced as a result of that data will enable GIS systems to build upon statistical reliability rather than mapping scales. As geographic coordinates are established for resource boundaries or sites, resource data can be merged with the ownership data because the information is located in the same compatible latitude and longitude system. Attendees will receive a CD with the GMM software and will walk through several real world applications.

GIS Data Maintenance Using Trimble GPS Equipment
Monday, May 1, 8am–5pm ($50)
Instructor: Chad Minteer of Electronic Data Solutions
Maximum 12

Attendees will get hands-on experience using Trimble's GeoExplorer 3 and Asset Surveyor 5 for the TSC1. Subject matter will cover the basics of Data Maintenance including the conceptual framework, and actual office and field techniques necessary to maintain GIS data with GPS technology from Trimble. Specifically, we will load GIS data back onto the GPS units, navigate to features, verify and update GIS attributes or GPS positions, map new features, and post-process data.

GIS for Students and Managers in Native American Government
Monday, May 1, 1–5pm ($25)
Instructors: Byran Marozas of the BIA Albuquerque Office and Jhon Goes of Innovative GIS Solutions
Maximum 35

GIS can be a helpful, though complex tool. Native people need an opportunity to understand the fundamentals of GIS in order to make informed decisions about implementing the technology. This workshop is designed to familiarize people involved in the management of Tribal resources with the basics of GIS technology and implementation. This workshop provides the participants with a background in GIS and integrates the cultural perspective of Native Americans into the technology.

Topics Will Include:
Defining and mapping space • Explaining GIS data models • Outlining correct database development tasks • and, Illustrating how GIS applications can be used to manage and protect native resources.

GIS Primer will be the used as a platform to discuss GIS applications appropriate for Indian Country.

More detailed workshop descriptions at http://www.gis.umt.edu/gisconf/ • Worksho

Grants Development

Monday, May 1, 8am–5pm ($50)
Instructor: Victoria Cech, Director of Grants Development at MSU-Billings
Maximum 50

This one-day workshop, sponsored by MSU-Billings, is intended to provide beginning and novice grant writers with the information they need to get started.

Topics Covered Will Include:
Definition of a grant • How to research grants and the organizations that make them • Using the Web to research funding opportunities • Contacting funders • Preparing and outlining a federal and a foundation proposal • Developing a budget for both foundation and federal proposals • and, Planning to ensure that receiving a grant is not the worst good news your organization ever receives.

Material presented in the workshop will be useful to all those involved in the development and planning of a grant-funded project. Materials provided will include sample budget formats, sample proposal guidelines, a list of useful web sites, and ordering information for "The Montana Foundation Directory."

Introduction to GIS: Basic Concepts

Monday, May 1, 9am–4pm ($50)
Instructor: Allan Cox of Boreal Geographics, LLC
Maximum 40

Introduction to GIS: Basic Concepts is designed for new or novice GIS users who want an introduction to the basic concepts and fundamentals of GIS. The workshop is NOT a software training course. The workshop provides an overview and introduction to GIS; review of spatial data principles; and an introduction to GIS functions, GIS data types, database creation, and spatial analysis.

This workshop is a good introduction to the concepts and ideas that will be discussed during the subsequent conference. Participants will receive a CD with various free GIS related software, data, and reference documents as well as a notebook with all of the workshop material.

Publish Your Geospatial Data on the Web: Intranet/Internet Solutions

Monday, May 1, 9am–12pm ($25)
Instructor: Dan Berman of Autodesk
Maximum 50

The Internet has opened the door to new and innovative ways of managing information. Web-based technologies have emerged as an efficient way for public agencies and private business to plan, manage, use and distribute geographic information both within and beyond the organization.

Can this be accomplished using industry standard tools? The answer is YES! This workshop will focus on the dilemma facing GIS professionals as we attempt to leverage our existing sets of rich data, which have been painstakingly created and maintained over the years in traditional CAD/GIS software applications. The challenge we will examine is how to successfully meet the diverse information needs of both our IT/IS colleagues, and the user community within and outside of our public agencies and private organizations.

