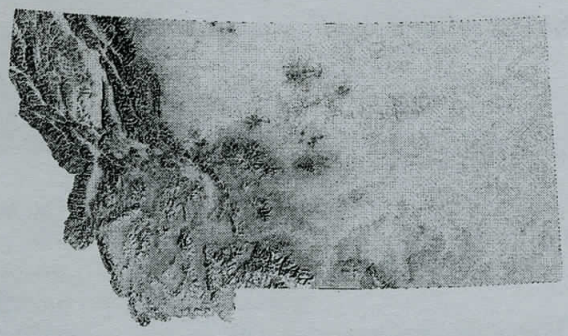
Montana GIS News



Montana GIS News Spring Edition 2000

Are You Ready for the Best GIS Conference Ever?

by Gretchen Burton

May 1st – 4th, 2000

Welcome to the 2000 Intermountain GIS Users' Conference! This millennial year marks the twelfth annual Montana conference and the third annual jointly sponsored Montana/Idaho conference. With record numbers of attendees from Montana and the surrounding states, we anticipate a highly diverse and exciting program. And this year we are also pleased to welcome fellow GIS practitioners from Canada and India; perhaps international rather than intermountain would be a more appropriate description for this year's conference!

We have filled the schedule to capacity with two days of intensive workshops including several new topics never before addressed at our conferences. We are offering an abundance of sessions categorized under such new headings as Public Health & Safety and New Mapping Technology. Plenty of options are available to entice the eager conference-goer! The concurrent sessions will also feature a number of panel discussions in which we'll discuss timely subjects like the Lewis & Clark Bicentennial and Surveying/GIS issues in addition to the requisite topics like education and coordination. The plenary session this year features a local to Montana: Steven Hock, who hails from Missoula, has been working with the Chaordic Alliance and will lend insight to some of the organizational issues we have been addressing in our region. We are equally pleased to have S.J. Camarata, Jr., Director of Corporate Strategies at ESRI, Inc. joining the plenary session.

in this issue....

Intermountain GIS Users' Conference 1
Innovative Organizational Initiative 2
Intern Mapmaker Shines! 3
Montana GIS Users' Group 4
GIS Public Night 5
ACollaborative Approach to Geospatial Transportation Data in Montana 5

Another can't-miss event is Public Night on Monday evening where you can check out the Map Gallery and judging—this year we debut a new category: Internet mapping applications. Public night will also feature the latest GIS activities for the K-12 set, including the new GIS Physical Toolbox and Curriculum Guide, available on loan to Montana schools. And, of course;on Tuesday night is the banquet dinner followed by music and dancing in the Cavanaughs Lounge—be sure to catch the Loose Caboose, a classic rock-n-roll/rhythm & blues band very popular in the Flathead Valley.

But above all, the organizing committee has worked very hard to ensure you not only have an informative and educational experience but a great time! Enjoy! ❖

Innovative Organizational Initiative Seeks To Best Meet GIS Community Needs

By Steven L. Hock

Needless and counterproductive duplication of data, leading to wasted time and money and to redundancy…

Difficulties in sharing essential information across incompatible platforms, frustrating data producers and data users alike…

Institutional obstacles — many of them seemingly easily resolvable, yet somehow intransigent — among innumerable parties new to working with each other and needing to share resources…

Quality data and information available, in many cases a seeming "click away"…but the proverbial needle-in-the-haystack making it virtually inaccessible to all but the cognoscenti.

No.

That's not the job description of the Montana geographic information specialist nor, for that matter, of their counterparts in other state and local governments.

It only seems that way.

Instead, it's the common litany for so many GIS professionals coping with the mounting demands for digital GIS information and society's unending appetite to use that data more widely.

It didn't take a national conference with top-level federal government executives in the Nation's Capital to sound the call for efforts to address the morass that so many GIS professionals see undercutting the full potential GIS holds.

