

**BLACK HILLS
DIGITAL
MAPPING
ASSOCIATION**

**2007
ANNUAL
CONFERENCE**

**“ALL THINGS
CADASTRAL”**

SEPTEMBER 18 & 19, 2007

RUSHMORE PLAZA HOLIDAY INN
505 NORTH FIFTH ST

RAPID CITY, SOUTH DAKOTA

<http://www.sdgs.usd.edu/bhdma>



WELCOME TO THE BLACK HILLS DIGITAL MAPPING ASSOCIATION ANNUAL CONFERENCE

Dear Attendees,

This conference, and the Statewide Cooperative Cadastral Committee meeting that follows, are milestone GIS events for both the Black Hills Digital Mapping Association and the South Dakota GIS Community. BHDMA is facilitating this statewide digital cadastral (land ownership) initiative, a first for both our organization and the State of South Dakota.

Governor Rounds has declared digital cadastral data a critical infrastructure data layer for our state. We believe that the development of statewide digital cadastral data will benefit all people in this state – it is that important. The South Dakota Cooperative Cadastral Initiative is being organized and run as a grass roots effort and is open to the South Dakota GIS Community at large – all are encouraged to participate and contribute.

A huge thank you to our event supporters – they are why we can offer such a high caliber lineup of speakers and hold it in this wonderful facility. The 2007-2008 USGS NSDI CAP grant program and the Federal Geographic Data Committee's Cadastral Subcommittee have provided both resources and funding to help make this event a success. Thank you especially to our speakers, who have volunteered their time to educate us on why cadastral data is vital to our state and on the many ways that digital cadastral data can be used to answer important questions and solve critical problems.

Regular attendees, you will notice many new faces - please help us welcome our newcomers. We have expanded our membership list, adding contacts from county assessing offices, tribal government, state government, and the surveying and engineering communities. The next four days will offer both educational opportunities and a means by which we, as a community of GIS professionals, can help shape the future of GIS in our state.

Enjoy the conference; and please participate in the cadastral committee meeting that follows. Your involvement matters!

BHDMA 2007 Board of Directors

Foster Sawyer, President

Brett Runge, Member-at-Large Representative

Jenny Sorensen, Secretary/Treasurer

Tim Cowman, State Representative

James Rattling Leaf, Tribal Representative

Dan Falbo, Private Sector Representative

Don Jarvinen, Local Representative

Kelly Lane, Academic Representative

Denise Miller, Federal Representative

THE EVOLUTION OF THE SOUTH DAKOTA COOPERATIVE CADASTRAL INITIATIVE

The Black Hills Digital Mapping Association is dedicated to promoting the development of geospatial data, data standards, and data exchange. Equally important, the group exists to facilitate these efforts and to provide a means by which people can communicate and share geospatial goals and needs. To help achieve these institutional goals, BHDMA applied for, and received, a USGS National Spatial Data Infrastructure Cooperative Agreement Program grant. This grant is one of twelve awarded for 2007-2008 under the *Fifty States Initiative: Strategic and Business Plan Development* category.

Collaborating organizations on the grant include the SD Bureau of Information and Telecommunications, the SD Geological Survey, the SD Association of Assessing Officers, the Pennington County/Rapid City GIS Division, and the City of Sioux Falls GIS. The grant application, available on the BHDMA website (<http://bhdma.sddcnr.net/>), outlines how BHDMA will promote and assist the development of the South Dakota Cooperative Cadastral Initiative.

The primary goal of the cadastral initiative is the production of cadastral strategic and business plans for the State of South Dakota. One component of the initiative is to organize and present a two-day conference that is focused on digital cadastral data issues. In addition to providing education, the conference also will provide a forum for discussion by the GIS Community on the development of a statewide digital cadastre.

A second component of the initiative is to establish a Statewide Cooperative Cadastral Committee that will meet directly following the conference to draft cadastral strategic and business plans. These plans will be finalized by the committee and will be reviewed and presented to stakeholders for input during public participation meetings. Three half-day meetings will be held across the state before the strategic and business plans are formally submitted to the State of South Dakota. The goal is to have these plans endorsed by participating organizations and individuals, in the form of letters of support and MOUs.

The long-term goal of the cadastral initiative is to spur statewide GIS development, cooperation and coordination between all levels of government and the private sector. Together we can reach the goal of creating and maintaining critical statewide GIS data layers.

Jenny Sorensen

BHDMA Secretary/Treasurer/Grant Administrator

Cadastral Committee Agenda for Sept 20th and 21st

Sept 20, 2007

7:30—8:30 am Continental Breakfast
8:30—12:00 pm Meeting/Discussion
12:00—1:00 pm Working Lunch at Holiday Inn
1:00—4:30 pm Meeting/Discussion

Sept 21, 2007

7:30—8:30 am Continental Breakfast
8:30—12:00 pm Meeting/Discussion

**BHDMA THANKS THE
FOLLOWING
FOR THEIR SUPPORT**

United States Geological Survey
FGDC NSDI Cooperative Agreement Program
FGDC Cadastral Subcommittee
**South Dakota Bureau of Information and
Telecommunications**
**South Dakota Department of Environment and
Natural Resources**
South Dakota Geological Survey
South Dakota Association of Assessing Officers
Sioux Falls GIS Department
Pennington County/Rapid City GIS
South Dakota Engineering Society
SDSM&T
ESRI
Pro-West & Associates, Inc.
Houston Engineering, Inc.
GeoAge
GIS Workshop
Graphics Plus
Frontier Precision
Compass Tools
Schneider Corporation
The Sidwell Company
Ferber Engineering, Inc.
FourFront Design, Inc.

