

FIRESCOPE GIS Specialist Face-to-Face Meeting

November 2016

Attendees: Tiffany Meyer, Matt Turner, Suzann Leninger, Steve Winter, Steve Kennedy, Tim Maguire (guest from comms group), Chris Ingram, Tom Gikas, Dave Donnley, Chris Castillo, Stephen Lai

Meeting Agenda Items

Tuesday November 29th:

1300 – Introductions

1330 – Liaison presentation, new issues & tasks, feedback, discussion, Q&A. Lorri replacement

- 7 leading agencies.
- Steve contacted Elizebeth Berrara USFS So. Ops and discussed Lorri's suggestions for her replacement. Hope to have it resolved by the end of this year.
- Next task force meeting is 12/6-7. Normal meetings are 1.5 days, but this meeting has another half day scheduled to bring together the Chair and Vice from the Comms, GISS and EIT sub groups to discuss overlapping issues (i.e. broadband on incidents).
 - Steve K. will be subbing for our group. Tom Gikas may also attend.
 - Ingram: important messages to be delivered to task force:
 1. Work group loud from Lorri is extensive.
 2. Who will pick up hard drive updates
 3. Who will continue the GISS refresher training course
 4. We need a knowledgeable, able person to replace Lorri.
- Division breaks proposal: waiting for final approval. Ingram pushed I out to teams over last summer for review and got feedback. Will review and integrate the feedback this week.
- Pre-plans
 - Winters is recommending templates to offer a standardized format. IT's up to individual agencies to conform existing plans to this format.
 - Looking at data components and mobile device comatability (ie. SCOUT, Interra).

1330– FIRESCOPE Communications Group white paper presentation on Information and Technology Specialist on incidents. – Tim Maguire (guest from Santa Clara fire and Comms FIRESCOPE sub committee)

Comms has responsibility to manage the internet on incidents.

Currently teams Comml orders coms (Satellite, phones) then it goes to plans to manage. COMms doesn't always have staff to support conflict with bandwidth between personnel use and family communications and work.

Proposal: Comml manages usage and brings into logistics from plans.

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Reasons:

- Better resources to manage
- More able to manage/regulate bandwidth and specify groups (i.e. GIS)
- Span of control
- Streamlines shift ticket signing

Matt: how would this impact GISS vendors?

Tim: Comms would not be involved in direct GISS vendor transactions. Although comms could take them into account during scaling up/down

Tom: Comms doesn't have quals to manage this.

Ingram: Have you discussed this with Incinet?

Tim: This proposal is working towards being all encompassing, and Incident is only CALFIRE.

Committee has agreed that they like support this proposal.

1445 - Update on major systems

FGX

- bandwidth issues
- Uses more native arcmap tools, which makes it easier for GIS knowledgeable people to use.
- Training: should next S-341 class be in FGX or FIMT?
- Matt: No state rep in training group so FIRESCOPE needs to improve that.
- Goal is to get GISS leads into FGX training class. Lorri looked into this but got resistance. Is this something that the regional training specialist could help with?
- Action item: Suzann will test FIMT in 10.4. and contact Strazzo to see if he's tested it. (But this is short term solution because FIMT is no longer supported)
- Need NIFC and a Forest Service AGOL account to use FGX
- Concerns about major upheaval to common practices and workflows
 - FIMT is no longer supported; will NWCG make FGX a standard/mandate for wildland incidents in 2017?
 - What is FIRESCOPE's influence on these decisions on ArcMap version/FIMT/FGX?
 - Training issues abound; FGX curriculum presently being developed by FGX development team, to be first presented at the 2017 S-341 classes
 - When will the cutoff date be for making the decision to roll with FGX or FIMT?

