

**Geospatial Task Group (May 29-31, 2002)**  
**Meeting Notes**

Sue McLellan - Florida Division of Forestry  
Joe Frost - USFS  
Randy Mckinley -EROS Data Center  
Luther Arizana - BIA  
Ted Tower - BIA  
Brian Sorbel-NPS  
Susan Goodman -BLM  
Mike Hutt - USGS  
Elise Bowne USFS  
Doug Stephen - NPS  
Steve Gregonis -USFS  
Melinda McGann -USFS

**Agencies and State Updates**

**USFS (Joe Frost)**

- FS Approved and proposed data standards are at [www.fs.fed.us/fire/gis](http://www.fs.fed.us/fire/gis)
- Fire standards have been in development for the last 2.5 years. The process will probably take 10 years to complete for all layers.
- Once the standards were initiated, funding became available through special projects.
- ROSS application will use geospatial data. Currently layers are from data given to ROSS by GeoMAC in summer of 2001 and are at least a year old. Future data will come from a variety of sources including EROS Data Center and Agency base layers. The intent of ROSS is that the local units will be able to view a .jpg with overlay of resource locations.
- National Fire Plan (NFP). The NFP is adjusting their databases to meet USFS criteria. USFS is concerned about multiple reporting.
- Forest Service FTP Site – data from site is removed every 30 days. Action: Joe Frost will give Ted another access point.

**USGS (Mike Hutt and Randy Mckinley)**

- USGS has 4 distinct divisions
  - o BRD – Biological Resource Division. One emphasis that BRD has is Invasive Species
  - o Water Resource Division. Emphasizes on post fire effects of water quality, erosion, etc.
  - o Geological Division. Sue Cannon is involved with landslide potential and geologic hazards related to post fire effects.

- Geography Division (Formerly Mapping) At EROS Data Center, work continues on LANDFIRE and Burn Severity Mapping, MLRC. It was noted that FireView is no longer. It was just a one-year pilot program. At Rocky Mountain Mapping Center, they have been updating DRGs and DEMs for on going wildfires in Colorado (updates include roads, houses, etc). Turn around time is approximately 6 hours.
- USGS will host a Wildland Fire Workshop this November
- GIST is being hosted by USGS June 10 – 14.  
Region 5 – GIST Class Coordinator  
209 532-3622 ext. 463  
Yolanda Dorston
- It was noted that the Forest Service needs to contact Tom Bobby for Burn Severity Mapping.

### **BLM (Susan Goodman)**

- National Science and Technology Center (NSTC) is still working on two prototype ArcIMS sites. A third site will be created this summer to make accessing vector data easier.
- Another contractor is working on dispatch maps.
- California hired two new GIS positions. Currently there are BLM fire GIS specialist located in New Mexico, Utah, Idaho, 2 in California, 3 in Alaska, 2 at NIFC, and 1 at NSTC.
- It was noted to always invite local fire GIS specialist
- Action item – Get agency contacts to Joe Frost by June 7, 2002

### **NPS (Brian Sorbel)**

- Fire history standards; concern on part of other agencies for linking to master fire database (SACS); USFS and BLM also have more centralized GIS systems; Oracle servers; output from Oracle database is comma-delimited text file (how many fields) that can be brought into GIS; no GIS clearinghouse; does not seem to be as well distributed; I said this would be somewhat separate from SACS; the idea is to not need SACS
- EROS assisting NPS in developing fire history and burn severity maps (post and pre-burn)
- Doug Stephen from National Park Service, IRMWT technical advisor

### **BIA (Luther Arizona)**

- Cobell... It is becoming a problem with fire. Plan on not getting Internet access at any BIA office. BIA is not certified for email.
- Lightning data – will use BLM or dial-up. Joe has a dial-up program that downloads the data every five minutes.

