

Notes from February 28th – March 1st, 2006 NSMGC Meeting
Santa Fe, New Mexico

Tuesday, February 28th

Attendees

<i>Name</i>	<i>Representing</i>
Bill Card, Chair	OSM-East
Larry Evans	IMCC
Rick Koehler	WIEB
Len Meier	OSM Mid-Continent
Doug Mullins	NAAMLPL
Steve Parsons	OSM-HQ (second day)
Al Wilhelm	OSM-West

Preview

The first National Surface Mining Geospatial Committee (NSMGC) meeting of 2006 began with a review of the agenda and dissemination of a slightly revised agenda provided by Bill Card. The main additions were to find some time for Larry Evans to inform the Committee on three topics: comparing ArcIMS to ArcGIS Server as a potential web-map-serving technology, the International Miner's Health & Safety Symposium to be held at Wheeling Jesuit University, and possible use of a travel-tracking software package to help with meeting logistics in the future. These items were added to agenda on a flexible basis.

The primary goals for this meeting were discussed; they are as follows (each will be discussed in greater detail elsewhere within this document):

1. Finalize the geospatial questionnaire to be sent to all related programs;
2. Make a decision on the FGDC Mining Data Standards Workshop;
3. Review the agenda for the 2006 Geospatial Data Stewards Meeting;
4. Approve the NSMGC Charter

Review FY 2006 Proposed Activities

The committee reviewed the schedule of activities proposed for FY 2006. Briefly, these activities include surveying SMCRA organizations for geospatial development status, hosting a national meeting of SMCRA geospatial data stewards, conducting a data standards workshop for the first two prototype mining data sets, funding training of selected data stewards in RDBMS, and conducting a class in ArcSDE for SQL Server.

Geospatial Questionnaire Session #1

The draft geospatial questionnaire was initially reviewed and the consensus was the questionnaire, with some modifications, would be ready to be sent out to the various organizations. The format is that of a quick snapshot of GIS activities and capabilities

within the responding organization, with the intent of not making the completion of the questionnaire an onerous task that is put off until a later date (and forgotten about). Within the sample questionnaire, Bill Card had completed a "Typical" response for his office, to show the type and level of detail anticipated in the responses. Some discussion ensued as to whether it would be advantageous or not to include such "sample" responses. In the end, it was decided that, although a "sample response" might serve as a guide for respondents, it might also act as a limiting factor or unnecessarily categorize their own responses too much, so no "sample response" will be included in the questionnaire.

A date for the initial launch was selected – March 8th, 2006. Bill Card will send the questionnaire to the TIPS manager for distribution to the Service Managers. The Service Managers will be requested to send the questionnaire to the appropriate individual within each of the various state programs, OSM offices, and tribes. On March 21st, Card will generate a list of "non-respondes", which he will forward to OSM Service Managers for follow-up calls. OSM Service Managers will conduct the follow-up calls on or about March 22nd. The final date for return of the survey will be March 29th.

A side discussion began, concerning the appropriateness of OSM providing RDBMS training to any state program which wanted it. Some group members (Rick, Larry, Al) felt RDBMS training was beyond the purview of TIPS. They believed that although training in RDBMS would be necessary for a state to take advantage of geospatial technologies, and especially ArcSDE, it was not "GIS training" any more than training in using word processing, etc. If an agency needed to send someone to RDBMS training, it would likely not have the agency infrastructure to support a RDBMS in place, and hence the training would be out-of-date by the time the software was purchased, installed, and set up for proper administration. Others in the group (Bill, Len) believed that RDBMS training was so tightly integrated with the goals of the NSMGC and with creating and using a GIS that it should be part of the training offered by the NSMGC. In the end, it was decided to wait until the questionnaire responses were compiled before making a decision on this topic. During the April 18th telephone conference, the issue of RDBMS training will be discussed further.

FGDC Workshop

The issue of holding a workshop to create national coal mining geospatial data standards was then discussed. During this discussion, it became evident that because of the scope of the group, extending to both surface and underground operations, for both Title IV and Title V programs, but only for coal mining, the group name should be changed from the National Surface Mining Geospatial Committee (NSMGC) to the National Coal Mining Geospatial Committee (NCMGC). All agreed to the name change.

Group members questioned how the attendees for the FGDC Workshop on Coal Mining Data Standards (hereby shortened to CMDS WS) would be selected, especially from what types of background or expertise (GIS, RDBMS, AML, Coal Permitting, etc.)? For the CMDS WS to be effective, it would need expertise from a range of disciplines, since there are aspects of GIS, database management, etc. encompassed within creating

geospatial standards. Also, the original idea of having representatives from the states and OSM was broadened to include the possibility of having representatives from industry (the National Mining Association?), tribes, the BLM, MSHA, etc.