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- Kennedy: FGX might possibly have streamlined the workflows between cloud services and desktop functionality
- Gikas: Issues with a single agency developing a new tool, independent of any other agencies' input.....with the possible expectation that all wildland agencies will be used
- Winters: Try not to focus on the tools used to develop maps.....operations don't care HOW maps are made, only that they're made. Focus on the needs.
- Leininger: Given FIRESCOPE GIS group's lack of FGX knowledge, perhaps the Intermediate GIS Training class should be wholly focused on FGX skills.

SCOUT\Interra\VSAT\IRWIN (integrated reporting of wildland fire information)

- Situational awareness applications for Type III incidents
- Various schemas presently exist, wholly dependent upon the application being used.
 - Standardization discussions need to happen
 - Shared services all do or try to use standardized GSTOP symbology

Collector app

- Presently in DINS.....perhaps other opportunities exist for using Collector throughout an incident
 - FOBS, DINS, Defensible Space Inspections
- Side loading of georeferenced PDF's into Collector is possible but not practical as it can only happen by hard wire connection
- Impractical with 100's of firefighters looking for that one laptop with the PDF and "plugging in" with a cable. Ripe for virus

NAIP imagery from USDA @2foot resolution for 2016

- Tiled out by county in MrSID format

Online tools and shared services- ie. SCOUT, Interra, ERWIN

- ERWIN - pulls information from existing online data sites

SCOUT/NICS - original problem was that it was spawned in operations, not plans.

- Has different levels of logins and security. Ie. Public and non public

AVENZA

- Licensing changes; mandating large agencies (CAL FIRE & USFS) to purchase
 - With licenses, you can use the PRO version gets you unlimited custom maps

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- As a store vendor, users can load maps into their store, but AVENZA must first “approve” maps before being available in the store
 - Days can go by before maps are approved; lag time
- Without licenses, only 3 custom maps are allowed for download
 - PRO: Disconnected & not dependent on internet
 - PRO: Better/tighter integration of shapefiles & associated attributes
 - \$100 per individual for a single license; tiered pricing for large organizations

1610 – nominations and elections for Vice Chair for 2017

- Currently Meyer is Vice chair and acting Chair.
- Winter: Decisions are made on a consensus basis, so all-encompassing knowledge is not needed to hold office position.
- Vice Chair nomination: Meyer nominated Gikas who accepted. Turner seconded. Gikas was elected vice chair for upcoming year.
- Chair nomination: Tiffany Meyer elected as chair for upcoming year.
- Secretary: Matt Turner
- Finalize minutes through the liaison for posting on the FIRESCOPE website.
- Motion to move the COMS Reassignment of the ITSS to the COM Unit forward to the FIRESCOPE Ops meeting for further approvals

Wednesday November 30th:

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0800 – 0815 – review agenda and modify as needed.

0800 – 1100 - Sub-Group status reports - overview:

0815-0830 – Ross update

- Survey qualified GISS in ROSS to determine activity
- Question development to occur during breakouts
- New list of qualified ROSS qualified GISS

Damage Inspection Specialist (DINS)

- DINS white paper

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- Symbology standards.....Meyer met with FEMA (Jonathan Calwell in Region 9 of FEMA)
- 2 sets of symbology: 1 on map, 1 on data collection devices
- Intentionally kept “basic” for rendering purposes & kept for 209 purposes
- DINS symbology standards are not a national standard.....California only
- Pre-fire inspections will be used for determining structure locations; only areas affected by wildfire will have homes inspected (Residential, Commercial, & Outbuilding)
- Meyer request to move the white paper forward to the FIRESCOPE task force for review and approval

0830 – 0845 – WUI Pre-Plan Map Standards

- Group has only had initial discussions with Rich Drozen a few years ago.
- FIRESCOPE GIS Subcommittee is waiting direction from the Task Force for specific tasks related to the mapping components
- Task Force is challenged by the large scope of such an undertaking
 - Many County pre-plans exist in several different formats; which to use?
 - Likely to be a long on-going process by the Task Force before FIRESCOPE GIS group get it.
 - Defining the scale/scope of the pre-plans
- How will data behind pre-plans be managed?
- Expectations of pre-plans data used during an incident by GISS staff?
- Core database elements
 - Dozer lines, structures, previous incidents’ perimeter data (fire history)
- Standardized software statewide for developing the pre-plans
 - Not necessarily ESRI...
- Action Item: Task Force to reach out to FIRESCOPE GIS Group (FGISG) to provide direction
 - List basic elements to be included in the maps.