But it did take just such a national conference to bring together, in one place and at one time, the critical mass determined to begin doing something about it.

The venue proved to be the June 1999 National GeoData Forum, which attracted more than 400 GIS professionals from state, local, regional, and federal government agencies along with scores of representatives from tribal communities, the private sector, nongovernmental organizations, and from academia.

Something happened during that national meeting, now just about one year ago. Something very special, according to many of the program participants.

From the fledgling seeds of that conference has grown a lasting commitment to fundamentally restructure how vital geographic data and information can be made easily and readily available to those needing it for cost-effective decisionmaking on issues ranging from economic development and growth to natural resources protection and environmental quality.

With initial financial support from the multi-agency Federal Geographic Data Committee (FGDC), established by Office of Management and Budget Circular A-16 in 1990, a new GeoData Alliance Organizational Initiative now is moving forward to help "build relationships among organizations to support the continuing development" of the National Spatial Data Infrastructure, NSDI. Organization and capacity building, it turns out, is no one's idea of a leisurely day in the sun.

It's in fact hard work, *darned* hard. And it's particularly challenging given the enormous breadth and scope of the GIS community and its constituents, and given the commitment to avoid the traditional "command and control" hierarchical kind of organization and all its inevitable shortcomings.

In the nearly one year since that seminal GeoData Forum meeting in Washington, D.C., a consensus has begun to solidify among a broad cross-section of state, local, federal, tribal and regional government representatives, working in concert with private sector, nonprofit, and academic interests.

The consensus is that only an entirely new and innovative organizational approach can meet the "bottoms up" needs facing GIS professionals and their customers and constituents.

Which brings us to the term "chaordic."

Yes…chaordic. The term, derived from "chaos" and "order," is the product of decades of cutting-edge thinking and organizational planning by VISA International Founder and CEO Emeritus Dee W. Hock, author of *Birth of the Chaordic Age* and, yes, my father. Hock delivered one of the keynotes at the National GeoData Forum and inspired the new GeoData Alliance Organizational Initiative.

Under the concepts first developed by Hock in founding VISA, and now embodied in a nonprofit organization he founded, The Chaordic Alliance, several qualities must characterize any chaordic organization, and these very traits are reflected in the GeoData initiative now under way:

* They can be global in scale, but with decision-making and functions resting with the most local interested parties;

* They must be open to all interests, but dominated by none;

* They must be "infinitely malleable in form and function," and at the same time infinitely durable in underlying purpose and principles;

* They must give rise to both monetary and nonmonetary value … value that can be tapped by all participants; and

* Perhaps above all else and without which none of the above can happen, they must be worthy of trust.

Which helps explain, in part, why such organization building isn't easy. And by no means routine.

It isn't just one of those tasks you can assign a few additional workers to do on overtime.

Some will say the future of this innovative enterprise a year later is still in doubt, its final destination still uncertain and unsure.

Those closest to the process itself — and the scores of participants in one way or another contributing most to its successes — are the first to agree.

What is uncontested is the need for GIS professionals — the data providers no less than the data users — to continue to seek-out new and creative ways to aggressively meet their shared needs and address their common concerns for timely, accessible, and high-quality geographic information.

That, in the end, best describes the efforts now under way — with leadership both from FGDC and its partners and also from The Chaordic Alliance — to meet the emerging needs that GIS professionals see virtually every day in their work.