Secrets of the ArcView Zen Masters: Tips and Tricks with AV 3.2

Monday, May 1 • 8am–12pm, or 1–5pm ($25)
Instructor: Ed Madej, Natural Resource Information System
Maximum 40/Session

ArcView version 3.2 brings more power to the world's most popular desktop GIS program. Add a dozen low cost or free extensions, and you have an unbeatable geoprocessing and mapping package. This lecture and demonstration will stress tips and tricks with ArcView that will make your GIS work easier and more productive.

Topics Include:
- Practicing safe AV computing: making portable projects and auto-backups, how to wreck an AV project.
- Geoprocessing: Using Xtools, the AV geoprocesser, and the Spatial toolbox.
- Slicing and dicing geodata with the Legend Editor.
- Table Tricks: Using Avenue scripts with the Field Calculator.
- Cartography: Cool legends and good colors on your map. Text labeling that works, with AVALabel. Making great maps for the Web and for publishing. And more!

Techniques for Using Microsoft Access to Supplement Your GIS

Monday, May 1, 8am–12pm ($25)
Instructor: Jeffrey Hutten of Montana Fish, Wildlife & Parks
Maximum 20

This half-day lab oriented workshop is limited to a maximum of 20 persons. Participants are expected to have at least an intermediate level of experience with Access including a familiarity with: Access user interfaces, table and query creation, table relationships, and creating forms and reports using the wizards. The attendees are also expected to have a basic understanding of GIS overlay analysis procedures such as intersect, identity, and union.

This will be a hands-on workshop with participants engaging in numerous exercises designed to highlight the many uses we have found for this powerful database manager.

POST-CONFERENCE WORKSHOPS

THURSDAY, MAY 4, 2000

Advanced ArcView Tips & Tricks, Working with Montana Geographic Data

Thursday, May 4, 8am–5pm ($50)
Instructors: Ed Madej of the Natural Resource Information System and Lydia Bailey of Montana Fish, Wildlife & Parks
Maximum 20

This workshop is designed for the experienced ArcView user. Students interested in attending should have completed ESRI's "Introduction to ArcView GIS" course, be very familiar with ArcView's graphical user interface (GUI).

Topics Include:
- Working with existing geographic data available from the Natural Resource Information System (NRIS) and Montana Fish, Wildlife & Parks (FWP)
- Utilizing ArcView extensions
- "Safe" ArcView computing skills
- Advanced symbolizing and cartographic skills
- "Slicing and dicing" data with ArcView Tables
- Using SQL connections to connect to Microsoft Access.

Bayesian Modeling with ArcView GIS

Thursday, May 4, 8am–5pm ($50)
Instructor: Richard Aspinall of the Geographic Information and Analysis Center (GIAC), Montana State University
Maximum 24

This course introduces a method for modeling distribution based on Bayes Theorem. It is designed to reveal the basis for, and operation of, Bayesian modeling as well as guiding attendees through the process of creating Bayesian models in ArcView. The course mixes lecture, discussion, and hands on exercises. The exercises use examples drawn from analysis of wildlife distribution in relation to environmental factors although the application of the method is much wider and can be used to model the distribution of many phenomena.

Specific Objectives:
- To expose attendees to Bayesian approaches to the derivation of habitat associations of plants/animals using thematic maps of varying resolution and spatial scales.
- To examine implications for predictive modeling of animal and plant distributions.
- To assess implications of the techniques and prevailing data quality for survey design and conservation planning.

Attendees should be familiar with ArcView GIS and with the Spatial Analyst extension.

Geographic Analysis with ARC 8

Thursday, May 4, 8am–12pm ($25)
Instructor: Jack Horton of ESRI-Olympia
Maximum 40

Arc/Info version 8 is a new paradigm for geographic data analysis and management. We will cover various types of analysis from simple display and query to more complex spatial analysis.You will see how a database can be used for analysis by one user while it is being simultaneously edited by another user. This workshop will consist of lectures and demonstrations, using Arc/Info rev 8.