CONFERENCE AGENDA

(PROFESSIONAL DEVELOPMENT HOURS AVAILABLE
ON SEPARATE FORM AT REGISTRATION TABLE)

TUESDAY SEPTEMBER 18

- 7:00-8:00 am **Registration and Vendor Setup**
- 8:00-8:10 am **Welcome to "All Things Cadastral"**
Foster Sawyer, PhD, President, BHDMA
- 8:10-8:30 am **South Dakota's Cadastral Initiative**
Jenny Sorensen, PE, PhD, Sec/Treas,
BHDMA
Dan Falbo, Private Sector Rep, BHDMA
- 8:30-9:15 am **KEYNOTE: (Moderator: Foster Sawyer)**
**Creating a Statewide Multipurpose
Cadastre-Issues, Challenges and Rewards**
Stu Kirkpatrick, MT State GIS Coordinator
- 9:15-9:45 am **Vendor Display/Poster Session/
Refreshments**
Sponsored by Graphics Plus
Door Prizes – Must be present to win
- 9:45-10:30 am **Cadastral Experiences from National,
State, Tribal, and Local Perspectives**
David Cowen, PhD Bob Ader
Hank Garie Dennis Kron
Stu Kirkpatrick Kevin Hyde
Berne Jackson
(Moderator: Dan Falbo)
- 10:30-11:45 am **Facilitated Discussion: South Dakota
Experiences and Perspectives**
Facilitator: Cheryl Chapman, PE
Matrix Consulting Group, Inc.
(Moderator: Jenny Sorensen)
- 11:45-1:15 pm **Luncheon and SPEAKER:**
Sponsor: ProWest & Associates, Inc.
**Making the Business Case for a
Cadastral Layer**
Bob Ader, Bureau of Land Management
(Moderator: Foster Sawyer)
- 1:15-2:30 pm **CADASTRAL WORKSHOP – PART I**
(Moderator: Dan Falbo)
**Speaker: A Unified Approach to Land
Management: Stearns County, MN**
Dennis Kron, Stearns Co., MN Director of
Land Management; County Surveyor
**Cadastral Standards and
Interoperability Considerations**
Jeanne Foust, ESRI
- 2:30-3:00 pm **Vendor Display/Poster Session/
Refreshments**
Sponsored by Graphics Plus
Door Prizes – Must be present to win

- 3:00-4:00 pm **CADASTRAL WORKSHOP –
PART II**
(Moderator: Brett Runge)
**Speaker: A Tribal Perspective on
Ownership Parcel Development**
Berne Jackson, Senior GIS Analyst,
Coeur d'Alene Tribe, Idaho
**Designing, Editing, and Maintaining a
Cadastral GIS Layer**
Chris Liske, ESRI
- 4:00-5:30 pm **ICE BREAKER –**
Sponsored by ESRI
Rushmore Plaza Holiday Inn Fountain
Court Lounge
- 5:30-10:00 pm **TRIP TO MOUNT RUSHMORE**
Sponsored by USGS
Seating limited to 47 – Sign up required
at registration table; Supper stop at Sonics;
Mt. Rushmore lighting ceremony
at 8pm

WEDNESDAY SEPTEMBER 19

- 7:00-8:00 am **Registration**
- 7:15-7:50 am **BHDMA Membership Meeting**
Foster Sawyer, PhD, President, BHDMA
Continental Breakfast Provided
- 8:00-8:20 am **WELCOME (Moderator: Foster Sawyer)**
Malcom Chapman, Rapid City Council
Darlene Piekkola, President, SD
Association of Assessing Officers
- 8:20-8:30 am **First Day of Conference - Outcomes**
Jenny Sorensen, PE, PhD, BHDMA
Sec/Treasurer
Dan Falbo, Private Sector Rep, BHDMA
- 8:30-9:10 am **KEYNOTE: (Moderator: Foster Sawyer)**
**Geographic Resources as a
Strategic Asset**
Hank Garie, GeoAnalytics
- 9:10-9:30 am **Vendor Display/Poster Session/
Refreshments**
Sponsored by Houston Engineering, Inc
Door Prizes – Must be present to win

WEDNESDAY SEPTEMBER 19 (CONT.)

CONCURRENT SESSIONS I AND II

Session I—Parcel Applications (Moderator: Linda Foster)

Session II—General Interest (Moderator: Denise Miller)

9:30 -10:00 am **I: Lawrence County, South Dakota
Cadastre**

Darlene Piekola, Director of
Equalization

Jason Writer, GIS Analyst

II: USGS Geospatial Activities

Ron Wencil, USGS MN Geospatial
Liaison

Steve Shivers, USGS Dakota
Geospatial Liaison

10:00-10:30 am **I: Applications for Parcel Data
Development at the County Level**

Harry Redman, District III GIS
Coordinator

II: GIS Standards and Interoperability

Jeanne Foust, ESRI

10:30-11:00 am **I: The Parcel Fabric for Emergency
Management**

Annette Theroux, President, Pro-West &
Associates, Inc., and Dan Falbo, ESRI

II: Water Resource Projects Using GIS

Jason Love, Teresa Whitney, and
Matthew Minnick, RESPEC

11:00-11:15 am **Vendor Display/Poster Session/
Refreshments**

Sponsored by Houston Engineering, Inc.
Door Prizes – Must be present to win

11:15-11:45 am **I: Parcel Data & Wildland Fire Manage-
ment: Long-Term Sustainability**

