

# HUMANITARIANS IN THE SKY

@PatrickMeier, PhD | [UAViators.org](http://UAViators.org)





Copyright  
F. P. LAWRENCE CO.  
CHICAGO  
MAY 24, 1906.

PHOTOGRAPH OF  
SAN FRANCISCO IN RUINS  
FROM LAWRENCE CAPTIVE AIRSHIP  
2000 FEET ABOVE SAN FRANCISCO BAY  
OVERLOOKING WATER FRONT;  
SUNSET OVER BILDER BAY.



**CYCLONE PAM - 2015**

# UAVIATORS

World Bank Activation



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**heliwest** GROUP



# Field Based Surveys

- Time Consuming
- Data Quality Issues
- Limited Perspective

# Aerial Needs

- Fully Destroyed
- Partially Damaged
- Largely Intact

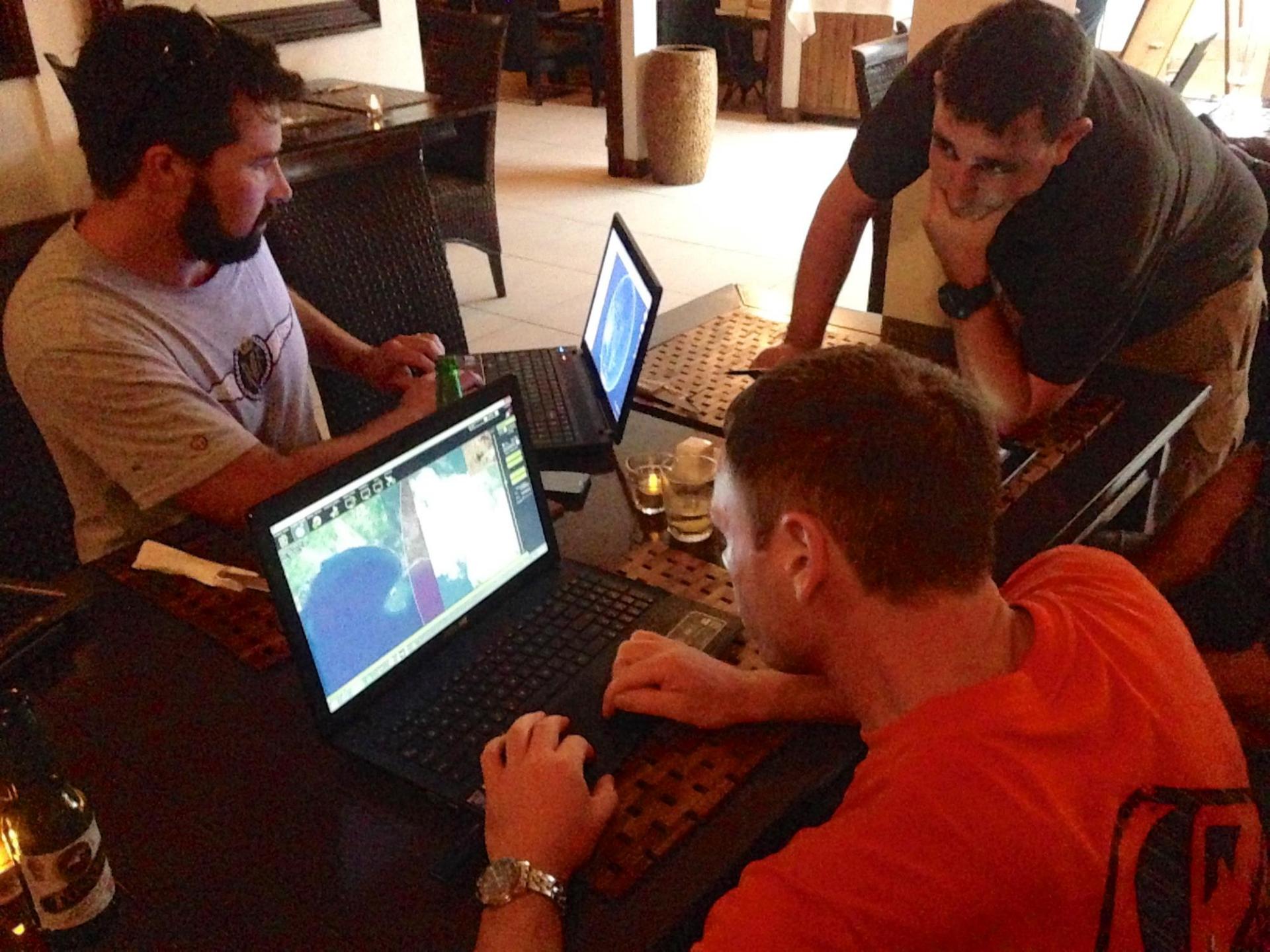