0845 – 0900 – S-341 Training

- Turner: provided an update regarding the proposal to have a 3rd class in 2017 somewhere in Southern California

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- Concerns/issues with getting the new FGX training curriculum established in enough time to accommodate an earlier (March 2017) class in SoCal
- FGISG recommended postponing the class to 2018
- At what point do we make the decision to move away from FIMT and to use FGX as the standard tools to use for 2017 wildfire season?
 - Is this a FIRESCOPE decision or a USFS (Lorri's old position) decision as the Region 5 GIS Coordinator?
- Concerns about California-involved instruction and/or input with curriculum development
- CICCIS-led training? FIRESCOPE training?
 - Engage the Task Force to inquire about California training outside NWCG
 - White paper to present recommendations to the Task Force to address concerns about having a California-specific S-341 classes (all-hazard GISS quals)
 - Recommend to change CICCIS position guide to address taskbook initialization requirements (S-341, FGX, CA-specific S-341 "all hazards" class...)
 - Who would be the approving and certifying body?
 - ACTION ITEM: Add to the FGISG Work Plan for the development of an Issue Paper related to California-specific S-341 training

0900 – 0915 – **Memorandum of Understanding (MOU)**

- Discussion put on hold pending USFS representation in FGISG

0915 – 0930 – **Internet bandwidth needs and capabilities**

- Yesterday's discussions with Tim MaGuire addressed this

0930 – 0945 – **Remote Sensing SOPs**

- Development of a handbook for incidents
 - Identifying the various products/resources that can be available on wildland incidents
 - Steve Barton @FRAP presently working on this

0945 – 1000 – **Fire GIS Information Portal**

- Enterprise Geospatial Portal (EGP) and Fire Geospatial Exchange (FGX)
- EGP is a "library" of resources for GIS professionals to go to download data.

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- This perhaps was a Lorri-inserted discussion item.....
 - Effort to replace the GISSHD to where data would be stored in EGP?
- ACTION ITEM: Meyer to talk about the GISSHD with USFS and who/what/how the drive will be maintained and distributed

1015 – 1030 – Training Standards for GISS, Intermediate (“Refresher”). Lorri replacement

- Ingram: recommendation that we will postpone the continuation of the refresher course at this time, given the scope of other Lorri-related activities that are being redistributed
- Recent refresher courses have become more of a “meeting update” rather than having practical exercises. Consideration of having or supporting a webinar only.....who would host or develop presentations?
- FIRESCOPE YOUTUBE GIS Channel
 - Develop screen-capture videos for quick how-to’s on fire mapping functionalities?

1030 – 1045 – Division Break Areas

- Ingram: issue paper was sent to all IMT GISS leads, with FGISG recommendations
 - Feds comments questioned the need
 - Ops should be the group determining these Ops boundaries
 - Clearly indicate that this is an OPTIONAL
 - Look into different symbology, ensuring that there aren’t any conflicts with other symbology
 - Specify when users only use boundaries versus shaded polygons
 - Create tipsheet and workflow for implementation
- Issue Paper is pretty much ready to go to the Task Force
 - does FGISG recommend specific symbols or offer up more general guidelines for symbology?
 - Winters: recommended some verbiage changes to the “Background” section to clarify that: assignment boundaries are presently not clearly defined with the existing assignment breaks (point) symbology, where FGISG recommends the development of Operational Boundary polygons to clearly define assignment break areas.