Kevin Hyde, METI, WFDDS/RAVAR
Technical Lead

**II: The Geographic Names Information
System—A User's Perspective**

Don Jarvinen, GIS Analyst, Rapid City
Ron Wencil, USGS MN Geospatial
Liaison

11:45-12:15 pm **I: Pennington County Cadastral Data—
Access and Use**

Bimende Malik, GIS Analyst, Rapid City

**II: GIS Datasets from the National
Weather Service**

Matthew Bunkers, National Weather
Service

12:15-1:30 pm **Luncheon and SPEAKER: (Moderator:
Foster Sawyer)**

Sponsor: The Sidwell Company

**A State and Local Perspective on a
Vision for National Land Parcel Data**

David Cowen, PhD

1:30-2:00 pm **WELCOME**

(Moderator: Foster Sawyer)

**State Perspective on the
Cadastral Initiative**

Otto Doll, South Dakota CIO

Erik Nelson, SD GIS Coordinator

CONCURRENT SESSIONS III AND IV

Session III—Facilitated Discussion of Cadastral Issues

(Moderator: Jenny Sorensen)

Session IV—Vendor Applications

(Moderator: Denise Miller)

2:00-2:45 pm **III: Facilitated Discussion – New Perspec-
tives on Cadastral Data Development**

**Speaker: Brown County, SD Cadastral
Uses and Issues**

Scott Madsen, Brown County GIS
Coordinator

Facilitated Discussion

Facilitator: Cheryl Chapman, PE,
Matrix Consulting Group, Inc.

**IV: Vendor Application Presentations
(20 minutes each)**

Sidwell Company, Brent Mainzinger
Pro-West & Associates, Inc., Annette
Theroux and Jennifer Ward

2:45-3:15 pm **Vendor Display/Poster Session/
Refreshments— Sponsored by ESRI**

Announcement of Logo Contest Winner and
Best Poster Winners

3:15-4:30 pm **III: Facilitated Discussion - Selecting a
Strategic Team**

**Speaker: The Importance of Cadastral
Mapping**

Steve Van Aartsen, Sioux Falls GIS
Supervisor

**Selection of the South Dakota
Cadastral Committee**

Facilitator: Cheryl Chapman, PE,
Matrix Consulting Group, Inc.

**IV: Vendor Application Presentations
(15 minutes each)**

Houston Engineering, Inc., Tim Penfield
Graphics Plus, Bruce Weyrich
Schneider Corporation, Sarah Ellingson
Compass Tools, Del Stewart

4:30-4:45 pm **Conference Wrap-Up and Introduction
to Statewide Cadastral Committee**

Meeting, September 20th – 21st

Foster Sawyer, PhD, President, BHDMA

Jenny Sorensen, PE, PhD, Sec/Treas,
BHDMA

Foster Sawyer

9/18/07 8:00am—Salon D

Welcome to “All Things Cadastral”

Jenny Sorensen and Dan Falbo

9/18/07 8:10am—Salon D

South Dakota’s Cadastral Initiative

Stu Kirkpatrick

9/18/07 8:30am—Salon D

Keynote Address: Creating a Statewide Multipurpose Cadastre-Issues, Challenges and Rewards

Stewart Kirkpatrick is the Montana (MT) State GIS Coordinator and GIS Bureau Chief. For the past eleven years, he has also served as the Project Manager for the Montana Cadastral Database, one of the first statewide efforts aimed at creating a framework cadastral database. He has over 18 years of GIS experience in Montana and has been active in the Montana GIS community. Regionally he is Montana’s delegate to the Western Governor’s Association GI Council and has served on the Steering Committee of the past two WGA Cadastral Forums. He is Montana’s delegated representative to the National States Geographic Information Council (NSGIC) and previously served two terms on the Executive Board of that organization. He also serves as the western states representative to the FGDC’s cadastral subcommittee.

Creating a statewide cadastral database is primarily an institutional and not a technological challenge. This presentation will compare and contrast some of the important institutional issues in Montana and South Dakota that are relevant when a state considers the collection, integration, maintenance and dissemination of statewide cadastral data. Some of the conditions that allowed Montana to create a statewide cadastre are either not present, or different in South Dakota. This may result in challenges that will need to be addressed up front. Additional factors may impact the ultimate usefulness of the database in terms of flexibility and the ability to track cadastral features beyond just tax parcels, yet the rewards can be great if good decisions and compromises can be made.

**David Cowen, Hank Garie, Stu Kirkpatrick,
Berne Jackson, Bob Ader, Dennis Kron, and
Kevin Hyde**

9/18/07 9:45 am—Salon D

Cadastral Experiences from National, State, Tribal and Local Perspectives

This panel discussion will cover perspectives from a national, state, tribal and local perspectives by individuals that have helped create and or implement cadastral layers.

Cheryl Chapman

9/18/07 10:30 am—Salon D

Facilitated Discussion: South Dakota Experiences and Perspectives

Cheryl Chapman, PE, is the President of Matrix Consulting Group in Rapid City, SD, consulting in the areas of environmental planning, community relations and Congressional outreach for communities, Tribes and private clients. From 1994-1997, she served as Principal Deputy Assistant Secretary of the Navy for Installations and Environment. She was elected to the Pennington County Commission in 1986, re-elected in 1990, and served until her Presidential appointment. She holds B.S. degrees in Civil Engineering and Mathematics and a Doctorate of Public Service from the South Dakota School of Mines and Technology. She is President of the Girls Scouts—Dakota Horizons; Vice Chair, Western Dakota Tech Foundation Board; Vice Chair, South Dakota Rural Enterprise; and a member of the South Dakota School of Mines Academic Advisory Board. She is married to Malcom Chapman and they have three children.

