SUMMARY

I participated in Operation Black Swan, an Offshore Mass Rescue Operation exercise with the US Coast Guard (USCG), the cruise ship industry, the Bahamas, and numerous other stakeholders, conducted on April 1-5, 2013. Black Swan is a series of mass rescue operation exercises designed to prepare for a catastrophic incident at sea. This exercise was unprecedented in its scope and complexity, and was the largest exercise in modern history for the USCG.

My participation was coordinated with the USCG to support the Pathfinders Task Force [http://pathfinderstaskforce.com](http://pathfinderstaskforce.com), the dba of Disaster Solutions, a Florida based, small business that provides services via an approved GSA schedule. My mission was to test and evaluate their cell phone application to track patients from a simulated cruise ship disaster as they were being treated and evacuated. This patented, mobile technology enables field observers to take pictures and add field notes on a simple cell phone, all of which is geocoded and time/date stamped into a command Google Map view for Command personnel to analyze as an incident unfolds. This system can and has been used in a 100% disconnected environment, with no cell towers or Internet.

The Pathfinders Task Force has been involved in numerous disasters, and Black Swan was an opportunity to support the USCG by transmitting disaster response information and patient data in real time. My medical objectives were to demonstrate the Pathfinders Task Force’s capability to provide triage and medical status information, patient location, tracking, and accountability.

Equipped with a cell phone loaded with the Pathfinder tracking system, I accompanied patients while abandoning ship in lifeboats and during on-shore triage, hospital treatment, and air evacuation by the Florida Advanced Surgical and Transport Team (FAST) from Freeport, Grand Bahamas to USCG Air Station Opa Locka via a Coast Guard C-130. Assisted by a non-medical scribe, we entered information into the cell phone in triage and abbreviated medical forms. We then took pictures of each patient, and after hitting the send button, the information was immediately transmitted to the Emergency Operations Center (EOC) where the pictures were projected for the Command to direct the response.

Tasked to support both the Situation and Resources Unit for Black Swan, Pathfinder personnel assigned to the EOC provided written updates to EOC leadership which assisted in medical decision making and provided situational awareness. Additional field personnel supplied unprecedented, real time field updates and geo-tagged photos simultaneously from multiple disaster response sites to the EOC and numerous organizations following the course of the exercise. The forms submitted by my unit
crossed two countries via two different cell networks and allowed the Command (and 35+ remotely located, multi-agency, monitoring locations) to gain knowledge minute by minute of on-going, field operations.

In my opinion, this technology on simple cell phone platforms has the potential to provide valuable, efficient, medical situational awareness during a disaster response, especially during a scenario with interagency involvement and patient evacuation. Utilizing the non-medical scribe, I was able to efficiently triage 56 patients and transmit initial triage criteria (respirations, pulse, mental status), tag status, 2 pictures of each victim, geotag and time/date stamp my evaluations — all 56 in precisely 42 minutes, as documented by the software. I utilized the medical form at the FAST team aeromedical staging site to create and transmit an abbreviated disaster patient movement record, which included relevant medical data such as patient name, vital signs, aeromedical evacuation movement precedence, critical care transport medical requirements, equipment, vital signs, and equipment requirements. I created both custom forms in less than 30 minutes with one of the Pathfinder Technical Specialists, who portrayed all of this information on a Google Map for the Command, with an Excel sortable report generated to forward to receiving trauma facilities.

The capability to provide mobile patient data records to an EOC could be utilized by any responding medical organization. Potential DoD medical users include Critical Care Air Transport Teams (CCATT), Joint Patient Movement Teams (JPMT), Patient Movement Situational Awareness Teams (PMSAT), Aeromedical Evacuation Liaison Teams (AELT), Joint Regional Medical Planners (JRMPs), and Emergency Preparedness Liaison Officers (EPLOs). The application is easy to use and requires minimal training. While I was able to enter patient data on my own, data entry was accomplished more quickly with the use of a Pathfinder non-medical scribe, and rapid data analysis was available from an EOC based Pathfinder. The Pathfinder team members could easily train DoD personnel, augment these teams if needed, and have a history of successful military/civilian force multiplier deployments.

The Pathfinder field reports and mobile technology were recognized in an initial Unified Command hot wash briefing as a best practice. I have included representative pictures, a triage spreadsheet excerpt, and a sample geocoded map view tracking patient movement while abandoning ship via lifeboat. The POC for the Pathfinders Task Force is Scott Lewis, CEM, FPEM at scott@pathfinders.cc.

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Excerpt from Pathfinder triage spreadsheet.

Sample view from the Pathfinder EOC Control Center during the Abandon Ship phase. Field Observer forms with pictures taken by me while abandoning ship via lifeboat were geocoded & time/date stamped on an interactive map.