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1045 – 1100 – **Fire History Standards**

- Lorri-led topic of discussion
- Meyer: Add date-type fields as a change from a text field
- Kennedy: look at IRWIN's schema to look for common fields/attributes

1130 – 1230 – **Lunch**

1230 – 1600 – **Review workplan and breakout groups**

- Meyer: made several updates to the matrix to include updated dates, TBD, adding & removing items that are now complete or no longer relevant
- Gikas: continuing concerns with bandwidth issues related to the possible FGX tools that will grab incident data on-the-fly for use in common operating pictures at the State level.
 - Will this process bypass IC approvals of vetted perimeters, allowing for folks outside of an incident to view and share perimeters??
- Dedicated bandwidth for GISS on incidents
 - Need to somehow monitor bandwidth and throughput to come up a baseline of data that will help us to design a better more efficient network
 - Breakout sessions to determine GISS Trailer minimum needs
 - Updates to NIFC
 - Data & maps to Box/Dropbox accounts
 - Local dataset downloads from local govt.
- Remote Sensing SOP
 - Development of a manual/supporting document
- Fire GIS Information Portal
 - Lorri task.
 - Gikas: development of FIRESCOPE GIS website to post discussion items
- ACTION ITEM: Add a FIRESCOPE GIS video account (youtube, vimeo) or channel for uploading of training videos
 - AVENZA, etc...
- Operational Area Polygons
 - Hopes to finalize issue paper this week and submit to Task Force next week
- USNG Training Standards
 - Finished!
- Fire History standards

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- Open Geographic Content – Issue Paper
 - OGC paper to address interoperability of GIS applications and standards
 - Mark Rosenberg-driven?
 - If we're going to be sharing data, it should be open-source so that anyone can consume data

1600- 1700 – Review completed items, identify gaps.....”Break Out Groups”

Thursday December 1st:

0800– 0900 – Set potential dates for Spring F2F

- Tentatively scheduled for May 9-11 in Monterey, CA

0900 - 1130 – Review work plan.

- Operational Area maps
 - Removed all references to “wagon wheel”
 - Added verbiage to include Operational Areas to include Division/Branches/Zones
- ROSS Analysis
 - Survey Monkey: sample questions for GISS in ROSS for review from FGISG
 - Would you be avail to go to an incident in 2017-2018
 - Would your agency support you to go to an incident in 2017-2018
 - Are you GISS, GIST, no GIS quals, don't know
 - ~~Would you like to be removed from ROSS as GISS, or remain in ROSS~~
 - Reword question as FGISG can't remove members from ROSS
 - Maybe ROSS already tracks incidents that GISS staff have worked
 - How many assignments have you received since 2014
 - Meyer/Donley to develop draft survey, & send out to ROSS folks identified as GISS
- Schedule out future conference calls
 - January 12
 - March 9
 - May (F2)
 - July 6
 - Sept 14

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- Nov 9
- FGX Presentation from Sean Tripplett
 - Use of Collector and Web-Mobile mapping
 - Replacement to FIMT
 - ArcGIS 10.5 will be last desktop version from ESRI; going to ArcGIS Pro
 - How to move forward with new ESRI products
 - Building a new DB on the back end
 - Event FeatureClass
 - Having a DB that can move between desktop mobile and collector
 - Event feature service database to design codeset to wrap around this
 - Spatial Data Exchange
 - Code with a toolbar and db architecture
 - Main feature service through EGP/AGOL as broker back and forth between feature service
 - Data down from AGOL, work on desktop, then synch back up to AGOL
 - New toolbar has no editing tools
 - Now using out-of-the-box editing tools
 - Feature templates to retain wildland GSTOP symbology
 - Tied to IRWIN data feeds
 - Creating features or making edits
 - Some troubleshooting issues arose over summer
 - Released as a Pilot Project
 - Running fires using both FIMT and FGX databases concurrently
 - Get users more familiar with using AGOL
 - Get users familiar with Collector
 - Account management
 - Feedback from various pilot users from GISS, FF's, Helitack, SITL
 - What worked, what didn't
 - GISS-perhaps scale down tools even further; keep as feature service only
 - Ideally trying to close the time-gap between data collection and operational mapping
 - Real-time picture
 - 107 fires in 2016 using FGX
 - Towards end of season, many were just using FGX