Bob Ader

9/18/07 11:45am—Hammons Room

Luncheon Address: Making the Business Case for a Cadastral Layer

Bob Ader is a geographer with the Bureau of Land Management (BLM), Cadastral Survey in the Lands and Realty Program. He has over 30 years of experience with spatial data processing primarily with the BLM. Applications range from comprehensive resource management plans to energy development, environmental impacts, use authorizations, wildland fire applications, landscape modeling, and resource protection. He is a chairperson of the FGDC Subcommittee for Cadastral Data. For the past ten years, he has worked with BLM Cadastral Survey’s digital boundary initiative or Geographic Coordinate Data Base. In August of 2000, Bob was certified as a “friend” of cadastral surveyors. Bob has a MS in Geography from the University of South Carolina.

Luncheon Address: Making the Business Case for a Cadastral Layer (cont.)

This presentation will summarize the characteristics and complexity of cadastral data in a GIS context and explore factors to consider in developing a business case for a state level cadastre in South Dakota. Factors will range from the business needs and benefits to data stewardship and levels of standardization. In addition, considerations for an approach to defining and implementing a statewide cadastre will be discussed.

Dennis Kron

9/18/07 1:15 pm— Salon D

A Unified Approach to Land Management: Stearns County, MN

Dennis Kron is the Director of the Land Management and County Surveyor at Stearns County. He has over 18 years in the private Survey Profession, working in both Land Surveying and Engineering Survey areas. He has been employed in county government for 17 years—10 years as a Deputy Auditor/Land Records Spec. and 7 years as Director of Land Management/County Surveyor and also Deputy Auditor. He is a member of the Task Force for the Secretary of State on Electronic Real Estate Recording. He is also a board member of the Minn. Counties E-commerce Committee and is a member of Minn. Society of Prof. Surveyors.

In Minnesota, a major business role of county government is the creation, maintenance, and management of land records. This includes business processes to manage the measurements and coordinate control of the parcel fabric, business processes for the creation and maintenance of a seamless representation of the land base, and procedures for linking to associated land-based business applications. Stearns County has implemented an aggressive and unified strategy to merge these business processes and systems using GIS. The goal is to let any land-related departmental function be driven by the simple query of a parcel layer via a portal application. Presentation highlights will include the business drivers for this approach and outline the issues concerning its implementation along with costs, benefits, and the need for cross-department and multi-jurisdictional cooperation.

Jeanne Foust

9/18/07 1:15 pm— Salon D

Cadastral Standards and Interoperability Considerations

Jeanne Foust is Global Manager for Spatial Data Infrastructure at ESRI. A geographer trained in Remote Sensing and GIS, she did her graduate work at University of South Carolina and has been with ESRI for 18 years. She manages ESRI's work on Standards Organizations, and as such, is a member of the ANSI INCITS L1 standards body and a delegate to ISO Technical Committee 211 for the United States Government, serves on the Geospatial Intelligence Standards Working Group, and OGC Technical Planning Group.

This session will cover the requirements for Cadastral system interoperability and the emerging standards that will ensure this interoperability. Dejure and emerging defacto cadastre standards will be reviewed as well as their linkages between GIS community standards.

Berne Jackson

9/18/07 3:00 pm— Salon D

A Tribal Perspective on Ownership Parcel Development

Berne Jackson's first contact with GIS was at Power Engineers (Hailey, ID) in 1989 where he worked as a computer tech, programmer and database administrator. In 1994, he went to the University of Idaho and studied for a masters degree in Geography with a GIS emphasis. In 1995, he was hired as a summer intern at the Coeur d'Alene Tribe (Plummer, ID), was hired full time in 1996 as a GIS Analyst and has been there ever since. He is currently the Tribe's Senior GIS Analyst with the primary role to maintain the Tribe's extensive spatial database, servers and workstations.

This presentation will cover the Coeur d'Alene Tribe's development of GIS ownership parcels, the reasons for that development and the future of GIS parcel data in North Idaho.

Chris Liske

9/18/07 3:00 pm— Salon D

Designing, Editing, and Maintaining a Cadastral Layer

Chris has been with ESRI for 8 years, spending the last 3 years as a Technical Marketing Representative in the Minneapolis regional office, supporting clients with ESRI software demonstrations and workshops focused primarily in state and local government. Chris spent 5 years at ESRI's corporate headquarters in Redlands, CA where he worked out of the Professional Services division as a technical analyst focusing on geodatabase design, data conversion, and migration for local government customers all across the country. Chris is originally from a small town in central Wisconsin called Stetsonville, growing up an avid outdoorsman. He graduated from the University of Wisconsin - Stevens Point with a double major in GIS & Natural Resource Management.

The purpose of this presentation is to introduce the geodatabase for GIS cadastral data storage and maintenance. Geodatabase design considerations will be discussed along with an overview of common editing workflows and maintenance tools available with ESRI's ArcGIS 9.2 desktop software. Demonstrations of the tools and concepts will be available at ESRI's vendor display.

The second day of this conference offers two concurrent tracks. One session will highlight general GIS topics and offer vendor application talks and demonstrations. The other session highlights cadastral issues in preparation for the work the cadastral committee will focus on later in the week.

