Leveraging WebEOC in Support of the Haitian Relief Effort: Insights and Lessons Learned

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HAITIAN RELIEF EFFORT: BACKGROUND

When a magnitude seven earthquake struck Haiti, thousands of US citizens responded by donating money, resources, people, and time to aid in the disaster relief. To respond to the incident and to create a secure information-sharing environment, the Florida-Miami-Dade County and State Emergency Operations Centers (EOC) were activated.

HAITIAN RELIEF EFFORT: SEQUENCE OF EVENTS

Tuesday, January 12, 2010:
- Magnitude 7 earthquake strikes Haiti
- Miami-Dade EOC and the State EOC activate to level 3 (a heightened state of monitoring) with the county duty officer and the state watch office monitoring the situation
- Urban Search And Rescue, Florida Task Force 1, and Florida Task Force 2 are notified of the situation
- U.S. Department of State begins response preparations
- Urban Search and Rescue teams from Virginia and California are mobilized

Wednesday, January 13, 2010:
- Key personnel meet at the EOC, including the Miami-Dade County Mayor, Miami-Dade County Commissioner, Florida State Representatives and a Congressman of State of Florida, the Miami-Dade County Chief of Fire, Miami-Dade County Chief of Police, the director of the American Red Cross, the director of Catholic Charities and various other elected officials
- EOC activates to level 2 in order to support donation preparation and documentation of surplus county resources to be deployed to Haiti

Thursday, January 14, 2010:
- EOC tasked to support the State Department repatriation of U.S. citizens and permanent residents of the United States
- EOC continues planning for the deployment of donations and county resources to Haiti
- EOC establishes and deploys a county relief effort website Miami International Airport and Homestead Air Reserve Base began receiving U.S. citizens from Haiti for repatriation.

CONTINUATION

Friday, January 15, 2010:
- EOC goes to 24-hour operations as it continues cataloging both county and non-county deployable and donated resources
- EOC continues working with the Department of State and the Miami-Dade Aviation Department on the repatriation plan
- EOC begins coordinating with appropriate Federal and State agencies in preparation for a potential mass migration event resulting from the earthquake

Sunday, January 17, 2010:
- As incident stabilizes, the EOC resumes daytime-only operations. A small contingent of staff provides 24-hour support for Homestead Air Reserve Base to increase repatriation effort coordination

COLLABORATION TOOLS

- Main information system in use at the Miami-Dade EOC is WebEOC
- WebEOC is a web-based crisis information management system
- Aids in secure coordination and collaboration among EOC staff, liaisons, and emergency managers
- Staff and liaisons organize the common operating picture
- Use situational report boards, position logs, significant events, and various additional boards
- In addition to the normal boards the EOC had created a priori, it needed to track other resources:
  - Repatriation efforts
  - When the airplanes were arriving
  - How many passengers each plane was carrying
  - At which airport the airplane was landing
  - How many passengers were aboard
  - How many people were injured
  - How much food and water were available
  - County and non-county resources that were being donated
  - What items were being donated
  - How many of each item

INSIGHTS AND LESSONS LEARNED

1. The need for on-demand boards, that is, boards that can be built on-the-fly.
   In its incident management preparation, the EOC did not anticipate the need for additional boards in the middle of a crisis. With WebEOC, the EOC was able to build the needed boards quickly and import data to those boards quickly as well. This greatly contributed to the success of the relief operations.

2. The need for web-accessible boards that can be accessed from any computer, any time, anywhere.
   During this crisis, the EOC did not anticipate the need for additional logs for individuals who were not assigned to the EOC to access WebEOC and input data. Thankfully, the EOC was able to quickly provide individuals at Homestead Air Reserve Base and partner agencies restricted access to the system in order to coordinate the relief efforts.

3. The need for intuitive, easy-to-use software that can be learned in a matter of minutes, and the ability to provide different levels of access controls to various users.
   The individuals who needed access to the transportation board were not regular liaisons at the EOC. They had never used WebEOC before and had to learn how to input and view the data they needed to share with the Miami-Dade EOC. Because the EOC allowed non-EOC personnel to use its system, it also needed to have various read-only access permissions to allow the individuals to see the same data that the staff and lead agencies were seeing.

4. The ability to jump from day-to-day operations to an incident quickly, and the ability to separate day-to-day and emergency data quickly and easily.
   The earthquake struck Haiti with little notice. The EOC needed the ability to change from day-to-day operations to the incident in a matter of minutes. It also needed the ability to separate the incident space from day-to-day data and from other incidents in the system.

RECOMMENDATIONS FOR FURTHER IMPROVEMENT

1. The ability to recover from failure quickly.
   Luckily, there was not a software failure during this incident. However, the rush of the relief operations dictated that if there were a failure, the EOC would need to access its backup system within minutes of the failure.

2. The ability to integrate the crisis information management system with GIS.
   There were many data for which it was useful to geocode and map. One example was the location and operating hours of all of the public donation drop-off points in the county.

3. The ability to create various reports.
   Therefore, the EOC needed a way to create various reports quickly and easily to print out the fields that it was interested in.

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