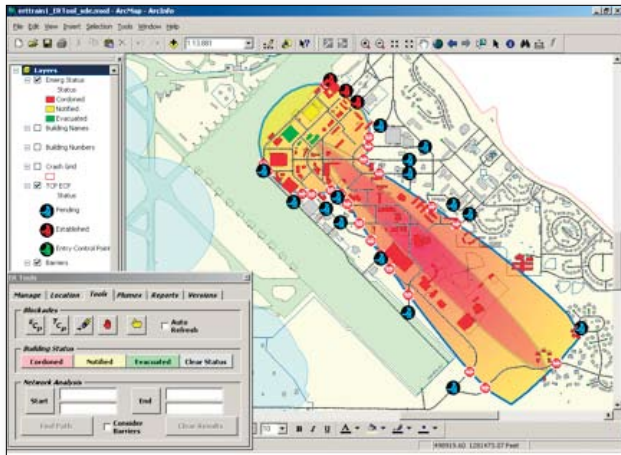


MacDill Builds on the Initial Efforts by PACAF and ESRI with Emergency Response Tools

MacDill Air Force Base GeoBase and Readiness Team Up to Save Lives and Property



Overview

At MacDill Air Force Base, the incident management process is one of the most critical responsibilities for the base Civil Engineering Squadron's (CES) Readiness Flight. Before 2005, most incident management procedures at MacDill were accomplished using outdated wall maps with transparent grease pencil overlays. The business process was prone to miscommunication and spatial location errors and was a slow manual process.

In 2003, the installation GeoBase Program began implementing the Air Force's standards-based CIP, creating the foundational architecture and data required to implement the GeoBase standard of "One Base, One Map." This provided the foundation to build the incident response Mission Data Set (MDS) and the Emergency Response Tool (ERT) application. These milestones allowed the incident management process to benefit from geospatial technology.

MacDill built on previous joint efforts to create ERT-style capabilities. The initial ERT efforts by PACAF and ESRI, along with subsequent efforts by ESRI under contract to the Air Force Center for Environmental Excellence and Air Education and Training Command, resulted in an ArcGIS extension that is simple, powerful, yet easy to use with minimal training. That extension is now known in the Air Force community as the Emergency Response Tool.

By early 2004, a strong partnership had been formed between the Geo Integration Office (GIO) and CE Readiness functions at MacDill AFB. Readiness personnel were quick to recognize the value of the GeoBase architecture and the CIP. The Geo Integration Office quickly recognized the value of sharing information with Readiness. A key element of the GeoBase program in the Air Force is support by contractors that are experts in the GIS industry. An early benefit of the contractor support was a regularly scheduled Science Applications International Corporation (SAIC) teleconference in which MacDill learned about the preexisting ERT. A call to ESRI rapidly got the ball rolling with locating a copy of the tool and additional pertinent information.

Within three weeks, the MacDill GeoBase office and Readiness teamed up to field a demonstration of a solution that met most of the requirements for an incident management tool for the Readiness Flight. The return on investment (ROI) was actualized by reusing existing code the Air Force already owned. The early results showed that a rapid prototype, low-cost solution was attainable. The resulting excitement energized the Readiness community. Working together, Civil Engineering Squadron/GIO and CES Readiness defined additional requirements and addressed enhancements to the prototype that would be required. Readiness Flight personnel pursued support from the base commanders to find the resources to migrate the existing manual process to a digital process using the ERT.

Contact Information

Mr. Willie Gibbs

Deputy Emergency Manager MacDill AFB
E-mail: Willie.Gibbs.CTR@macdill.af.mil
Phone: 813-828-4321

Kevin Kish

GeoBase Coordinator MacDill AFB
E-mail: Kevin.Kish.CTR@macdill.af.mil
Phone: 813-828-4241

The Readiness and GIO partnership along with strong support from wing leadership was the key to success. The shared vision was to improve communication, enhance the emergency response capability, and bring GIS technology and incident management together to automate key portions of the process. The guiding principle was to achieve these capabilities by capitalizing on the Air Force's investment in GIS technologies.

Key Roles

The Readiness function clearly identified the incident management business process and served as the facilitator between the technology implementers (GeoBase) and the end users (Fire and Security Forces).

The GeoBase function created and demonstrated GIS capabilities and shared technical knowledge with Security Forces, Fire, and Readiness, resulting in a good understanding of what is possible.

Results

MacDill emergency responders are now using the ERT that is revolutionizing the way information is managed and accessed during an incident. The incident location, cordon, plume models, and entry control point are created and managed by the Fire troops, while the traffic control points and the building evacuation status are managed by Security Forces. Management by both functional areas is simultaneous and capitalizes on the multi-user incident management editing capabilities of a centralized ESRI ArcSDE database.

Situational awareness has reached an unprecedented level by utilizing ESRI's ArcIMS Web mapping services to project the incident and related emergency information on the MacDill local area network via a Web browser live to the command and control (C2) and emergency services personnel. Future plans

allow some of the incident information to be made available to general base populace, facilitating rapid notification and response, resulting in a smarter and more timely response to potentially dangerous situations. C2 staff are now able to see incident information in a regional mapping environment faster than ever.

The Web browser allows personnel to overlay or link to other databases, providing an improved situational awareness and access to related information at the click of a button. For example, the installation commander can easily access the facility manager contact information when he or she clicks on a building that is affected by the incident. C2 realizes that the Web-based C2 viewer is powerful because it brings essential information into a unified picture. This allows decision makers to see more options and possible solutions when managing a crisis. The ERT and associated Web-based mapping viewers help focus limited resources to the areas of highest priority and still help personnel not lose the big picture as to how to best use resources to maximize impact during a response.

Conclusion

The improved response time, communication, and state-of-the-art mapping display are helping MacDill prepare for and respond to emergency-related incidents. Improved response is allowing MacDill to protect responders and property and save lives while preserving its ability to carry out its mission.