Welcome Addresses

9/19/07 8:00 pm— Salon D

Malcolm Chapman

Malcom offers consulting and workforce education based on a model he designed, known as *Harvesting the Company Mind*®. This model is a corporate knowledge cycle, which consistently produces information about customer needs. In *Harvesting*, Malcom teaches how to lead, sell, and deliver extraordinary customer service. He conducts seminars and speeches nationwide and has motivated thousands toward peak performance and high achievement. "Chap", started his professional sales career after leaving the service as a US Marine Corps Captain. In 1996 he started *the Chapman Group*. In 1999, Malcom was one of the founders of the Black Hills Society for Training and Development. He is a trainer on the staff of South Dakota State University, and has consulted with and for the Center for Naval Analysis, a Washington, DC naval think tank on base closing issues as it relates to the community's youth. He is actively involved in many community activities and was in 2004 elected to the Rapid City Common Council. In 2006 he was unopposed in his re-election and is currently serving as Council President. He is married to Cheryl Kandaras Chapman and has three children.

Darlene Piekkola

Darlene has been the Director of Equalization for Lawrence County for sixteen years. Prior to moving to Lawrence County, she was the Director in Harding County for eight years. Her previous experiences include private appraising, restaurant and lounge owner, and Chief program clerk for the Farm Service Agency.

Hank Garie

9/19/07 8:30 am— Salon D

Designing, Editing, and Maintaining a Cadastral Layer

Hank Garie is currently the Director of State and Federal Practice at GeoAnalytics, a system's integration and consulting firm that specializes in Spatial Intelligence - the integration of business information, geographic information and analytics. Hank served as the Executive Director of Geospatial One Stop from January 2003 until September 2006 when he entered the private sector. The centerpiece of Geospatial One Stop is a web-based portal for one-stop access to spatial data sources, digital maps, web services, and partners that simplifies the ability for government and citizens to find geospatial resources. Hank also has over 20 years of management experience in State government. He is a past president of the National States Geographic Information Council, was a member of the Mapping Sciences Committee of the National Research Council and has served on numerous national advisory groups. He is a graduate of Rutgers University with a Master of Science degree in Environmental Science.

This presentation will stress the importance of using geographic resources as strategic assets. It will also draw upon personal experiences working in State and Federal government and most recently in the private sector to focus on the importance of place-based information as assets to help decision makers effectively manage business functions in their organizations. Location matters in the daily activities and issues facing executive leaders and policy makers. Through working examples and practical experience, it will be demonstrated the importance of integrating geographic resources with business data; and it will be stressed the value of sharing information across organizational boundaries.

Darlene Piekkola and Jason Writer

9/19/07 9:30 am— Salon D, Concurrent Session I

Lawrence County, South Dakota Cadastre

Darlene has been the Director of Equalization for Lawrence County for sixteen years. Prior to moving to Lawrence County, she was the Director in Harding County for eight years. Her previous experiences include private appraising, restaurant and lounge owner, and Chief program clerk for the Farm Service Agency.

Jason has been with the Lawrence County Equalization office for six years; first as an appraiser and then as the GIS Coordinator. Jason has dedicated the last three years to identifying and mapping all parcels in Lawrence County, as well as working with other agencies to coordinate GIS information. His current business ventures include being part owner of Deadwood Bicycles for the last three years.

Lawrence County, South Dakota Cadastre (cont)

The presentation will revisit the trials and errors of creating a GIS system from scratch, the costly mistakes that were made and where we are today. Maps of "yesteryear" versus the GIS system of today display the many in-accuracies that have been built into the system. Correct land ownership information is a critical infrastructure layer for the Equalization Office in order to determine size, location and legal description for tax purposes. Investigation and research of prior deed transactions often found that properties were "dropped off" the tax rolls or that properties were being assessed twice, under two different legal descriptions. Without an accurate land map where a complete inventory of the county could be ascertained, there was no way for the equalization office to discover the errors.

Ron Wencil and Steve Shivers

9/19/07 9:30 am— Salon BC, Concurrent Session II

USGS Geospatial Activities

Ron Wencil is the US Geological Survey (USGS) Geospatial Liaison for Minnesota. He works with federal, state, and local government agencies to assess geospatial data requirements and promotes cooperative efforts to meet the goals of the USGS National Geospatial Program Office. He has been a Cartographer/Geographer in the Federal government for over 25 years in various positions and has been the Liaison in Minnesota for nearly 12 years. He participates with the Minnesota Governor's Council on Geographic Information and Metro GIS as well as other regional working groups and committees and is also active in the American Society for Photogrammetry and Remote Sensing (ASPRS).

Steve Shivers will join the Central Region NSDI Partnership Office as the USGS Geospatial Liaison to North Dakota and South Dakota in October. He has 23 years of experience with the U.S Geological Survey. He opened the prototype Earth Science Information Center (ESIC). He served as Chief of the ESIC and later joined the ESIC National Management Team in Reston to provide training and information coordination services for the ESIC network. He was most recently serving as the National Coordinator for Knowledge Management and Information Delivery within the Natural Science Network. He has served as the Alaska Regional President for the American Society for Photogrammetry and Remote Sensing, and is also a certified interpretive guide as recognized by the National Association for Interpretation. He has a B.S. in Geography from Oregon State University with additional courses in GIS from the University of Alaska - Anchorage.

USGS Geospatial Activities (cont)

The USGS National Geospatial Program Office (NGPO), oversees the portfolio of national geospatial programs that are housed within the USGS. This includes the Federal Geographic Data Committee (FGDC), the Geospatial One-Stop (GOS) project and The National Map. The primary purpose of the NGPO is to advance the development of the National Spatial Data Infrastructure (NSDI) for the Nation. There are numerous updates for NSDI activities including recent developments in data, such as the National Hydrography Dataset (NHD), the National Elevation Dataset (NED), and other programs managed by the USGS. Additional changes in the NSDI Partnership Office Liaison Network and the National Geospatial Technical Operations Center (NGTOC) within the USGS Geospatial Information Office (GIO) will be discussed.