GIS-GPS Integration

Thursday, May 4, 8am–5pm ($50)
Instructors: Fred Gifford and Sally Staley of Maxim Technologies Inc., and Guner Gardenhire of Geoline Positioning Systems, Inc.
Maximum 12

GPS technology is one of the primary tools used for developing databases for use in GIS. While GPS technology has become easier to use, there are still many details involved with efficiently collecting high quality information for use in GIS. The workshop covers the step by step procedures required to setup and execute a professional GPS data collection plan.

Topics Addressed Include:
Pre-mission planning • Unit setup • Database design and setup • Data maintenance • Differential correction • Projections • and, Data transfer.

In the workshop will use technology from Trimble and ESRI. However, the methods presented will be applicable to other vendor's technology as well. The workshop will include both hands on exercises and classroom lecture.

Introduction to GeoDatabases

Thursday, May 4, 1–5pm ($25)
Instructor: Jack Horton of ESRI-Olympia
Maximum 40

In this session, you will learn the basics of database technology in general and geographic databases in particular. We will cover the integrated storage and maintenance of tabular and spatial data in a database.

Topics Include:
Transactional data management using database versions, management of spatial objects in a database, and managing database integrity using domains, subclasses, and relationships.

The format will be lectures and demonstrations, using an ArcSDE server with an Arc/Info client.

Remote Sensing Fundamentals and Applications

Thursday, May 4, 8am–5pm ($25)
Instructors: Dr. Lloyd Queen, Associate Professor, School of Forestry; Dr. Jerry Winslow, Andrew Weiss, and Michele Thornton of the EOS Training Center; Eva Karau and Steve Brown, Graduate Researchers at the University of Montana
Maximum 20

Digital Remote Sensing applications can offer regional to landscape "views" of the lands to which natural resource managers are stewards. The EOS Training Center at the University of Montana is housed within the School of Forestry and draws on the expertise of professors and researchers in areas of remote sensing and forestry/range land management. The workshop will consist of a half day addressing the fundamentals of remote sensing.

The last half of the day will be "hands-on" working with a popular remote sensing software to explore remote sensing applications relevant to natural resource management. Working with raster imagery from MODIS and Landsat 7, we will cover topics such as landcover characterization, vegetation indices (net primary productivity), and drought mapping. AVHRR data will be substituted if MODIS data is not available.

hop locations announced in workshop confirmation letters and at Cavanaughs, May 1.

Program Information (program is subject to change)

LOCATION

Cavanaugh's Inn, Kalispell Center
20 North Main Street, Kalispell, Montana

FEES

The conference fee covers all conference materials, a T-shirt, lunch and dinner on Tuesday and lunch on Wednesday. A no-host social will be held on Tuesday night after the banquet, with entertainment provided by Loose Caboose, a rhythm & blues/classic rock and roll band well known in the Flathead area.

A T-shirt is complimentary with each conference registration, including student and vendor registrations; proceeds will go directly to the GIS Users' Group education fund. T-shirts will also be available for purchase at the conference.

REFUNDS

Registration forms must be postmarked by April 10. Refunds will be provided for cancellations received by April 24, 2000.

Please register early.

LODGING

Blocks of rooms at special rates have been reserved for conference attendees at the following hotels:

- Cavanaugh's Inn, Kalispell Center*
  20 North Main Street
  406.751.5050 or 800.325.4000
- Outlaw Inn,* 1701 Hwy 93 South
  406.751.5050 or 800.325.4000
- Kalispell Grand Hotel,* 100 Main Street
  406.755.8100 or 800.858.7422
  (within walking distance to Cavanaugh's)

Additional hotels near Conference include:

- Hampton Inn, 1140 Hwy 2 West
  406.755.7900 or 800.426.7866
- Four Seasons Motor Inn, 350 North Main
  406.755.6123 or 800.545.6399
  (within walking distance to Cavanaugh's)
- Motel 6, 1540 Hwy 93 South
  406.752.6355
- Montana Reservation Central
  406.862.7589

*** To receive your special price rate, remember to identify yourself as a GIS conference participant when making your reservations.**

Scholarships Available!