Steven L. Hock is an attorney specializing in information technology and organizations, the former Managing Partner of the national law firm Thelen, Reid & Priest LLP, and a Senior Fellow and Project Director with The Chaordic Alliance, living in Missoula. Additional information on the GeoData Alliance Organizational Initiative is available from FGDC Partnership Coordinator Kathy L. Covert at e-mail klcovert@usgs.gov, or online at http://geoall.net. Hock can be contacted by e-mail at shock@bigsky.net❖

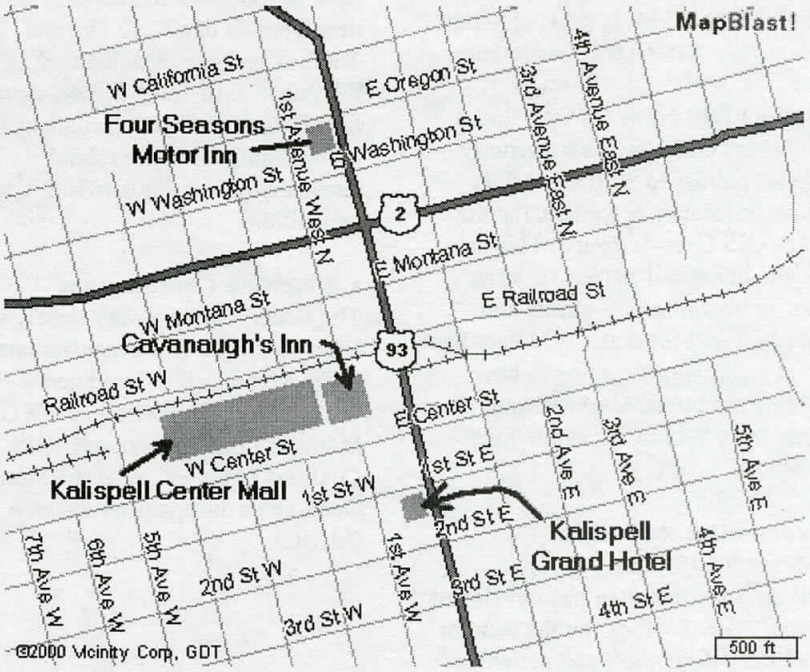
Intern Mapmaker Shines!

The NRIS program recently had the honor of Katie Thompson-Newell choosing the program for a volunteer internship. Katie is the daughter of the late Larry Thompson, the first director of NRIS and Sue Newell.

To give Katie a taste of a real-life work experience, she was given a wide variety of tasks that required a great deal of flexibility and willingness to learn. She was given tasks that ranged from answering the phone and photocopying to research, computer work and map-making using ArcView software. She also participated in planning implementation of "GIS Day", a day long program designed to help children and adults understand more fully computer-aided GIS.

Katie did a great job!! Our whole program benefited from Katie's internship. Not only did she contribute her time, talent and energy, but all of us loved her exuberance and cheerful presence. NRIS extends a very heartfelt thank you to Katie! ❖

Map of Kalispell Conference Hotels



The Montana GIS Users' Group

By Margie Lubinski

The Montana GIS Users' Group is a statewide consortium of federal, state, local, tribal, university, and private organizations and individuals engaged in the use of and education about GIS technology. The Group's purpose is to provide a forum for exchanging information and ideas on GIS. Membership is open to anyone with an interest in GIS. Any funds generated by the non-profit group are fully invested in projects that serve the GIS community in Montana. There are no membership dues. At the annual meeting, members approve goals for the subsequent year and elect new board members. The charter for the group was adopted in 1990 at the Montana GIS Users' Conference in Missoula.

Users' Group Activities:

• Annual Intermountain GIS Users' Conference
The Users' Group sponsored the Montana GIS Conference from 1988 through 1997. Since 1998, the Northern Rockies chapter of the Urban and Regional Information Systems Association (URISA) has co-sponsored the conference, which is now called the Intermountain GIS Users' Conference.

• Montana GIS News
The Montana GIS News is a quarterly newsletter published by the Natural Resource Information System for the Montana GIS Users' Group. This is a forum for interested parties to write articles highlighting GIS events and activities around the state. Contact Pam Smith at psmith@state.mt.us to have your name put on the Users' Group Mailing, or to submit an article for the newsletter!

