



# UNITED STATES SOUTHERN COMMAND TECHNOLOGY APPROACHES FOR ENABLING MULTI- NATIONAL ACTIVITIES

**US Southern Command  
Science, Technology & Experimentation Division  
LTC John M. Ferrell  
Deputy Science Advisor**

**UNITED STATES SOUTHERN COMMAND**  
PARTNERSHIP FOR THE AMERICAS



# Mission

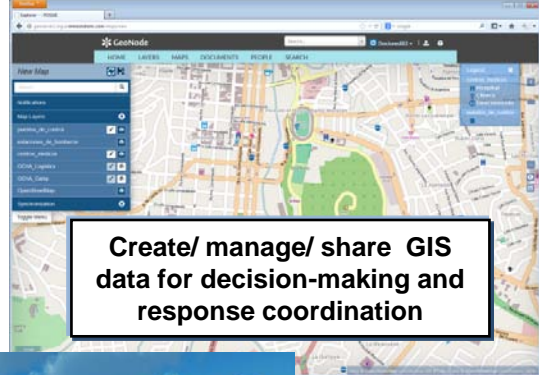
*United States Southern Command's Science, Technology & Experimentation Division* investigates, coordinates, executes, and reports on Science and Technology activities in support of the Command's missions; transforming plans, programs, and processes to improve their effectiveness and efficiency. It is responsible for the theater's Science and Technology program, Joint Capability Technology Demonstrations, International Research and Development activities, and Joint Experimentation Program.

SOUTHCOM S&T is focused on enabling partners to achieve more effective, collective mission effects in a multi-national, cross organizational environment.



# Sharing and Collaboration in a Multinational, Unclassified Information Environment

## Create-Share-Enhance Communication & Collaboration

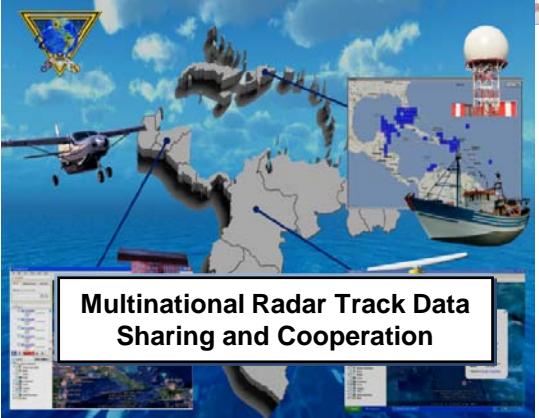


Mobile APPs create/ share "ground truth" GIS information

Create/ manage/ share GIS data for decision-making and response coordination



Work with international partners to understand requirements and develop sharable solutions