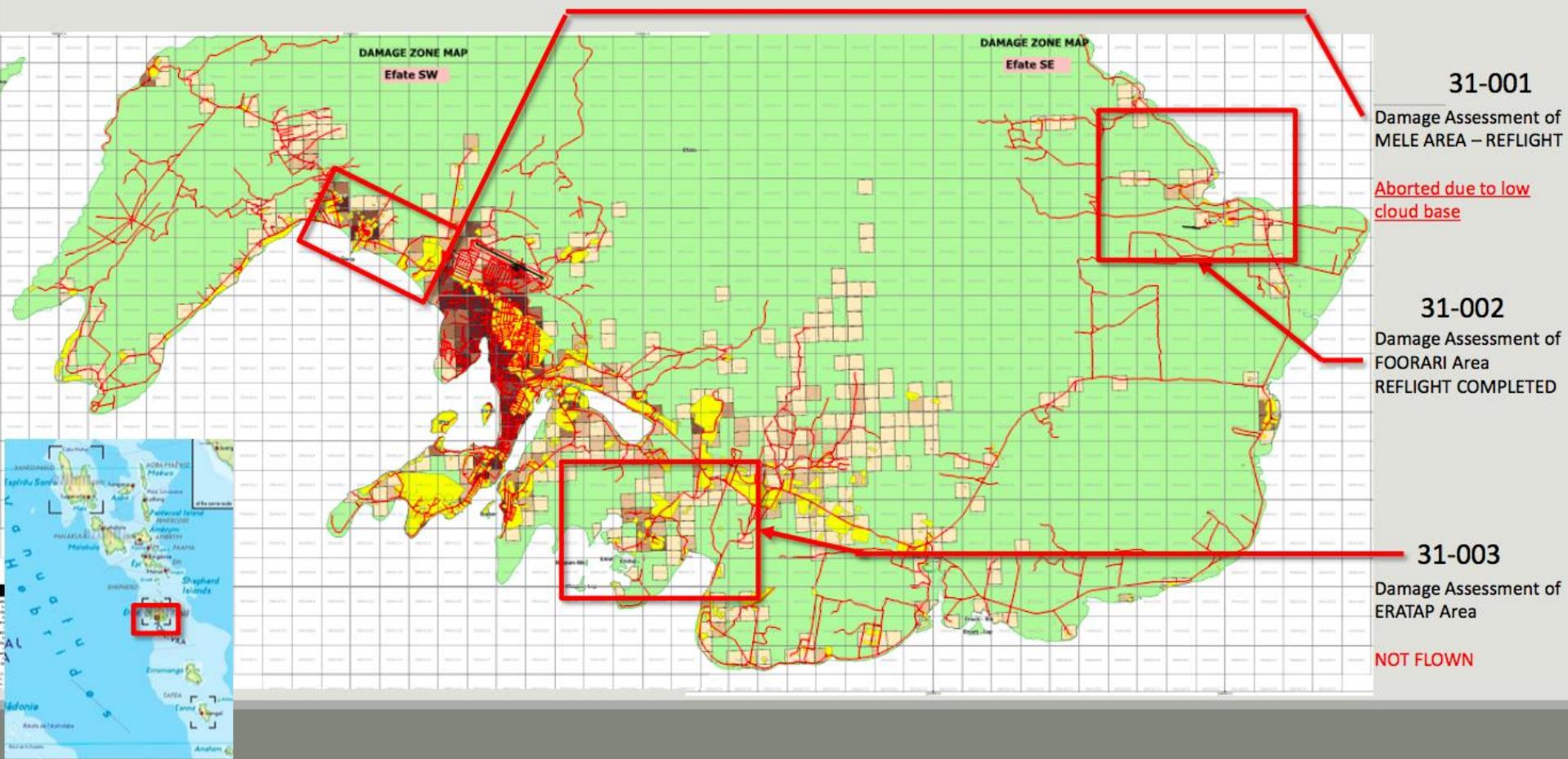
UAVIATORS  
HUMANITARIAN UAV NETWORK

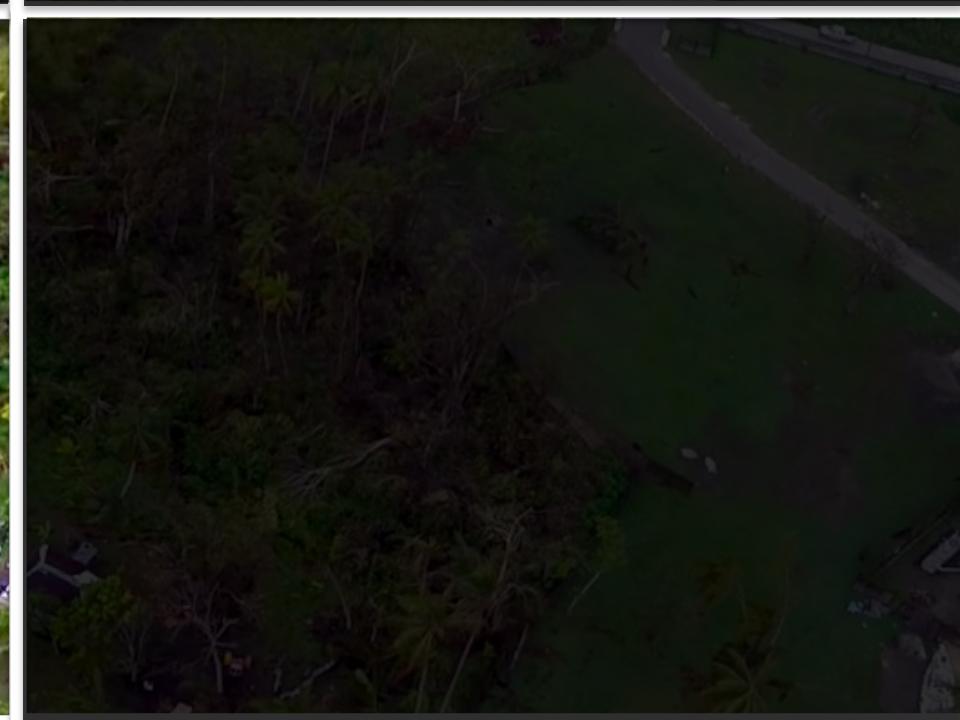
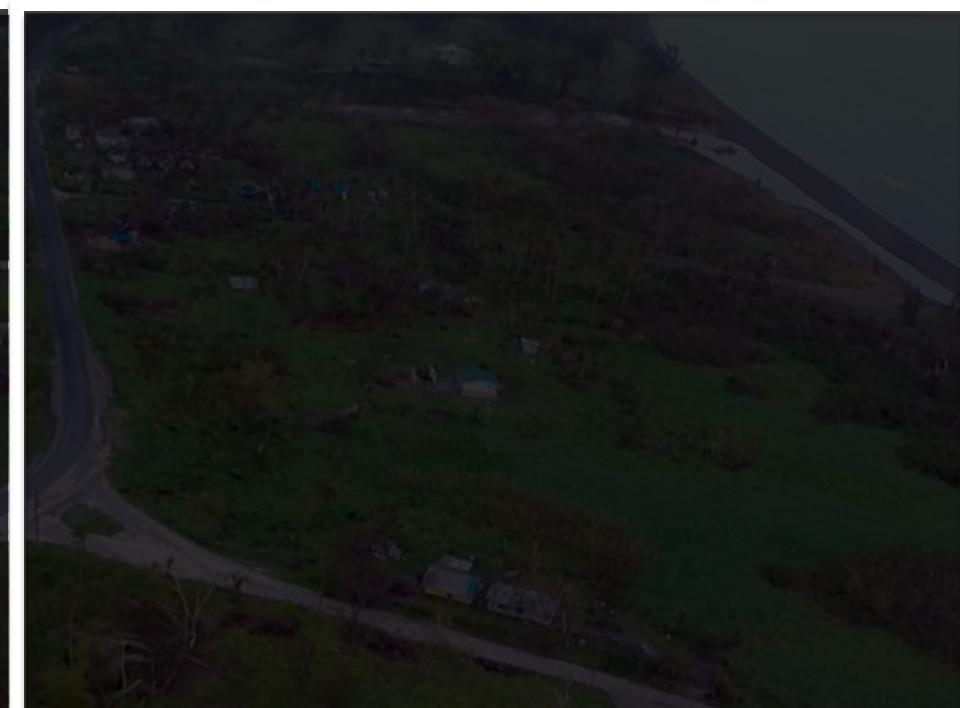
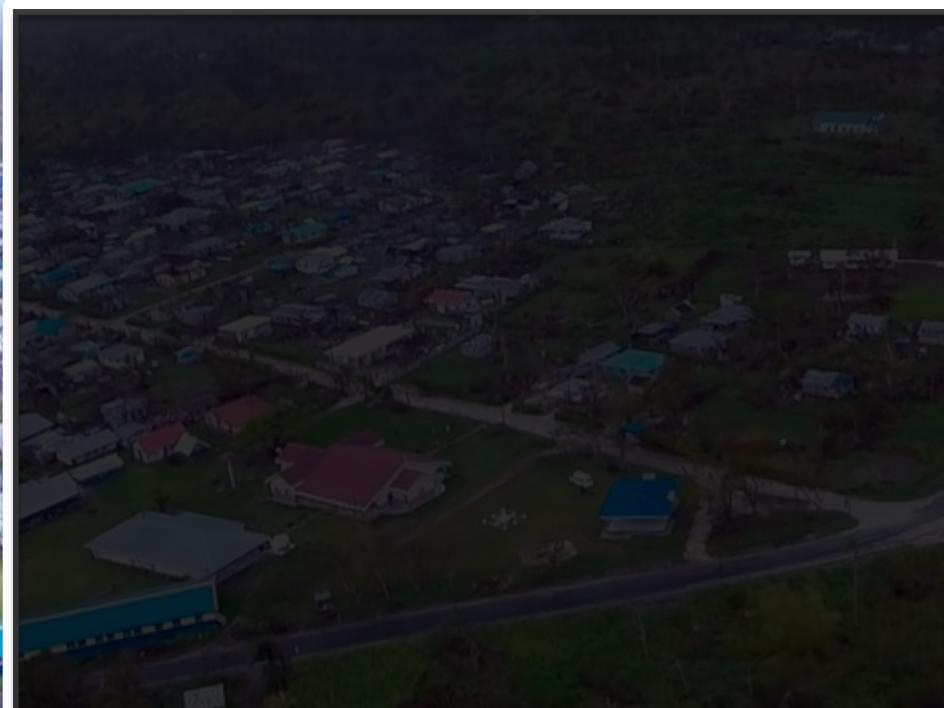




