

THE GETA GROUP

Intelligence Unit

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The GETA Group got their first fire assignment as an Intelligence Unit when they were ordered to the Shanta Creek Fire in Soldotna, Alaska in mid-July, 2009. This is an After Action Review of the challenges they encountered on this first deployment, as well as successes.

This information is provided to increase awareness and understanding about the GETA Group and what it can provide to fire managers both before, during and after fire season.

Successes:

Provided incident specific information before assigned to Shanta Creek Fire

Using the National Situation Report the GETA Group identified the assignment of the Atlanta and later the Boise NIMO Teams. The GETA Group anticipated a request and began to quickly collect data and information from both government and nongovernment sources to be applied on each incident. Establishment of the files online used by team members via netlinked file in Google Earth provided a common operating picture of the incident and general incident information.

RESULT: Few NIMO members used the COP information due to unfamiliarity with the technology or poor communication by GETA team members

RECOMMENDATION: Intelligence unit collects information “pre-incident” to provide NIMO personnel a common operating picture before arrival on scene.

Supported the Situation Unit

Although there was a situation unit leader established on the incident an initial lack of GIS support reduced appropriate map products provided to line personnel. The Intelligence unit was able to quickly become established and compile information collected prior to incident assignment to produce specialty maps for resources going to the line. The Intelligence unit came with appropriate technology to establish a wireless network, print maps, and project products onto a projector screen for collaboration and planning.

RESULT: Crews received generic map products from the Intelligence unit until the situation unit was in place.

RECOMMENDATION: Intelligence Unit can assist with generating tactical maps to line personnel until a situation unit is in place. To effectively function in this capability the Intelligence Unit should be dispatched upon request of Incident Management Teams by the local unit.

Tested Common Operating Picture with minimal technology

Alaska had potential to be a very challenging test of capability. The area around Soldotna provided some challenges to the integration of semi-realtime tracking, however GETA Group was able to overcome these problems with participation from other resources. Cell phone connectivity was available over most of the fire area which provided the opportunity to test agency provided cell phone technology using text messaging to provide information to and from the field. By establishing standard operating procedures with abbreviated text messages through cell phones, GETA Group was extremely successful in testing and demonstrating what a Common Operating Picture looks like. Over a three day period, five Interagency Hotshot Crews, Palm IR resources, a rappel crew and a Fire Module were tracked in a relatively remote location. The tracking information consisted of crew designator, position and notes on crew functions or fire behavior for that time period. This information was displayed in Google Earth and netlinked to other sites including the Operations “room” and the helibase.

During a reconnaissance flight, Operations discussed an ending point for one side of the fire with a superintendent over the radio. The superintendent text messaged us with his position (H30) and the location discussed on the radio. We successfully sent screen captured USGS topographical maps with fire perimeter, crew, and division break location as well as screen captured satellite imagery with the same locations to the superintendent in the field via email. This action aided in enhanced situational awareness in determining an end to field operations on one side of the fire due to a lack of visibility on flat terrain and confusing fire perimeters.

Following the three day operation, GETA Group debriefed all five Hotshot crews, a fire module and many other incident personnel. The debriefing allowed firefighters to understand what a Common Operating Picture is, and identify potential future uses.

Actively recruited FOBS, IHC’s and team members to utilize visual GIS tools

Throughout the assignment improved methods for current operations within the Incident Command Post and line operations were found. This included active recruitment and briefings of what the tools can do and display. Five Region One Interagency Hotshot Crews participated in the test, and at least two people from each crew expressed an interest in learning more. GETA Group successfully trained the entire Chepeta Fire Module in basic Google Earth use, and put three crewmembers through advanced training, and operational practice tests.