Harry Redman

9/19/07 10:00 am— Salon D, Concurrent Session I

Applications for Parcel Data Development at the County Level

Harry Redman, GISP, is currently the GIS Coordinator at Planning & Development District III in Yankton, South Dakota, where he has been employed for 9 years. Harry graduated from Northwest Missouri State University with a degree in geography. Since then, he has been at work introducing GIS and GPS technology to the rural, southeastern region of South Dakota. Harry has over eight years of experience in GIS, including GIS and database management, environmental planning, E911, county GIS parcel, and various GIS data conversions for state, county, municipal, and Tribal governments. He has a thorough understanding of ESRI ArcGIS software and data models and has acquired additional software and hardware skills that utilize Leica GS-50 and Trimble Pro XH GPS units.

This presentation will discuss parcel data and how it relates to county/city applications. Also discussed will be how counties use parcel data within Planning and Development District III's service area in relation to Zoning, Water Districts, Emergency Management.

Jeanne Foust

9/19/07 10:00 am— Salon BC, Concurrent Session II

GIS Standards and Interoperability

Jeanne Foust is Global Manager for Spatial Data Infrastructure at ESRI. A geographer trained in Remote Sensing and GIS, she did her graduate work at University of South Carolina and has been with ESRI for 18 years. She manages ESRI's work on Standards Organizations, and as such, is a member of the ANSI INCITS L1 standards body and a delegate to ISO Technical Committee 211 for the United States Government, serves on the Geospatial Intelligence Standards Working Group, and OGC Technical Planning Group.

This session will review interoperability enablers that must be considered when building an interoperable and open GIS architecture. Focus will be given to GIS dejure standards and understanding OGC, ISO TC211 and how the process of standards development informs software engineering.

Annette Theroux and Dan Falbo

9/19/07 10:30 am— Salon D, Concurrent Session I

Land Records and Emergency Management

Annette Theroux is President of Pro-West & Associates, Inc. Her expertise includes developing multi-purpose cadastral data and implementing enterprise GIS to meet the business needs of counties and cities. She has a long and varied experience in the GIS industry contributes to the innovative technology and geospatial standards employed by her firm in GIS data development and programming.

Dan Falbo has been with ESRI since 1990 specializing in State and Local Government Solutions and works primarily in South Dakota, North Dakota, Minnesota, and Cook County, IL. Previously, Dan worked for the State of Minnesota Land Management Information Center (1985-1990) and the US Forest Service (1980-1984). Dan has a BA and MA from the University of Minnesota.

This presentation will focus on the multipurpose nature of the cadastre and details data and application development issues to meet the needs of Public Safety and Emergency Managers.

Jason Love, Teresa Whitney and Matthew Minnick

9/19/07 10:30 am— Salon BC, Concurrent Session II

Water Resources Projects Using GIS

Jason Love is a water resources engineer with a strong educational background and 10 years of professional experience in surface-water quantity and quality modeling and advanced computer applications in environmental engineering. He has education and experience with ESRI's ArcGIS along with the Spatial Analyst and 3D Analyst extensions. He is also proficient with geodatabase design and computer programming with several languages.

Teresa Whitney has been working as an environmental engineer for 14 years. She is currently working on a watershed assessment project using ESRI's ArcGIS, including Spatial Analyst and 3D Analyst extensions and Model Builder; geodatabase design; geoprocessing; and data models. She also is proficient with statistical analysis, including the use of Minitab statistical software.

Matthew Minnick is a geological engineer with a strong educational background in soil mechanics and GIS with 2 years of professional experience in soils engineering and testing. He joined RESPEC in January 2007. He has experience in geology, slope stability analysis, and geotechnical engineering and using ESRI's ArcGIS with Spatial Analyst and 3D Analyst extensions, Model Builder, and geodatabase design and geoprocessing. He developed the Black Hills Development Suitability Risk Model currently in use by Pennington County Planning Commission.

This presentation will discuss three projects that highlight RESPEC's use of ESRI's geodatabase and Model Builder as tools to develop innovative, holistic, and cost-effective solutions. ESRI's Geodatabase and Model Builder provide a framework to do this through data integration and reusability. The projects to be discussed include work done on uranium permitting, watershed assessments, and land suitability for development.

Kevin Hyde

9/19/07 11:15 am— Salon D, Concurrent Session I

Parcel Data & Wildland Fire Management: Long-Term Sustainability

Kevin Hyde works as a water resources and landscape analyst researching and developing decision support systems under contract with the US Forest Service. He is the technical author of RAVAR, Rapid Assessment of Values at Risk from wildland fire. RAVAR was implemented during the 2007 fire season as a nationwide standard for wildfire risk assessment. Another system he developed which assess post-fire risks is currently undergoing field testing. He has worked closely over the past several years with the Cadastral Subcommittee of the Federal Geographic Data Committee to help inventory and compile all available parcel data for the Western US for use in the RAVAR system

Justification for wildfire suppression expenditures has shift from cost per acres suppressed to value of resources protected. Residential and commercial structures are generally the most expensive and dangerous resources to protect. County and state GIS-based parcel data records permit rapid identification of approximate structure locations and asset value. Parcel data were systematically inventoried and compiled for the Western US to support the 2007 wildfire season and results of parcel based analysis were incorporated into an automated, web-based Wildland Fire Decision Support System (WFDSS). Long-term sustainability of the WFDSS system and broader-based all hazards response tools requires that we work together, across programs and jurisdictions to develop an efficient, standardized, and integrated parcel data infrastructure.