# Humanitarian UAV Flight Plans

TUESDAY 31 MAR 15 – PLANNED UAV FLIGHTS – **COMPLETED**





# MicroMappers



DRAW

EDIT

SAVE

DELETE







# NEPAL EARTHQUAKE

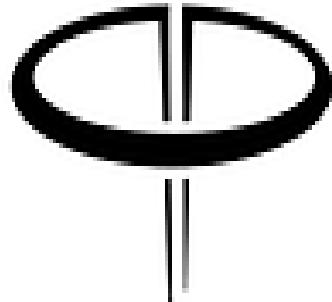


Nepal UAV Missions: [iRevolutions.org](http://iRevolutions.org)

# Aerial Needs

- Search & Rescue
- Disaster Damage
- Logistics Support
- Heritage Sites
- Body Recovery
- Landslide Risks

# INDEPENDENT UAV TEAMS



HALODROP



SKYCATCH



DJI Inspire



eBee



DJI Phantom 2



Aeryon Scout



## Code of Conduct & Best Practices



[UAVIATORS.org/docs](http://UAVIATORS.org/docs)

# UAVIATORS

## HUMANITARIAN UAV NETWORK

CIVIL AVIATION AUTHORITY OF NEPAL

FLIGHT OPERATIONS DIRECTIVES NO. 07  
MAY 2015

This Flight Operations Directives No.7 has been issued in accordance to the power conferred by Rule 82 of CAAN, Civil Aviation Regulation, 2058. The purpose of this Directive is to regulate and systematize the operations of UAVs within the territory of Nepal.

### 1. General

The term UAV is an abbreviation of Unmanned Aerial Vehicle, meaning aerial vehicles which operate without a human pilot. For the purpose of clarity, UAVs are categorized as “small” and “large”. This Directive is issued for the regulation of small UAVs that weigh less than 20 kgs. This note provides an introduction to the use of Unmanned Aerial Vehicles (UAVs), more commonly known as “drones”. These are remotely piloted aircraft that range from simple, hand-operated systems to high altitude, long endurance systems similar in operation to small aircraft.

# UAVIATORS

## Crowdsourced Crisis Map

The screenshot shows the UAVIATORS interface. At the top, the logo 'UAVIATORS HUMANITARIAN UAV NETWORK' is displayed, along with a search bar and a 'ADD' button. The main area is a map showing crisis locations marked with red icons. A sidebar on the left lists crisis reports with their locations and dates:

- Gaza City, Israel  
Sep 2, 2014 1:45 AM
- California, United States of America  
Aug 26, 2014 8:20 PM
- Yunnan, People's Republic of China  
Aug 25, 2014 9:13 PM
- Yunnan, People's Republic of China  
Aug 24, 2014 8:28 PM
- Sichuan, People's Republic of China  
Aug 24, 2014 8:26 PM
- Washington, United States of America  
Aug 18, 2014 1:06 AM
- Oregon, United States of America  
Aug 18, 2014 1:05 AM
- Taiwan  
Aug 18, 2014 1:02 AM
- Jamaica  
Aug 18, 2014 1:01 AM

# MicroMappers



DRAW

EDIT

SAVE

DELETE

# UAVIATORS

HUMANITARIAN UAV NETWORK



[UAVIATORS.org](http://UAVIATORS.org)



openrelief



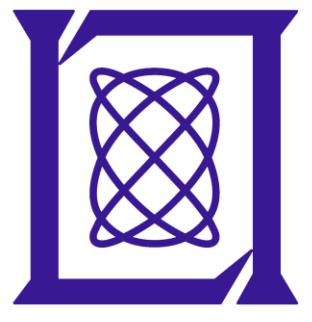
KRAMER LEVIN  
KRAMER LEVIN NAFTALIS & FRANKEL LLP

# UAVIATORS

International Experts Meetings

THE  
ROCKEFELLER  
FOUNDATION

July 2015

 MIT  
Lincoln  
Laboratory

October 2015

# UAVIATORS

Training & Certification





## use cases:

1. UAV-communications networks
2. wearable - early warning two-way comms
3. smart homes - II
4. 3D printing - community supplies
5. 3D printing - water filters
6. Biometrics - family reunification

San Francisco

# UAVIATORS

## Humanitarian UAV Award

