Emergency Management and Disaster Response

Jackson State University

The National Center for Biodefense Communications (NCBC)

The Center for Defense Integrated Data (CDIC)

March 2007

All Hazards Emergency Operations Management System (ALLHAZ)

The National Center for Biodefense Communications

March 2007

ALLHAZ

- **Highly integrated system supporting emergency management for different types and sizes of disasters**
- **Designed to reduce the amount of effort and time to comply with reporting requirements**
- **GIS enabled data collection and analysis**

Lessons Learned

- **Leverage Human Resources – Citizens Will Volunteer, Be Prepared To Use Them Wisely**
- **Teamwork provides benefits**
- **A Common Operating Picture is critical**
- **Sharing information, leveraging existing resources, building upon existing systems is effective, efficient and expedient**

Disaster Management

Triage at Waveland, Miss. Hospital

March 2007

Katrina Evidence

Aerial view of Waveland, Miss.
Neighborhood after Hurricane Katrina
Photo courtesy of Pictometry International Corporation.

ALLHAZ Components

- **Animal Evacuation Shelter Management**
- **Automated National Incident Management System (NIMS)**
- **Common Operating Picture (COP)**
- **Evacuation Shelter Management**
- **Mississippi Board of Animal Health Zoonotic and Animal Disease Tracking**

ALLHAZ Components

- **Scaleable System Grows as Event Grows**
- **Shared Data, Projects and Resources**
- **WEB EOC and NRP/ESF Compliant**

Contact Information

Ms. Elizabeth Matlack, Director, NCBC

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Disaster Response Intelligent System (DRIS)

Center for Defense Integrated Data (CDID)

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DRIS Search And Rescue Support

- **Provide critical support to SAR personnel to assist in the location and recovery of victims after a natural disaster**
- **Maximize effectiveness and economy of effort of SAR tasks**
- **Fuse all available data to enhance decision-making essential to SAR efforts**
- **Enhance data collection and availability**
- **Integrate SAR to overall disaster management (ALLHAZ)**

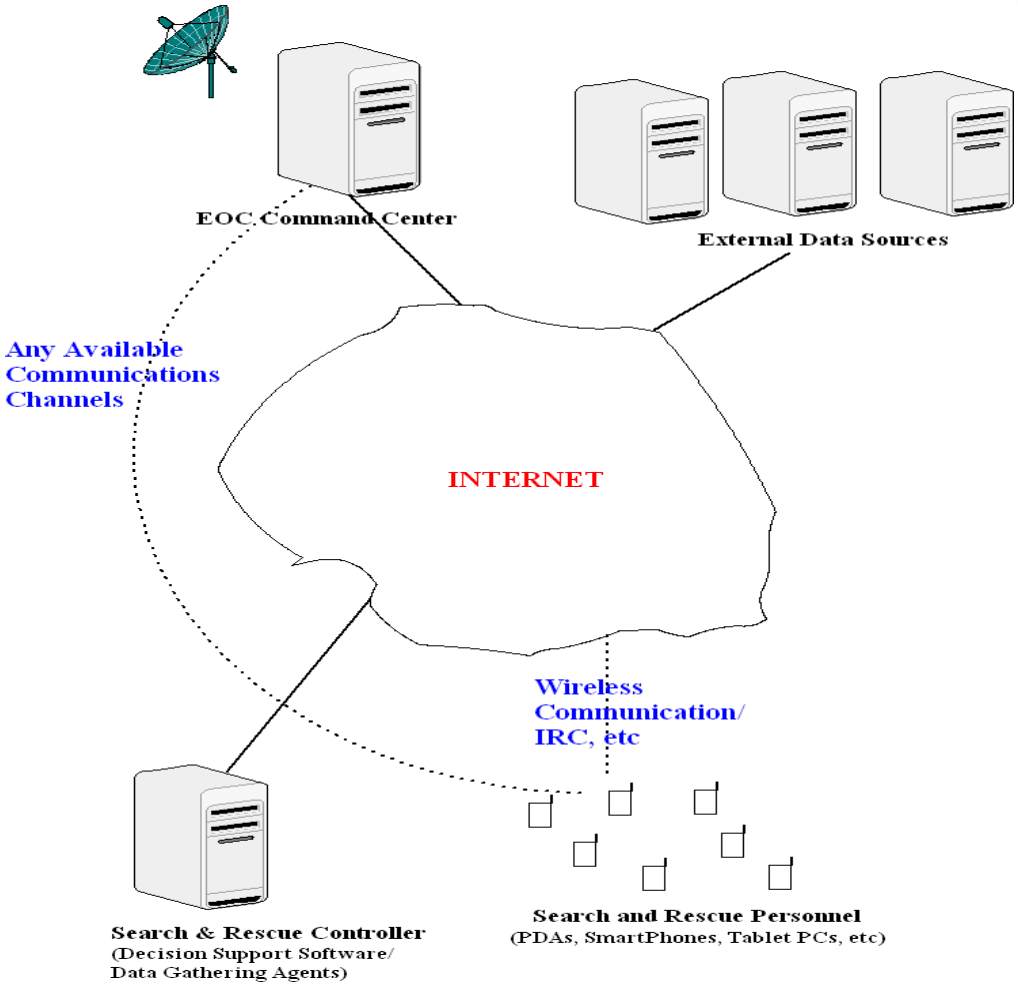
Data Fusion for Search and Rescue

- **Utilize PDAs, smartphones, tablet PCs to provide information to first responders and record event / environment data by SAR teams**
- **Integrate data from static/dynamic sources, live data from first responders, sensors**
- **Direct teams to hot spots as feedback from field occurs**
- **Standardize software, user interfaces, data collection forms for both SAR and damage assessment**

DRIS Architecture

- **Utilizes Web services**
- **Integrated GIS interfaces**
- **User selected area of interest**
- **Integrated live data and sensor feeds**
- **Intelligent and data gathering agents**
- **Extensible**
- **Distributed Architecture / Robust**
- **Rule based**
- **Integrated expert system**
- **Employs fuzzy logic for decision support**

DRIS Architectural View



Contact Information

Gordon Skelton, Director, CDID

gskelton@c-did.com

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