The committee considered whether the CMDS WS should be held prior to the Data Stewards Meeting (as originally scheduled), during, or after the Data Stewards Meeting (to take advantage of input and lessons learned during the Data Stewards Meeting). The group felt it was premature to hold the CMDS WS at this time, and also began to question how soon any involvement from the FGDC would be needed or desired. Consensus was that the Data Stewards Meeting should come first, followed by preliminary meetings and discussions among key personnel (more on that later), and finally possibly involving the FGDC at a later date. The group felt this was the most efficient way to deal with this issue, especially considering the expense of getting FGDC personnel ... we might not be ready for them.

On the topic of "who attends", agreement was reached that the same entities that supplied representatives for the NCMGC (the IMCC, the WIEB, the NAAML, and OSM) would nominate two (2) representatives each to serve on a CMDS Working Group (a different name might be used). It was determined that the nominees should have technical expertise in at least one of several areas, as identified above (GIS, RDBMS, AML, Coal Permitting, etc.), as opposed to using other selection criteria. The list of nominees would be reviewed by the NCMGC members, and eventually an approved list of approximately eight (8) members for the CMDS Working Group would be finalized. The group also felt that an additional ninth member could be added by the NCMGC members if there were areas of expertise "needed-but-not-covered" by the initial eight members.

Committee Member Reports

The various Committee members gave reports gathered from information supplied by their respective constituencies. The response level from constituents was not very high for any of the members. Although each member had sent out requests for input to the organizations they were representing, most received input from only two or three organizations.

Larry Evans – IMCC: Larry reported that Greg Conrad is having e-mail difficulties, but Larry is working to keep Greg informed.

Al Wilhelm – OSM-West: Al has been working hard on the EGIM effort since September, which clearly has an impact on the NCMGC activities and direction, as well as on all of OSM and of course, DOI as a whole. Billie Clark wants the NCMGC and EGIM efforts to be synchronized, to work in concert with each other. Some key objectives are to review agency/program grants in excess of \$1 million, with an eye towards data layers, and any geospatial language (purchases, projects, etc.) contained within any grant application or request for expenditure. Are these requests oriented towards making the eventual outcome or product shareable? If they aren't intended as such, why not? Could they be re-configured to make them more useful to a broader range of folks?

AI briefly touched upon the DOI blue-printing process relating to OSM datasets and layers. This is a topic that EGIM is already working on, and conflicts have turned up concerning entities, layers, standards, business process needs, all of which need sorting out as the process moves forward.

Western state GIS efforts at OSM are centered on converting from personal geodatabases to enterprise/ArcSDE-level geodatabase structures. Greg Morlock and AI are busy with this effort. In addition, OSM-West has hired an entry-level GIS person to work on such things as creating a data dictionary, doing conversions/reprojections from NAD27 to NAD83, and defining naming conventions for attributes, etc. AI also said it was important to find the time to sit down with program people and create a dialogue.

Doug Mullins – NAAMLPLP: Doug said he had received a limited reply to his requests for input, and that this was perhaps related to possible limited use of GIS by AML programs as compared to the coal permitting side of SMCRA. He described activities of the Virginia mapping standards workgroup, comprised of representatives from industry, the regulatory authority and consultants, which was working on CAD drawings and creating a template for layers.

Len Meier - OSM-Mid-Continent: The OSM Mid-Continent office has been trying to set up a server with Microsoft SQL Server and ArcSDE. This server was paid for by TIPS from money set aside in the budget for our committee. TIPS will supply ArcSDE software; Len is still trying to get Microsoft SQL Server from OSM headquarters. Two employees (Min Kim and Mick Ahrens) have received ArcSDE and SQL Server training; a contractor has some experience to help. The staff has looked around among various state and OSM offices to discover what GIS expertise might be "out there" to help them; they plan to meet with the Indiana and Illinois programs in April or May, along with the Illinois AML GIS program folks at some future date.

Rick Koehler - WIEB: Had sent out requests to Colorado, Utah, Wyoming, Montana, North Dakota, and Alaska; had received responses from Dave Berry for Colorado and Duane Bays for Montana (along with Marcelo Calle of Wyoming post-meeting). Colorado said they appreciated the ongoing support and assistance of TIPS, especially as it is tailored to the diverse needs of the various states. Colorado has made progress with its GIS program, but looks forward to having some standards and guidelines to reference, including a common projection, documentation and metadata guidelines, and guidelines on data storage and "refresh frequency" issues. Training is a priority. They are moving forward with vector data development, but need imagery. They are currently using TerraServer imagery, but data currency and storage are issues, which leads them to think that perhaps some sort of central storage and distribution system might be considered.