Don Jarvinen and Ron Wencil

9/19/07 11:15 am—Salon BC, Concurrent Session II

The Geographic Names Information System—A User's Perspective

Ron Wencil is the US Geological Survey (USGS) Geospatial Liaison for Minnesota. He works with federal, state, and local government agencies to assess geospatial data requirements and promotes cooperative efforts to meet the goals of the USGS National Geospatial Program Office. He has been a Cartographer/Geographer in the Federal government for over 25 years in various positions and has been the Liaison in Minnesota for nearly 12 years. He participates with the Minnesota Governor's Council on Geographic Information and Metro GIS as well as other regional working groups and committees and is also active in the American Society for Photogrammetry and Remote Sensing (ASPRS).

Don Jarvinen is a GIS Analyst for Pennington County and Rapid City GIS and is part of the Rapid City Growth Management Department. He has worked in the GIS field since 1994 in Maryland, Montana, and South Dakota. He holds a BS in Geography from the University of Alaska Fairbanks and a MA in Geography from the University of Maryland. He is a former Air Force weather forecaster and Air Force Reserve engineering technician.

The Geographic Names Information System is probably unknown among the majority of GIS users in our region. It contains a wealth of information that can be used to enhance GIS operations. With a relatively small amount of processing, users can have a spatially-enabled database of current and historical names. This presentation will discuss some of the uses, problems, and procedures of the Geographic Names Information System.

Bimende Malik

9/19/07 11:45 am—Salon D, Concurrent Session I

Pennington County Cadastral Data—Access and Use

Bimende Malik is a GIS Analyst for Pennington County and Rapid City GIS and is part of the Rapid City Growth Management Department.

This presentation will discuss the evolution of the Cadastral Data in Pennington County. Also the data use by the City/County offices and the general public. Future developments of the data / work flow: - improving data accuracy, derivative data sets and their purpose will also be touched on.

Matthew Bunkers

9/19/07 11:45 am—Salon BC, Concurrent Session II

GIS Datasets from the National Weather Service

After graduating from Dell Rapids High School in eastern SD in 1988, Matt attended the South Dakota School of Mines & Technology for his B.S., M.S., and Ph.D. degrees in meteorology. Matt has worked for the National Weather Service in Rapid City since 1991, and he has been the Science and Operations Officer since 2003. He resides in Rapid City with his wife and three daughters.

A brief introduction to the NWS will be given, followed by an overview of the current GIS datasets available from the NWS. Although there are a variety of GIS datasets and available formats, a significant portion of the talk will focus on a description of radar data and how they might be used in a GIS. As time allows, additional discussion will focus on GIS datasets pertaining to severe-storm warning polygons, severe-storm reports, and forecast data.

David Cowen

9/19/07 12:15 pm—Hammons Room

Luncheon Address: A State and Local Perspective on a Vision for National Land Parcel Data

David Cowen is former chair of the Department of Geography, co director of the Center for GIS and Remote Sensing, and a Carolina Distinguished Professor of Geography at the University of South Carolina. He is the 2005 recipient of the ESRI Lifetime Achievement Award in GIS. He chaired the Mapping Science Committee of the National Research Council for six years, is a National Associate of the National Academy of Sciences and a member of the NRC Board on Earth Sciences and Resources and the Board of the Geographic Information Systems Certification Institute. He is also the current chair of the NRC Study Committee "Land Parcel Databases: A National Vision". Since 1967 his research and teaching interests have focused on the development and implementation of geographic information systems in a wide range of settings.

This presentation will focus on the state and local perspectives regarding the vision and recommendations of the new National Research Council Study "National Land Parcel Data: A Vision for the Future". This report presents a summary of the current status of land parcel data at all levels of government in the United States and outlines the major challenges facing the federal government if it attempts to coordinate a national perspective on parcel data. Particular emphasis will be placed on the issues directly relating to intergovernmental relationships and incentives.

Otto Doll and Erik Nelson

9/19/07 1:30 pm—Salon D

A State and Local Perspective on a Vision for National Land Parcel Data

Otto Doll was appointed South Dakota's First Chief Information Officer (CIO) in July 1996 is responsible for all state government computers, telecommunications, state radio, and public broadcasting. He has advised Fortune 1000, Federal, State, and Local Government CIOs on information technology assessment and alignment to business needs. He has served as a Director with the United States General Services Administration, developing information technology strategic plans and oversight policy. He received his Computer Science degree from Virginia Tech and is a Senior Executive Fellow of the Kennedy School of Government, Harvard University.

Erik Nelson is the GIS Coordinator for the State of South Dakota.

The state is very interested in a statewide cadastral dataset. The State of South Dakota wishes to partner with city, county, federal, private, and tribal entities to obtain a statewide cadastral dataset. We believe with this statewide GIS dataset, both local and state agencies would be able to make better decisions. The State of South Dakota is currently seeking input towards defining its role in developing a statewide cadastral dataset.

Cheryl Chapman

9/19/07 2:00 pm—Salon D, Concurrent Session III

Facilitated Discussion: New Perspectives on Cadastral Data Development

Scott Madsen

9/19/07 2:00 pm—Salon D, Concurrent Session III

Brown County, SD Cadastral Uses and Issues

Scott Madsen studied Landscape Architecture at Iowa State University where some of his earlier GIS projects included urban and regional planning, land cover change assessments, agricultural and rural home site suitability studies, roadway impact assessments, vegetation and wildlife inventories and the documentation of historical landscapes for the National Register of Historical Places. His subsequent employment with the SD Dept of Transportation involved the collection and management of local road system data. Since July 2005, he has served as the GIS Coordinator for Brown County, SD and am the contact person for the NorthEast SD GIS (NESDGIS) Users Group.