- Fire Planning – GIS work and using the SACS data and importing it in from SACS. Correct fire data and this year they are working on Western Region, Alaska, Rocky Mountain, and then Southwest.
- Passed out BIA Coordinator and BIA list of fire GIS specialists.
- ALMS - Automated Lightning Mapping System - Loads the data in arc/info system. [www.fs.fed.us/fire/planning/nist](http://www.fs.fed.us/fire/planning/nist) - there is a new version of this application
- BAER – Space Imaging is the imagery that works the best. Digital Globe has much more competitive pricing than Space Imaging. Digital Globe 4 meter multi spectral, etc. Brett Thomasey. There is a USFS license. Luther handed out information on BAER Imagery.
  - Digital Globe
  - Brett Thomassie
  - 228-688-1607
  - [www.digitalglobe.com](http://www.digitalglobe.com)
- BAER teams have hardly any interaction at the interagency level.
- BIA fire has a web site at: [www.fire.nps.gov/bia](http://www.fire.nps.gov/bia) there will be a list of names
- BIA has offered to host a GTG meeting at NIFC or at one of the tribal resorts located throughout the country.
- Ted Tower will be Luther's back up on the GTG and Ted is a member on the IRMWT

FWS - Need to get another representative, as Keith is no longer working for FWS.

### **States (Sue McLellan)**

- Sue works mostly with the fire people. They are located in 15 district offices and there are 32 state forests. The Florida fire management information system (FMIS) has an approved business plan. This system will include prescribed fire, law enforcement and wildfire tracking, and it will incorporate geospatial information. It will probably be developed in MapObjects and also have an ArcIMS smoke modeling component. The smoke dispersion model that is being used in the prototype is called VsmokeGIS and runs in light MapObjects. This type of modeling will be incorporated into the FMIS. Fire risk assessment, Space Imaging has been working on this and they are using Anderson's 13 fuel models. LandSat 30 meter data was used. They are touting 90 percent accuracy, but so far have not seen the accuracy assessment yet. It will run in spatial analyst and allows managers to run different scenarios. Should be completed by September and hopefully, I can have a presentation by the next meeting.
- Southern states are doing a risk assessment, but there have been some tie up with the money. Florida fire chief is the leader for this project. Most of the Southern states do not have the level of data that Florida has.
- Florida is working towards enterprise ArcSDE and training individuals to do GIS out on fires. Some are foresters, wildlife biologist, and others are GIS specialist. Sue is trying to coordinate some fire mapping training in the southeast for GIS.

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### **Western State Representative Discussion**

- Joe Frost would like to nominate Dave Gruehaggen – State of Idaho and department of forestry as our Western State Representative. It was discussed that we should go back to WGA and ask if they approve this nomination.
- Action Item: Joe Frost, Mike Hutt and Susan Goodman will coordinate WGA and Dave.
- Joe will ask the IRMWT to get another state rep.

### **Website update**

- The GTG site is working, but it only works on contractor's server. Joe will pay the contractor to bring the site up on NWCG server. It will be up in the next month.
- Ted has working toward locating the NWCG Web site on a non-government Web host. This would include the NWCG web site, an anonymous ftp site, and the Project Management Office (PMO) repository.
- USGS said they could host GTG website for \$2000.00/year.

### **Training**

Requested Money for Training

\$50,000

\$25,000 for travel

\$25,000 for writing up requirements

\$12,000 from BLM and USFS

\$8,000 from the other agencies

- There needs to be a review of incident to figure out what are an incident GIS needs
- Develop a framework for establishing standardized data products, technology and transition protocols.
- At the last IRMWT the GTG asked the IRMWT to take the GIST course to the Training Working Team and turn this item over to Training. Need an official statement from the training team saying yes or no.

Brian did some research on 310-1. His notes are attached. Brian talked to Merrie Johnson regarding the GIST position. Incident Operations Working Team is the only one that can recommend to 310-1 and Training Working Team will only take up training that is in 310-1. Currently, there is a perception that fire people go to too much training. Major focus to keep training to a minimum and for hands on training.

Four type positions in 310-1

- Incident command system (IC,
- Wildland fire skill positions (e.g. FFT2, FBAN, etc.)
- Technical specialist positions
  - This is current where GIST fits
  - You only need I-100 and S-110
- Fire Use Skill Positions

No minimum standards are not required for technical specialist. It is recommended that you should take I-100 and S-110

#### Potential evolution pathways for GIST

1. continued laissez-faire
2. encourage completion of self-study technical specialist orientation training
3. Specify minimum qualifications of the GIS technical specialist and required hardware/software somebody would have to maintain a list and send it out to the GACC create a gist ICS position
4. initiate a “performance based qualification system through position task book.
5. institute a required training for gist above and beyond recommended technical specialist training
6. others??? Mandatory fitness standards, standards for survival training; standardized symbology and map layout

Number 3 was the path that GTG will now take with the GIST position.