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- Entire system working on 1 server; needed to start limiting user access/FGX functions as they approached maximum capacity
- Meyer: Bandwidth. How to manage? Need to synchronize db back and forth through web?
 - Pioneer fire – no bandwidth
 - Limited DSL capabilities, FF's had 0 connectivity in field
 - Not necessary to sync all the time; users have control over synch schedule
 - Workflows have been established for areas where connectivity is limited or non-existent.
 - FF's synch smart devices in morning, go into field for collection, then maybe go up a peak to connect or wait until back in camp to synch
- Meyer: Initial login to pull datasets down first?
 - Yes. Small bandwidth required initially.
 - Once db is created, simplicity
 - Preplanning is where much of the work happens
 - Prepositioning groups with accounts prior to assignments
 - TPK: building Tile Packages for areas to collect data
 - Side-loaded into smart devices, synch database, then off and running
- Gikas: Timelines?
 - Unknown, better idea next week after meeting with Skip and other developers
 - Hope is that both FIMT and FGX used concurrently
 - Resolution of FGX issues with IRWIN connectivity/functionality
 - Improved load balancing needs to be addressed
 - Be prepared to use FIMT as a backup if going full FGX
 - Entire fire can be run disconnected with FGX
 - Data is a file geodatabase (known as an event feature service)
 - Synchronizing data back up as web-service
- Gikas: Can users download service before incident?
 - Currently a process that they're working on, but initial synchronization will allow for:
 - CAD and IRWIN data
 - Fire origin, fire number, other IRWIN features
 - Type 5 or Type 6: Ultimately Incident Management and Incident DB can be run without a GISS
 - Smartphone use on IA from FF or BC can initiate an incident

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- Type 3 or Type 4: Other workflow involves GISS as support to IA to include db management
- Type 1 or Type 2: Full blown GISS support
- Meyer: Vetting FOBS data before synch?
 - AGOL instance displays sync'ed data coming from field
 - Ability for GISS through event feature template to flag or tag features
 - Get SITL or PLANS or AIROPS to view AGOL instance for vetting
 - GISS has ability to flag data as approved/visible or unvetted/not visible
 - Workflow process will likely be handled by each IMT individually, case-by-case basis
- Kennedy: workflows integrate with EGP?
 - Most users not required EGP account
 - Feature Service itself comes from EGP
 - Edits inside EGP possible but not preferred
 - EGP data with checkmarks (yes/no) for visibility of active fire perimeters
- Castillo: issues with versioning of features; two people trying to edit the same line. How does FGX manage multiple users of same feature or objects?
 - Working with Esri on that.....last edit in, wins. MAJOR POTENTIAL ISSUE!
 - Other features that AREN'T edited will not be overwritten. It's only CHANGES that will be overwritten by the last user
 - Stacking of the same features will happen if 10 editors all add dozer line over each other. Each user has unique ID's and therefore 10 separate dozer lines will display in AGOL instance. GISS admin has ultimate control over which features will be viewable
- Turner: Versions of ArcGIS compatible with FGX?
 - 10.3.1, 10.3.2, 10.4, & ArcPro
- Ingram: does FIMT work with 10.4
 - Yes, works fine
- Ingram: FIMT conflicts with users on 10.3 and 10.4
 - Yes, the ESRI db structure will have issues. As always, all users in GISS Trailer need to use same ArcMap version
- Castillo: Topological structure between singlepart vs multipart lines & polygons?
 - Syncing data back up will simplify features.
 - No topology built; straight out-of-the-box
- Documentation been established yet?
 - NIFC.org has training and documentation already available
- Meyer: Plans on trainings?