Brown County, SD Cadastral Uses and Issues (cont)

A Geographic Information System (GIS) provides Brown County, SD with an improved framework for storing, identifying and analyzing cadastral (land parcel) data. Within Brown County's GIS-enabled work environment, cadastral data supports planning and development decisions by providing local decision makers with essential land ownership, valuation and zoning information; it empowers emergency responders by supporting the coordination of a multi-agency response to natural and technological hazards; it authenticates information served out to the public through a variety of media outlets including the World Wide Web; and it improves efficiency in the work place while enhancing public safety.

Vendor Application Presentations

9/19/07 2:00 pm—Salon BC, Concurrent Session IV

Sidwell Company

The Sidwell Company specializes in development and implementation of GIS and mapping services. Among the comprehensive products and services offered by the company are GIS planning, design and implementation; data conversion and cadastral database development; aerial photography; software development; photogrammetric services including topographic, planimetric, and digital orthophoto mapping; project management, and training and technical support services such as web hosting for GIS data. Sidwell is an Authorized ESRI Business Partner. In 2003, Sidwell was named a Foundation Partner by ESRI, in recognition of the company's hard work and dedication in client services and advancement in GIS technology. In business since 1927, Sidwell is an employee-owned firm offering experienced staff, quality products and services, and the finest in ongoing client support.

Pro-West & Associates, Inc.

Pro-West & Associates, Inc. (PWA) has been providing GIS and information management services to regional and national clients since its founding in 1987. It has become one of the largest and longest-established GIS firms in the Upper Midwest, and has gained extensive experience with local government, public utilities and natural resources management. In 1987 the company employed an engineer and a forester; today PWA employs consultants, programmers and technicians who collectively Pro-West & Associates has been an authorized ESRI Business Partner since 1990 and were acknowledged as an ESRI Partner of the Year in 2000 and again in 2006.

Cheryl Chapman

9/19/07 3:15 pm—Salon D, Concurrent Session III

Facilitated Discussion: Selecting a Strategic Team

Steve Van Aartsen

9/19/07 3:15 pm—Salon D, Concurrent Session III

The Importance of Cadastral Mapping

Steve Van Artsen is the City of Sioux Falls GIS Supervisor, Sioux Falls, SD. He has a Master of Science Degree in Geography from South Dakota State University. He manages the Geographic Information System (GIS) program activities at the City of Sioux Falls. Steve began working for the City Engineering Department more than 20 years ago and he has been involved with the development of the City's GIS program since 1990. He coordinates GIS applications for all City departments including Engineering, Fire Rescue, Health, Parks/Recreation, Planning/Building Services, Police, and all the divisions of Public Works. Approximately 125 city employees use GIS software as it applies to a variety of mapping tasks and geographic analysis.

In 1990 the first goal established by the joint City of Sioux Falls and Minnehaha County GIS Technical Committee was to establish a cadastral basemap. A variety of editing procedures, data capture tools, and database administration processes have been tested and explored throughout the years. The standards, accuracy requirements, and software tools have all improved but the basic need for a good cadastral basemap continues to be the underlying foundation in the development of a useful geographic information system. This presentation will show several of the current uses of the City of Sioux Falls Multipurpose Cadastre and highlights the importance of partnering with other departments and agencies.

Vendor Application Presentations

9/19/07 3:15 pm—Salon BC, Concurrent Session IV

Houston Engineering, Inc

Houston Engineering is a full-service engineering consulting firm, which provides engineering, surveying and environmental consulting services to clients in the private and public sectors. Today, Houston Engineering, Inc. is recognized as a regional leader in water resources management. We are also known for municipal engineering, transportation engineering, surveying, and GIS services. Engineering projects require precision data, and many projects are supported with data provided by Geographic Information Systems (GIS) technology. Houston Engineering's GIS experience encompasses simple basemaps to complex interactive maps and Internet databases.

Graphics Plus—Rushmore Survey Equipment

Rushmore Survey Equipment has been in business for 24 years. We are a family-owned business selling supplies and equipment to surveyors, engineers, architects and contractors. We are an authorized dealer for Topcon, Pentax, Hewlett Packard, David White, CST, Seco, Brunton, Laser Tech, Laser Reference and more.

Schneider Corporation

At The Schneider Corporation, we are a team of engineers, surveyors, computer specialist, architects, landscape architects and programmers all working collectively in the business of land development - because that's the business of our clients. The Schneider Corporation offers services in engineering, surveying, GIS, architecture and 3D multimedia. For over two decades, The Schneider Corporation has been providing GIS solutions to municipal, county and state government agencies. The Schneider Corporation's experience with GIS is extremely strong, with over 300 years of combined GIS experience.

Compass Tools

CompassTools is dedicated exclusively to the GIS Industry, specializing in field data collection tools since 1994.

CompassTools is focused on sales, service, support, repairs and training for GPS data collectors, laser rangefinders, digital cameras and imagery, each as stand-alone products or integrated to create field data solutions. CompassTools has a dedicated sales force, technical support, and training teams and are also licensed resellers for: Trimble, Autodesk, ESRI, Laser Technology, Ricoh, GeoSpatial Experts, Spatial Data Technologies, Lizard Tech and GeoEye.

Conference Wrap-up and Introduction of the Statewide Cadastral Committee Meeting

9/19/07 4:30 pm—Salon D

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