Twenty students are eligible to receive full **Scholarships** to the conference. Complimentary one-day registrations or a workshop will also be awarded to interested K-12 teachers.

For more information, contact:

Mike Frankovich, 406.496.3745
email mfrankovich@mtech.edu

Information Contacts

Program Content Gretchen Burton, 406.994.6921
email burton@guava.giac.montana.edu

Poster Sessions Hans Zuuring, 406.243.6456
email hrz@forestry.umt.edu

Public Night Kris Larson, 406.444.5691
email klarson@state.mt.us

Workshops Bob Holliday, 406.444.0770
email rholliday@state.mt.us

Exhibitors Catherine McCoy, 360.754.4727
email cmccoy@esri.com

Concurrent Sessions Margie Lubinski, 406.329.3743
email mlubinsk/r1_lolo@fs.fed.us

The GeoSpatial NEW WEST Conference

INTERMOUNTAIN GIS KALISPELL 2000

Maitland & Associates, Inc.
3250 Foothill Road
Kalispell, MT 59901

The Intermountain GIS Users' Conference, May 1 – 4, 2000
REGISTRATION FORM

Name: _____

Organization: _____

Address: _____

Business Phone: _____ **E-mail Address:** _____

Check here if you do NOT want your contact information appearing on distributed lists of attendees: _____

All Speakers Must Register for the Conference

CONFERENCE REGISTRATION FEES

_____ $125 Advance conference registration. Registration must be postmarked by April 10th.
_____ $150 Conference registration after April 10th.
_____ $ 75 Single-day registration.
_____ $ 75 Student registration for full conference (student ID required). See conference announcement for more information.

Check your meal preference[1] for Tuesday night's banquet: Top Sirloin____ Cranberry Chicken Breast ____ Pasta Primavera ____

NO REFUNDS AFTER APRIL 24, 2000

WORKSHOPS

Workshops fill up quickly, so please indicate your first and second choices by marking "1" & "2". We cannot guarantee your choices. Requests are processed on a first-come, first-served basis, although registered conference participants receive preference.

Pre-Conference Workshops - Monday, May 1, 2000

_____$25 Projections, 8am – 12pm (max. 25)
_____$25 Projections, 1pm – 5pm (max. 25)
_____$50 Understanding GMM, 8am – 5pm (max. 20)
_____$50 GIS Maintenance Using GPS, 8am – 5pm (max. 12)
_____$50 Grants Development, 8am – 5pm (max. 50)
_____$25 GIS for Students and Managers in Native American Government, 1pm – 5pm (max. 35)
_____$50 Introduction to GIS, 9am – 4pm (max. 40)
_____$25 Publish Your GeoSpatial Data on the Web, 9am – 12pm (max. 50)
_____$25 Secrets of the ArcView Zen Masters, 8am – 12pm (max. 40)
_____$25 Secrets of the ArcView Zen Masters, 1pm – 5pm (max. 40)
_____$25 Using Microsoft Access to Supplement Your GIS, 8am – 12pm (max. 20)

Post-Conference Workshops - Thursday, May 4, 2000

_____$50 Advanced ArcView Tips & Tricks, 8am – 5pm (max. 20)
_____$50 Bayesian Modeling, 8am – 5pm (max. 24)
_____$25 Geographic Analysis with Arc 8, 8am – 12pm (max. 40)
_____$50 GIS/GPS Integration, 8am – 5pm (max. 12)
_____$25 Introduction to GeoDatabases, 1pm – 5pm (max. 40)
_____$50 Remote Sensing Fundamentals, 8am – 5pm (max. 20)

PAYMENT:

Conference Registration $_____ T-Shirt Size (Circle One): S M L XL XXL

Workshop Registration $_____

Total Enclosed $_____

Make Check or Money Order[2] payable to **"Montana GIS Users 2000 Conference"**, and send with this form to:

Maitland & Associates Inc.
3250 Foothill Road Ph: 406-755-8687
Kalispell, Montana 59901 Fax: 406-755-8686

[1] If you have specific dietary requirements, please describe them on the back of this form.
[2] We can process federal or state agency purchase orders. We cannot accept payment via credit card.