Multinational Radar Track Data Sharing and Cooperation



**Haiti Earthquake**



UNITY

RDA

ROGUE

2010

2011

2012

2013

2014





# Enabling Technologies for Multi-national Activities

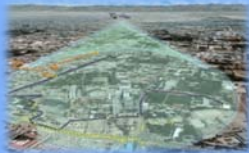
ISR



Space-based Imagery



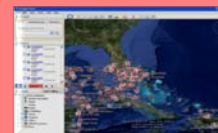
Persistent Surveillance



Wide Area Sensing



Geospatial Mapping & Visualization

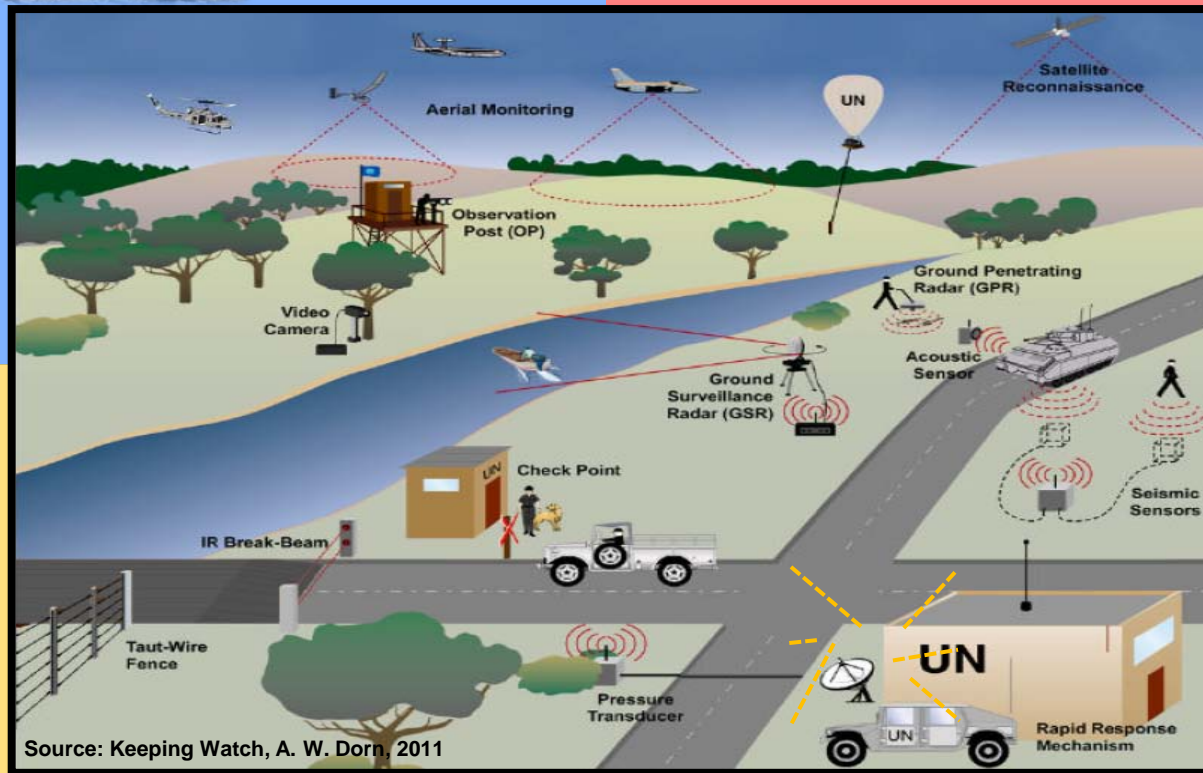


Shared Situational Awareness

C4/SA



Tactical Comms / Data Networks



Small UAS



Armored Vehicles

Force Protection



Unattended Ground Sensors



Counter-IED



Non-Lethal Systems

Protection of Civilians



Water Purification / Renewable Energy



# Rapid Open Geospatial User-driven Enterprise "ROGUE"



UNITED STATES SOUTHERN COMMAND  
PARTNERSHIP FOR THE AMERICAS



# Challenge

Events, such as the earthquake in Haiti in 2010, demonstrated the need for fast, accurate location information in order to deliver supplies and needed assistance to the right place, at the right time

- Where are the groups of people needing help?
- Who is in the area/coming to the area to help?
- What help is available and where is it located?
- What is the trafficability of the roads/bridges?



**How can we get help to those in need?**



# ROGUE Charter

**Collaboratively develop geographic feature data, with traditional and non-traditional partners, by improving the ability of the **OpenGeo Suite** to **ingest, update** and **distribute** non-propriety feature data utilizing **open source** software and **open standards**.**

## Initial Context

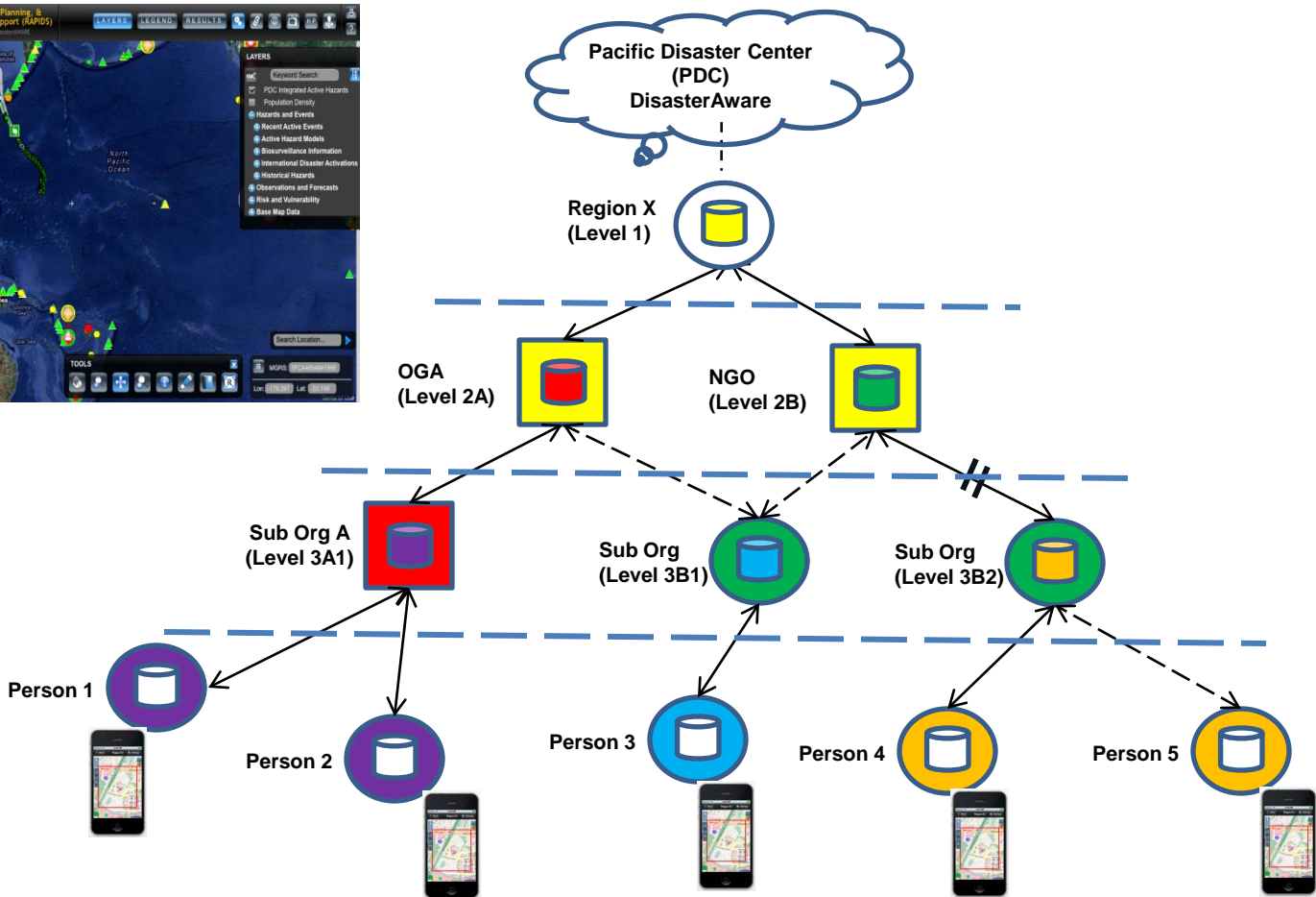
- Humanitarian Assistance & Disaster Relief (HA/DR)