Montana's primary issue is data standards: attributes for a national coal database, data types and lengths, and spatial data quality. They'd like to see broad national guidelines established for state programs. They've also been preparing personal geodatabases from typical sources (AutoCAD drawings, shapefiles, etc.) for eventual inclusion into SDE. They want to learn more about ArcSDE admin, etc., and discover if their Coal program

needs might be best met by having their data in both a local SDE database and a national one (perhaps stored on a TIPS server in part?).

New Mexico is continuing to build their Coal GIS capabilities, and have recently hired another GeoScientist to do GIS work for the Mining & Minerals Division. The new person will be primarily focused on non-Coal mining workgroups, but will also work on AML and some Coal projects. The NM AML program will be ramping up into GIS but still needs a lot of work within the database creation area first. New Mexico is very appreciative of TIPS, and supports the concept of collaboration amongst the states, tribes, and OSM through the NCMGC. They believe their interests will be with sharing selected datasets on a national level, perhaps developing a distributed web-map serving network using WMS technology from the Open GIS Consortium. New Mexico might also request ESRI ArcSDE, along with training and assistance in setting up the administration of SDE at some future date, as they move into a enterprise-level geodatabase structure.

Bill Card - OSM-East: Al Klein and Billie Clark have kept the OSM Core Leadership Team informed about NCMGC activities and are working hard to maintain support for GIS from “the business side of the house.” In other bureaus, GIS seems to be more IT-centric. For our work to be truly successful, our line managers need to defend their SMCRA business process-related needs. The Knoxville Field Office maintains a GIS to support the programmatic needs of the Federal Program for Tennessee. This activity is very similar to the regulatory activities of other state coal mining regulatory authorities.

The role of the Appalachian Region office in the work of the NCMGC was discussed. Committee members stated that they are not informed about the GIS activities of the AR office. Some AR states have been requested to provide state data which was used in special projects of regional scope, but the results of those projects have not been communicated to the office contributing data. It was felt that AR could do a better job of communicating results and sharing datasets resulting from regional projects.

The Knoxville Field Office has been working on converting its data assets from file-based structures to a SDE geodatabase, converting from NAD27 to NAD83 datum, and hired both a GIS technician and an intern to work on GIS. Like many other agencies, they have a volume of paper-based data to deal with. They are working on getting more input from engineers, geohydrologists, vegetation and soils experts, so they are forming a GIS user group at KFO to share needs, etc. They've developed a strategic plan with a time table. The new KFO Director has supported their GIS efforts.

Geospatial Questionnaire Session #2

The draft geospatial questionnaire was reviewed again, and a number of revisions were made to the questions, wording and format until the group was satisfied with it.

SMCRA Geospatial Data Stewards Meeting Session #1

The committee worked on the agenda and schedule for the SMCRA Geospatial Data Stewards Meeting, trying to finalize sequencing, items to include, etc. The group

finished the first page of the draft agenda and decided to continue this effort on the next day of the meeting.

Agenda Additions From Larry Evans

Larry discussed the CMDS/FGDC WS. He had a phone call with Doug Nebert, who identified facilitators and modelers who were helpful in past efforts. Larry created a draft request for resumes listing experience and references which could be sent out to prospective facilitators and modelers; this was reviewed by Bill Card. Concerns about needing to also address ASTM and ANSI standards were raised, which might mean that these could be precursors to any FGDC standards work.

There was additional discussion of proper sequencing for the CMDS WS, along the lines of doing work on the issue in-house first (meaning among OSM and the states through a working group), and then deciding what role the FGDC might play. Also discussed the need for XML expertise; Larry has a contact in his IT shop with some experience, and Rick suggested contacting the Australian person who has been active in creating a mining-related XML standard. There was also discussion of where to hold the meeting. Larry discussed the travel costing software and website provided to him by Bill Card who got it from Karyn Evans at OSM in Denver. Larry feels it would be a very useful tool in determining where to hold meetings. He has installed it and done some preliminary testing. The software finds the cheapest site to hold a meeting based on traveler's locations, current airfares and hotel rates, etc.

This completed the day's discussions, with all the items scheduled having been covered.

Wednesday, March 1st

CMDS Datasets

The day began with a PowerPoint presentation by Bill Card to discuss proposed definitions for surface and underground mining boundaries. These definitions should be meaningful to both Title IV and Title V SMCRA programs in context of current business process needs. The committee reviewed and refined the proposed definitions with the intention of providing these to the CMDS WG to identify the scope of their work.

A lengthy discussion of what exactly was meant by permit boundary for surface coal mines ensued: was it the current boundary, the current boundary plus all earlier incarnations of the boundary, did it include areas that were permitted but never mined, should it reflect the rich history of the permitting in an area or just a snapshot in time of the current situation? The extent of the discussion, the numbers of variables brought up and the different ways in which a seemingly simple concept like "dataset depicting the coal mine permit boundaries" could be interpreted, all indicated that there was a lot of ground work to be done by the experts of the eventual CMDS Working Group to iron out exactly what is needed and/or desired. The committee made changes to Bill's draft definition for the surface mining dataset and agreed to move on.

