



Global Relief Technologies helps Gustav effort

City Company lends technology



Michael Gray, the chief executive officer and founder of Global Relief Technologies in Portsmouth, shows off his company's Virtual Network Operations Center, which handles information gathered from personal digital assistants (PDAs) in the field during disaster relief efforts. Scott Yates photo



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PORTSMOUTH — Information the American Red Cross will have to assess the needs of those hardest hit by Hurricane Gustav will be infinitely better than what it had when Katrina hit the Gulf Coast in 2005, thanks to the efforts of a Portsmouth company.

Global Relief Technologies, located on New Hampshire Avenue at the Pease International Tradeport, has given 29 of its combination hand-held personal digital assistants (PDAs), global positioning systems (GPSes) and satellite phones to Red Cross volunteers spread out across the affected region. These volunteers will be able to

send real-time data on the needs of Gulf Coast residents directly to Red Cross headquarters in Washington, which will attempt to address those needs as quickly as possible.

"There is a significant amount of our equipment in the field distributed among the approximately 100 Red Cross disaster relief teams dispatched to the area," said Michael Gray, Global Relief Technologies president and chief executive officer. "We're fully incorporated into the Red Cross team."

The PDAs will be able to record the status of electricity, food supplies and shelter, and even take pictures of areas hit by the storm. That data and visual material is then immediately uploaded to the Red Cross operations center so the agency's officials can direct resources to where they are needed most.

"We don't even see FEMA doing this yet," Gray said.

Gray, a former Army intelligence officer, developed the disaster response system based on his own experiences. He found out a lot about how the inability to generate and analyze disaster information in real time can affect the effectiveness of humanitarian efforts from his work doing village assessments in Kosovo in the 1990s and, more recently, in Afghanistan.

"We were having trouble determining how much plastic sheeting was necessary to protect the population in Kosovo and why we were dropping bombs on humanitarian aid workers in Afghanistan," he said.

Despite the vast amount of technology available, disaster relief workers, both military and civilian, were still using pencils and paper to prepare the reports assessing local needs. Those completed forms rarely made their way to the people in decision-making positions and, if they did, took weeks to turn into usable data, Gray said.

Quickly realizing that the military bureaucracy was too entrenched and slow moving to accept another approach to disaster data collection and analysis, Gray and a few others decided to come up with their own system, which relies on hand-held hybrid PDAs. These systems are put into the hands of those who are witnessing the disasters firsthand in the field.

"If you empower people with the proper tools, you'll get the necessary data," Gray said.

However, there was another piece of the puzzle that needed to be addressed: It involved what to do with all this data once it is accumulated and how to get it into a simple, readable form so those in decision-making positions, as well as those in the field, could act on it.

Gray and his staff began working on the development of what he called "virtual network operations centers," or V-NOCs, to deal with that issue. V-NOCs are secure databases designed to the specifications of each customer and have the ability to be updated on a real-time basis.

It means an agency such as the Red Cross monitoring something Hurricane Gustav would have information concerning the event available in a comprehensible form that is updated each time a worker in the field pushed the "send" button on his or her PDA.