The question from Merrie Johnson, “Are there things that on an incident that the incident personnel absolutely have to have that a normal GIS person cannot do when they go on fire?”

Need to develop standards and here are some interagency standards being develop.

GTG needs to create standards that all agencies would agree upon. Local unit can probably can handle Type III Incidents.

There needs to flexibility in these standards

What does a GIST need to bring with them to an incident and what does the incident need to provide them?

To create a course it takes two years even if you have a lesson plan already written. There is a process and timeline.

Potential GIST Qualification – from Brain

“The essence of perfection is not when nothing more can be added, but rather when nothing more can be stripped away.”

1. Get data
2. Incorporate industry standards
3. Use GPS
4. Make maps
5. Projections
6. Hardware software

Recommend take the minimum two ICS courses and S-245 Display Processor (DPRO). Display processor brings up the timing issue that maps have to be created efficiently and timely on an incident. S courses are strictly skill courses now. Learn about the five maps that you need to produce. Quick one-day course.

A lot of Type 1 and 2 teams already have GIST and GTG process should not interfere with these team people.

Can we take advantage of the DPRO training? DPRO will go away and it was last certified in 1997 and will be coming up to be re-certified in 2004. GIST would be the logically replacement to DPRO. This would be a logical switch.

Reword the GPS. Expand to if you are red carded you maybe collected GPS data

GIS Guidelines for Incident Support – Our stance is that we are not advocating GIST as part of 310-1. Strategy has changed.

Action Item: We found some new information and want to add this other option to the White Paper so we need to add this information prior to being it forwarded to other information. Advocating holding off and adding addition information.

Action Item: Joe will contact Sheri Shetler formally and Ted will contact her informally about delaying action.

If this goes to IOS, it might start the process to substitute GIST for DPRO.

You can avoid both of these teams by going with the recommendation that Brian brought up.

*Action Items:* Joe Frost and Brian Sorbel will lead with assistances from Elise. Ted will pursue what needs to be done with the establishing GIST as a technical specialist with suggested prerequisites.

### **Fire Congress 2003**

– Oriented to fire ecology  
Steering committee has been formed  
Jim Brenner and Bob Clark

Fire Meteorological association  
Scott Gooddrake – liaison to the fire metrological organization

Scott came to Sue saying that this would be a good group to coordinate the GIS/remote sensing portion. Task maybe developing schedule and review papers etc. The focus is fire ecology.

USGS would be interested in helping put together a session.

*Action Item:* Sue will get us more information, what do they want us to help. USGS will help.

Proposed data standards to the Date Access Working Group (DAWG)?

Transferred Standard is the only standard we can forward to this group (DAWG)?

IRMWT - Judy Crosby in the PMO (DAWG Person)  
NWCG – Letters will be sent out to agency saying they should use standards.

*Action Item:* Request that Ted will be our IRMWT liaison as he is a voting member because Ted will be the back up in GTG.

*Action Item:* July 17 Conference Call – Joe will make arrangement at 1:30 MDT

*Action Item:* Next Meeting will be in Tallahassee – October 7<sup>th</sup>, travel on Monday, three day meeting. Sue will make arrangements

## **Thursday**

### **FIRE-MAP**

- Developing a new fire management program analysis and budget tool
- Based off of the Hubbard Report in an effort to derive a common budgeting tool.
- It is being implemented by USDA and DOI
- Gives different scenarios on what will occur on different land.
- OMB and Congress wanted a consistent method to figure out Federal Fire Budgets

### Attributes

- Full scope of activities
- Goals are defined by local planning unit
- Fire Program Simulator – GIS/PC based software for testing fire management strategies, displaying tradeoffs between goals to determine the most effective strategy to optimize all goals.
- Cost-Effectiveness Analysis

Hubbard report gives example of GIS themes that maybe used.

- Fire return departure
- Condition Class, etc
- Historic Ignition

FIREMAP maybe chartered under the NWCG.