•Subcommittee Activities
The Montana GIS Users' Group Education Subcommittee has developed a "Virtual" GIS Toolbox on the web for GIS related information and activities for anyone involved in K-12 education. They now have a "Physical" GIS Toolbox available for distribution throughout K-12 schools in Montana. The toolbox is designed to provide GIS project-oriented curriculum for teachers to incorporate into their existing curriculum. Items in the toolbox include GIS workbooks, tutorial CDs, games, mapping materials, GIS data, Global Positioning Systems (GPS) units, and much, much more! It will be distributed through the Montana Natural History Center.

• University Endowments
The Users' Group has established an Endowment through the Montana Community Foundation for graduate students enrolled in GIS-related programs at Montana Universities. Students are awarded a one-time $500 scholarship and are encouraged to present their work at the annual GIS conference.

• Yearly Grants
Each year the Users' Group awards grants to further K-12 GIS education throughout the state. These grants have supported activities such as the development of a K-12 "Virtual" GIS Toolbox website, development of the "Physical" GIS Toolbox, and support for teachers to write curriculum for K-12 including a middle school curriculum about the Lewis & Clark expedition.

• Statewide Coordination
The Users' Group works closely with other statewide GIS organizations such as the Montana GIS Interagency Technical Working Group (ITWG), the Montana Local Government GIS Coalition (MLGGC) and the Montana Geographic Information Council (MGIC).

Users' Group Board:
The primary responsibility of theMontana GIS Users' Group board is to plan and participate in the yearly Intermountain GIS Users' Conference. They are also very involved with the education subcommittee, developing and administering grants and scholarships, as well as promoting GIS in the K-12 community. Members serve a four year term and elections are held at the Users' Group conference when it takes place in Montana. This year we have a position available so be sure to **fill out your ballots.** ❖

Current Board members:

President
Gretchen Burton
MSU-GIAC

Past President
Margie Lubinski
Lolo National Forest

Secretary
Catherine McCoy
ESRI Olympia

Treasurer
Rick Breckenridge
Flathead County

Hans Zuuring
UM- School of Forestry

Tom Tully
Butte Silver Bow Planning Office

Ed Madej
Natural Resource Information System

GIS Public Night

By Kris Larson

Plan to attend our 9th annual GIS Public Night from 6:00 pm until 9:00 pm on Monday, May 1. The idea behind Public Night is to reach out to teachers, students, city and county officials, and others who may not have been exposed to the concepts behind GIS. If you're new to the conference or new to GIS, it's a great way to meet people & find out about the GIS projects happening in our area. If you're an old hand at GIS, it's an opportunity to help others appreciate the possibilities of this powerful technology. It is always a fun-filled evening with demonstrations for adults, activities for kids, and, of course, plenty of little finger foods to draw in the crowds.

Our philosophy is that everyone is a winner. Any students who participate in Public Night will receive a bag full of goodies just for coming in the door and playing games for an hour or so. This year, we will have at least eight activity booths set up for K12 students. Classrooms will showcase their GIS projects. Every participant will be automatically entered in a drawing for a door prize.

While the students are playing geography-related games, there will be demos and poster exhibits set up for adults. It's an opportunity to mingle with GIS Professionals, see demonstrations, ask questions, and actually get some time to sit down at the computer and gain some hands-on experiences. Public Night is free and open to anyone who would like to participate. So wrangle up the family, and come on down! We'll look forward to seeing you.

If you'd like more information about Public Night, please feel free to contact Kris Larson at 406-444-5691 or klarson@state.mt.us. ❖

A Collaborative Approach to Geospatial Ground Transportation Data in Montana

By Michael Sweet

In early 1999, representatives from the Montana Interagency GIS Technical Working Group (ITWG) and the Montana Local Government GIS Coalition (MLGGC) established the Montana Transportation Working Group as a forum for discussing ways in which geospatial ground transportation data can be more effectively and efficiently shared among cooperating entities in Montana. The Montana Transportation Working Group began by reviewing efforts by local, state and federal agencies in Montana to develop and implement geospatial ground transportation databases. It was clear from this review that each implementation had application dependencies. It was also clear from this review that each jurisdiction's decision-process would benefit considerably from access to and the integration of ground transportation databases held by other jurisdictions within their geographic area. In a very short time, the Working Group determined that:

* A significant amount of relevant ground transportation data in digital form already exists among public and private jurisdictions in Montana.