Many line personnel including all of the Hotshot Superintendants on the incident provided support, feedback, and resources from their crews to train using this technology. Skepticism was high at the beginning of the test because of uncertainty and belief that the technology was to be used only as a tracking tool. Once crews began providing situational data and receiving information from the ICP (incident command Post) realization began to set in about the potential capabilities of this technology. Crews solidified a positive experience when the GETA group provided a presentation on the events that took place, the information that was provided to and from the field, and how that information was used.

An AFMO (Operations) from the Gallatin National Forest was acting as a Field Observer on this incident. Within two hours, this AFMO received training in the basics of Google Earth and was turned loose on a few projects during down time at ICP. The AFMO was instrumental in the communication process between GETA Group and the Situation Unit, and developed several techniques for technical processes during our stay.

RESULT: We began to establish a ground swell of support for this technology from tactical resources.

Identified possible communication project that identifies best possible radio repeater locations by computer modeling and visualization

A potential communication project was identified when a communications technician saw what the Common Operating Picture, and briefed the IMT on a project he was developing. The technician is developing software to use with current radio transmission software. The combined product will allow teams to select a given area of fire perimeter in Google Earth, run a process of triangulation, and output a model of the best repeater locations to “talk” to those points. This model could save time, money and effort in the initial set-up of large incident communications, as well as reducing risk by eliminating unnecessary reconnaissance flights to scout possible locations. This will be followed as an action item. (see attachments)

Strategic planning support

Many requests were managed by the Intelligence Unit including: providing a platform for daily incident planning, producing planning products for the strategic firing plan, producing map products for an addendum to the local structure protection plan, and using technology to track resource accomplishments and situational information. There was an incredible need for planning support on this incident which required a significant amount of time.

Due to these support needs, Google Earth was used as a platform to initiate dialogue between line personnel, planners, and fire managers at the Incident Command Post. This included discussion of structure protection plans, firing plans, water support plans, long term implementation plans and operational plans with various layers being displayed. Some of the layers used in these discussions were FSPRO imagery, vegetation, weather, fuels, ownership, boundaries and road layers as well as resource, logistical and tactical operation points.

RESULT: The intelligence unit quickly became ingrained and used in many functional areas.

Presentation of Incident objectives, actions, and summary at community meeting

The Intelligence Unit also created a briefing tool using Google Earth that displayed fire information. This presentation was used as the primary visual aid for the National Incident Management Organization's community meeting held at the Soldotna Community Center July 14, 2009. The presentation allowed the public to visualize and understand locations, events, accomplishments and challenges associated with the management of the Shanta Creek Fire. Perception of this event was that the public gained a better understanding of what was happening on the incident. The Common Operating Picture was also displayed to community members to better understand actions on the fire.

Successfully used GE as a visual planning tool

Throughout our operation, the Intelligence Unit found ways to use Google Earth to initiate dialogue between fire managers at the Incident Command Post. This included discussion of structure protection plans, firing plans, water support plans, long term implementation plans and operational plans with various layers being displayed. Some of the layers used in these discussions were FSPRO imagery, vegetation, weather, fuels, ownership, boundaries and road layers as well as resource, logistical and tactical operation points.

The Boise NIMO is receptive to new ideas and encourages learning and critical thought

GETA group was essentially given free reign to try new techniques, test ideas and utilize existing technology to improve fire management and operations. Additionally, the IMT displayed patience and good humor when GETA Group's field going experience created barriers in communication at the Incident Command Post. The IMT allowed GETA Group to attend almost any meeting we wanted to, and the learning experience is very much appreciated.

Challenges:

Integrating with existing ICS positions, particularly SITL and skeptical personnel

The technology and ideas being tested are new and do not have any standard operational procedures developed yet. The Situation Unit had a difficult time adjusting to the thought process that 75% now is better than 99% tomorrow with the products an Intelligence Unit creates. Instead of being comfortable with working on enhancement of the Situation Unit, GETA Group tended to be dismissed as gimmicky and not official, even though several of our products ended up being used as converted ARC/GIS outputs.