- There needs to be core data standards between agencies and a smooth way to incorporate improved data into layers.
- Need a processes to update layers and data standards and it need to be kept it dynamic. Data

Action Item – GTG needs to be involved from the ground up as we are a group about data standards. We need to have a liaison between FIREMAP and GTG. What data and resolution is the data for model. How will the states fit in? Coordinate with IRMWT – talk to agencies technical representatives.

NFPORS – Conference Call

What in NFPORS can be covered in 10-year comprehensive strategy 18 key performance measures. Part of this is working with fire occurrence data. The technical contacts for fire occurrence is:

- BLM- Corey Grant
- SACS- David Potter
- FWS – Andrea Olson
- USFS – Penny Sturnburg

Training and Implementation and Communication Website ....

- Stakeholder Groups
- Newsletter
- Training – Starting the middle of July – Train the trainer class and produce training materials and web based.

Action Item: Susan will find out more about the fire occurrence data Steve Gregonis will go to the OMB presentation.

## **LandFire**

Randy gave us handouts

Coordination has occurred with Missoula Fire Science Lab Staffing

MOU with RMRS FIA

Burn Mapping

- NPS burn mapping
- Burn mapping validation
- Fire fuels research
- DOI Rapid Assessment Burn Mapping (Tentative) (\$21K from BLM)

EDC Fire Science web page [edc.usgs.gov](http://edc.usgs.gov) - there is a button with fire science to all of the science projects.

Dr. Z is the head of the team

Jim McNacus - USFS

Bob Keane - USFS

MOUs have been put together

White paper on structural stage (Randy will send us a paper on that)

LandSat is the multispectral data.

Burn Mapping web site – info on this project

Relates back to some of the original work.

MRLC – Burn Mapping scenes end up in the MRLC archive.

Rapid assessment – Contact Randy Mckinley at EDC or Tom Bobbie with the Forest Service in Salt Lake.

Glovis link off EDC

Historic Burn Atlas – Mesa Verde Park – Put together image database using satellite data.

### **University of Montana Fire Center Discussion**

Lloyd Queen - Director

Funding came from Congress and NASA

The director is interested in getting GIS integrated into research.

Have a MODIS downlink.

Working with LIDAR – There is potential to map structure. Trying to Validate.

Action Item: Get clarification from David and Dorothy. What do they want from GTG?

Investigated report for Geospatial Incident Support...

Is GIS using for incident support, if yes by whom?

Write a quick report.... Create an initial assessment of how Geospatial Technology is being used on incident.

### Sampling Design

Joe would do statement of Work.

Conference – Will there be a conference in San Diego – Dorothy said it is a conference in San Diego, but mainly a state. California Association for Fire Ecology.

Side meeting in San Diego – a facilitate a talk on effective use of GIS technology on incident. 10-Year Strategic Plan.

Need to write a proposal to Jim Burchfield about what we want UM to do for us. Go to incidents and report of incidents needs.

Jim Burchfield –some process what we do to validate assumptions.

Jim Burchfield is the social science at the UM.

Report will need to be statistically sound methodology

Need to put sideboards

Driving issue is GIS incident support

We do not want to include BAER

Severity

3 – D images

Data Standards

Just Incident or the whole process from dispatching to BAER.

Where does the GIS data goes after a fire?

Delegation of authority...may state where the data should go everyday?

What projection/datum the data should be produced in.

FTP site etc...

Knowing how to get a hold of local data and how to transfer data back.

10 year strategic plan approved by western governors association (WGA).

\$29,000 Money given to us by IRMWT needs to used Strategic Initiatives

FTP site issue – It would be nice to have a commercial site that could have input/output access

### **Fire Perimeter White Paper**

Action Item: Joe will write a cover letter with white papers and published through a DAWG. This paper will presented at the next IRMWT meeting.

Recommended fire history data set be at the site and set up another IMS.

Brian will add acres and miles of perimeters. Add hand drawn by foot.

Add wording that firepak is a tool and it is not required and that it is a possible solution.

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Geospatial technology – hardware software image processing – the money was driven by the white paper.

Half of the money was funded for this year.

Action Item: Joe will verify with Shari Shetler about the money.