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- Skip & Sean working with contractor for training materials, & to visit units to host GISS, GISS Admin, & FF modules
- Rebuilding S-341 materials
 - To handle FGX AND to handle mobile environment (AGOL, Collector)
- Behind power curve due to \$\$\$, staffing, time.
- Met with NWCG training leads to write training modules for other ICS positions
 - FOBS training to use Collector
 - SITL training to manage GIS Trailer & data collection
 - AirAttack, Crew Bosses, etc; other users of data collection
- Gikas: when will curriculum be finished?
 - No firm timeline.....2017 S-341 class will be standard course with a few new modules to address FGX
 - 2018 S-341 class to be completely reworked
 - Next March 2017 hopes to have F2F meetings with FF's and GISS folks at the unit level.
- Castillo: FGX as addin, or require admin rights on desktop
 - Yes, Addin. Unsure if admin rights required. Dependent on how units handle IT security on laptops
- Castillo: how big do FGX GDB databases get?
 - Pioneer fire was only a couple of Megs and was 100k+acre fire.
 - Collector tools handling attachments has been concerning
 - Degradation of images and videos
- Leininger: where to find the Addin?
 - Needs to be sent by Sean Tripplet
 - Kennedy might have link from Skip that contains FGX
- Gikas: when data syncs up to AGOL as a data service, how are outside agencies consuming data in their COP?
 - EGP will publish a feature service through AGOL that can then be consumed
 - SLA agreements might be necessary for agencies
 - Are ESRI-products required?
 - No, data is OGC-compliant and can be consumed by other apps that aren't ESRI-specific
- Castillo: predetermined metadata imbedded?
 - FGX is NWCG-approved data service standard
 - Geospatial Subcommittee has template for event feature service and schema
- NIFC account required
 - Ability to play with FGX
 - IMT EGP account required with the proper roles for desktop editing (ArcCatalog connection to service)

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- Can we get a generic user account for FIRESCOPE group?
 - NOPE! Need individual user accounts
- How do we get IMT EGP accounts?
 - Email Skip or Sean Triplett for account access
- Kennedy: Integration of SA Field Tool (Interra)
 - Not sure, requires further discussions with Interra for ramifications
- Gikas: What other vendors are you working with?
 - Sundance vendor, doing training development, db schemas
 - Interra developers
 - ESRI developers, same group working with IRWIN group
- Kennedy: Where does the Service live when data is pushed up
 - EGP SQL database, hosted out of center in South Dakota (govt hardware and govt infrastructure)
- Castillo: Security with synch data & their stance on password policies
 - More concerned about password administration
 - Working on single sign-in solution
 - Authentication of usernames and passwords.....presently not flexible
 - Using standard AGOL out-of-the-box tools related to account management
- Meyer: How are groups organized in NIFC
 - Some lingering issues.....users in NM causing issues with CA
 - User education. Don't be stupid.
- Gikas: What is plan for incidents to provide tools/instruments for end users?
 - Asking FOBS to come to incidents with smartphones, or do we provide these on incidents?
 - Go to your IT people to address
 - Why are incidents not providing these tools? Currently FF's are using their own devices without any reimbursements for data usage, etc.
- Kennedy: From a GIS perspective, any lessons-learned from networking issues or bandwidth
 - Bandwidth is VERY small and doesn't appear to be an issue; maybe few 100k
- Castillo: Use AGOL Credits?
 - Don't even worry about it as it's handled on the NIFC side
- Gikas: Vision of Avenza use?
 - Yes, still used a ton and is significant.
 - Not all users will need AGOL or Collector; many users still use Avenza app...maybe 95% of users.
 - Next version or two will use GeoPDF's within Collector app as a base layer.

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1130 - ? - **Lunch & return home.**