The underground dataset discussion began with a review of Bill's suggested first draft, and a question as to whether there is a national standard to reference, perhaps related to the national underground mine mapping efforts by OSM and the states. It was mentioned that Kentucky, Pennsylvania, West Virginia, and Virginia all got money for scanning underground mine maps in this area. After some discussion, all agreed that the underground mining dataset would consist of a polygon that depicted the surface expression of the complete extent of underground workings for that mine. The permitted surface facilities of the underground operation would be identified in the surface mining boundary dataset. This led to another lengthy discussion of whether the underground mining boundary should include pre-SMCRA workings or just post-SMCRA mine workings, with the group leaning towards the former, but agreeing that this was again an issue for the CMDS Working Group.

SMCRA Geospatial Data Stewards Meeting Session #2

The group continued work on the draft agenda and schedule for the meeting. Len wanted to add an element on E-Tools - the concept of developing a automated/push-a-button tool for doing certain SMCRA analysis tasks using TIPS software, such as performing a PHC or CHIA analysis using a routine built with ModelBuilder which calculates the watershed boundary, perhaps asks the analyst some key questions about characteristics of the study area, and runs through some complex sequence of routines to produce a final result. The group agreed, and completed the agenda for the meeting. Hard copies of the agenda were printed out for the group members.

Future of TIPS:

Larry presented a PowerPoint on the possible future of TIPS and Mining Geospatial Data / GIS, as a "geospatial collective". He reviewed the development of TIPS and state collaboration with OSM as it progressed through time, and suggested it was time to take additional steps using the technology available to better share information. The WVDEP uses Citrix terminal services to satisfy connectivity needs. A system based on Citrix and VPN could also use ArcSDE remotely to tie distantly-located users together. Larry introduced the concept of the TIPS GIS BORG - the Broadband Orchestrated Regional Group, and displayed some benchmarking on network planning factors and performance.

Current Year NCMGC Budget Review

The committee reviewed the current year budget for the NCMGC line by line. It was noted that the original budget amount of over \$200K was drastically reduced to around \$104K. Accordingly, items were eliminated from the budget, at least for this year, and the resulting items totaled around \$129K, which exceeds available funds. Some discussion ensued as to whether any additional monies might be expected or discovered.

The "FGDC" / CMDS WS was again discussed, as it constituted a considerable portion of the budget. The question was raised "Do we need a facilitator at the beginning, or just later in the meeting? Could the Working Group hash out the issues we've noticed for a day or two, and then bring in the facilitator and/or modeler, or does the modeler need to be present from the outset?" Larry and Al will investigate this further.

NCMGC Charter

The NCMGC Charter was reviewed again and discussed point by point. The group felt the Charter was well-written, but many thought that the lengthy "Background" section was superfluous and should be excised for brevity. Others thought it was necessary, at least in the initial stages of review by management, as a way of providing a fuller view of the history and development of the NCMGC and TIPS GIS use. Eventually the committee agreed on the wording of the Charter, with minor changes to be finalized by Bill Card.

ESRI User Conference

Al disseminated information on the ESRI User Conference (San Diego, August 7th - 11th, 2006), and stated it was the intent of TIPS management to provide for NCMGC members to attend, providing registration fees using OSM Customer Number allocations, and possibly travel funding. Al asked that each group member confirm their intent to attend, and their travel funding needs, by sending him an email as soon as they could get definitive word from management, etc.

NCMGC Communication Plan

Steve Parsons went over his communication plan for the group, which included both the SharePoint website for internal use and collaboration, and the eventual public website. Steve demonstrated the SharePoint site, showing the structure, the documents available, and discussed the access permissions, etc. He presented his plan in both a Word document form and also within an Excel spreadsheet format that is used by the DOI Geospatial Team to outline communication activities and planning.

Rick and Steve agreed to have a live mock-up of the public website ready for the Data Stewards Meeting, through which state personnel could access documents, etc. as tools to inform their management of the NCMGC activities. Steve said he would set up a conference call between himself, Rick, and the OSM webmaster in the near-term to discuss details.

NCMGC Five-Year Budget

The five year budget for the NCMGC was reviewed in detail. The budget was by necessity somewhat sketchy, but it was agreed that it was a good beginning that could be built upon in the future. Future budget projections will be made to better identify and refine NCMGC funding needs.

Action Items

The meeting ended with a listing of all the action items for the group. The items were discussed, deadlines were set, and the general sequence of the items were re-arranged to give a good timetable to make progress. The list of Action Items was agreed upon and printed out for dissemination to the group. The meeting adjourned at about 5:20pm.