## Problem Set

- Numerous partners: military, inter-agency, non-governmental, international
- Common situational awareness of the environment is critical
- Responding organizations both need, and can provide a great deal of information



# Concept





# Solution



GeoNode

HOME LAYERS MAPS DOCUMENTS PEOPLE SEARCH

New Map

Search

Notifications

Map Layers

- puestos\_de\_control
- estaciones\_de\_bomberos
- centros\_medicos
- OCHA\_Logistica
- OCHA\_Camp
- OpenStreetMap
- Sincronización

Toggle Menu

Legend

- centros\_medicos
- Hospital
- Clinica
- Desconectado
- puntos\_de\_control

EOC (JTF HQ)

NGO ("X")

NGO ("Y")

GOV (Department)

\* Capability to create location information and

\* Share the information among organizations

Water

Water (ALT)

Displaced Persons

Food

MedEvac

1st Aid/ Med

Police

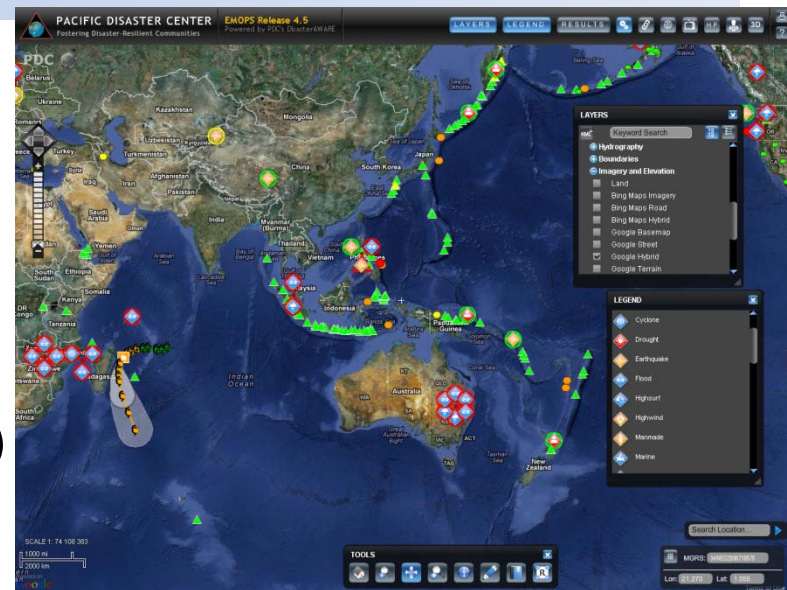
Fire

# PDC Transition



## Pacific Disaster Center (PDC) DisasterAWARE

- Platform for Emergency Operations (EMOPS)
  - Worldwide hazard tracking & alerts
- ROGUE capabilities will augment DisasterAWARE
  - Enable use of Volunteered Geographic Information (VGI) with existing authoritative PDC information
  - Enable sharing among organizations
  - Provide open source option to lower cost of DisasterAWARE deployments to other countries





# Questions?



**UNITED STATES SOUTHERN COMMAND**  
PARTNERSHIP FOR THE AMERICAS