Intelligence Unit products are new and need to fit for the situation. Feedback on the end product of what a Common Operating Picture should be provided and suggestions and improvement of methods needs to continue. Most of what GETA Group does can be customized to fit the viewers need. Continued engagement of Situation Units on incidents needs to happen in order to identify ways to enhance both products.

Where and when to provide critical input in an operational climate is unclear

This was the first incident where almost all of GETA Group time was spent at the Incident Command Post. The learning curve GETA Group faced of the various support functions and the Incident Command System was steep and challenging.

This point also ties directly back to identifying what the role of an Intelligence Unit is, or should look like in the future. It may potentially end up that each team or unit utilizes the skills in different ways, but having a clearly defined input process of the information that could be provided is necessary. GETA Group is currently working through suggestions and ideas with Plans to accomplish this.

Technical capabilities of cell data coverage limited potential tests with the Common Operating Picture

Testing of a Common Operating Picture (COP) was enormously successful, but the equipment to utilize a COP to maximize efficiency was not available on this assignment. Cellular data networks had limited availability for Verizon customers (Forest Service), and the resources on the incident had limited equipment to gain a complete COP.

RECOMMENDATION: Overcoming this challenge on NIMO incidents, pursuing and matching technology and education to identified resources, and following through with technical assistance to the Technology and Development Centers will be a high priority.

Recommendations:

Identify and define specific roles and responsibilities

Identifying and defining specific roles and responsibilities of either an Intelligence Unit or an expanded Field Observer role. On this incident, the Intelligence Unit reported to the Planning Section Chief with intent of working closely with the Situation Unit and Field Observers.

There are many possibilities of how an Intelligence Unit could function, but one suggestion is to keep Intelligence Units in the Planning Section for now. Additionally, the Intelligence Unit should be briefing the Operations Section Chief with the current known “snapshot” just prior to operational plans meetings.

The Command and General Staff briefing may also be an excellent opportunity to provide good situational awareness. Each staff area could have custom layers of information that the Intelligence Unit could present at the beginning of the meeting to help build the situational awareness of the group. Updates at each meeting would be as short as possible, and relevant to what has changed. All of the geospatial layers of each function would be available if the staff wanted to explore a problem or plan in more depth.

Rapid reassessment of the licensing troubles with more capable phones for interested parties.

Smart phone capability in the field is a tremendous asset that is being hindered by rules and licensing problems. Resources need to be able to find the tool that works and utilize that tool.

Streamlining the Technical Approval process and finding ways to get the technology to incident responders through either team kits or increased targeted budgets is necessary to enhance modern fire management

Rebrief Fire Use Modules in the use of netlinked files within Google Earth to reduce and eliminate the need for air transport of data in remote locations

Working with the Chepeta Fire Module has brought attention to the need to re-engage the Fire Module community in a number of ways. Fire Modules need to be briefed on current and future technologies to force multiply the module size.

The priority should be educating all Fire Modules on the use of netlinked Google Earth files to manage risk on remote fires.

Action Items:

- Continue to engage the IHC community, and follow-up at the Region 1 Superintendent meeting. (Gibson)
- Complete writing a one page instruction sheet for new users of netlinked files in Google Earth. (Gibson)
- Tie in Chepeta Fire Use Module with Bob Roth to talk about Geotagging cameras. (Phillips)
- Follow up with Geo pdf writing pen and map tools. (Bidwell)
- Interview the IMET group to discover relevant weather briefing displays. Pass information to Bob Roth. (All)
- Identify small communication and printer package for each team to utilize with resources in spike or coyote camp situations. (Jackson)
- Pass Kevin Ames' project description through channels to the Technology and Development Centers and through NIFC. (Gibson/Phillips)
- Follow-up with potential uses of Google Earth for briefings and displaying planning documentation. (All)
- Continue to use new and emerging technologies on incident to improve efficiencies and assist with providing a common operating picture to ICP and the line. (All)