* Ground transportation data cannot readily contribute to an effective and efficient decision process if it is difficult to locate and obtain, and has an undetermined level of integration.

* For a given geographic area, it is the case that no single jurisdiction has a mandate to build or provide a multi-jurisdictional ground transportation database that contributes to the decision environment of a community or organization.

In mid-1999 the Montana Transportation Working Group began to review and consider the draft NSDI Framework Transportation Identification Standard – Version 3 (July 22, 1999) as a unifying concept that might advance their efforts. Exploratory review indicates that this standard has technological and institutional characteristics that make it attractive for consideration as a foundation for the exchange of ground transportation data between jurisdictions. At the same time the standard could potentially support the exchange of ground transportation data within jurisdictions in cases where a single geospatial data model could not satisfy dependencies inherent in a range of existing applications. More importantly, the Framework Transportation Identification Standard has the potential to bring data creators and user together to discover and advance the technological methodologies and institutional arrangements necessary to create and maintain a geospatial ground transportation framework in Montana

To better understand the draft NSDI Framework Transportation Identification Standard, in October 1999 the Montana Transportation Working Group hosted a one-day workshop with Bruce Spear from the U.S. Department of Transportation Bureau of Statistics. The goal of the workshop was to answer immediate concerns and determine if the

Transportation Identification Standard deserved further consideration as a mechanism for addressing Montana's need to integrate ground transportation data across jurisdictions. As Chair of the Federal Geographic Data Committee's (FGDC) Ground Transportation Subcommittee, Spear provided considerable information and insight. The Montana Transportation Working Group concluded that it would be worthwhile to give this standard further consideration.

The strength of the underlying model described by the Transportation Identification Standard is that it provides a software, cartographic and application independent non-topological data exchange format that can support multiple representations (resolutions) of the same transportation segment. It appeared that very little oversight coordination is required to successfully implement the standard, and the standard could easily adapt to multi-jurisdictional situations.

The weakness of the model described by the Transportation Identification Standard is that it is relatively untested in real-world situations. Without a prototype test and evaluation it is difficult to assess how well this model will support the exchange of transportation data in support of key applications. The model shows promise because it is not a radical departure from data models currently in use, but questions of data integrity and the institutional requirements of implementation remain.

The Montana Transportation Working Group is in the process of applying for grant funding to facilitate the next phase of this investigation. The goal of this multi-jurisdictional collaborative effort is to advance the capacity of users to access and use digital, geographic, ground transportation databases to meet their information needs. The grant proposal has three major objectives that should advance our efforts toward that goal:

1. Develop a multi-jurisdictional prototype implementation of the NSDI Framework Transportation Identification Standard – Version 3 (July 22, 1999) to determine if this standard can help formulate the technological and institutional framework necessary for integrating ground transportation data from multiple jurisdictions within the same geographic extent in Montana.

2. Provide recommendations to ITWG, MLGGC and MGIC for developing a statewide geospatial ground transportation framework by evaluating and document the results of a prototype multi-jurisdictional implementation of the NSDI Framework Transportation Identification Standard – Version 3 (July 22, 1999).

3. Determine how a ground transportation framework integrates with other ongoing framework efforts in Montana such as those of the Montana Cadastral Project and the Montana National Hydrographic Database (NHD).

4. Improve cooperation, and a shared understanding of the terminology and concepts associated with a ground transportation framework.

Further information on this effort and the activities of the Montana Transportation Working Group can be found at http://mtgeo.org/Framework/Transportation ❖