



Regulations and Operations technical area meeting #1 UAS Coordination Technical Working Group

21 Oct. 2020

Tour de Table

ORGANISATION	NAME
INGC	Antonio Beleza
OICT	Arturo Ojeda Demaria
Humanitarian Open Street Map	Cristiano Giovando
IFRC	Dan Joseph
Global Medic	Daniel Cyr
Outsight International	Denise Soesilo
Outsight International	Devangana Kokhar
WFP	Domingos Reanne
Independant	Faine Greenwood
WHO	Gaetano Morelli
Emergency.Lu	Gilles Hoffmann
WFP	Irshad Khan
WFP RBD	JeanClaudeAtassa LAOUWAYI
COOPI	Jonathan Chambers
Global Medic	Jowett Wong
WHO	Kamal Ait Ikhlef
WHO	Louis Ilunga
WFP	Marco Codastefano
WFP	Matthias Boyen
WFP	Patrick Mc Kay
IOM	Sebastian Ancavil
OICT	Stephen O'Sullivan

Brief introduction to the Imagery thematic area

- Need of more precise ToRs for this group. Matthias will write up an annex to the ToRs together with the co-chairs and share for endorsement with the group in the next meeting.
- What are some of the key outcomes you are expecting from this group?
 - **Matthias:** interested to see if we can develop a guide on how to best collect data. In particular using only free/open source software. Besides that I would be interested to see how we can use crowd-sourcing in disasters. Also I think we should look into how machine learning can enhance our data analysis? Lastly I would be interested to work on how we establish data sharing mechanisms?
 - **Jean-Claude:** touch on different types of sensors, technologies and various applications.
 - **Matthias:** someone of DJI could be an interesting guest speaker to talk about sensors
 - **Stephen:** recently rolled out the Mavic enterprise dual, thermal camera on board. Exploring ground penetrating radar and other sensors to detect water e.g. What is there at the moment in the market? Particularly around cost-savings, opensource material in terms of processing imagery. Also using machine learning and AI to assist us.
 - **Denise:** challenges that we often encounter is to turn data into actionable information which is so important in humanitarian setting. Primary reason we would be using drones. As part of the case studies to drill down into that.
 - **Faine:** backs up what Denise said. How to turn data into deliverables to people who don't have a GIS background.
 - **Cristiano:** provide guidelines where a drone can be used for collecting imagery. Question which comes often from people I work with. Satellite, drone or manned aircraft? Imagery licensing, we are often limited to what we can do with imagery and not.
 - **Gilles:** priority would be on data and image analysis using AI. Representation of data, data sharing between organizations
 - **Sebastian:** Not only RGB data but also to talk about the Digital Elevation Model for development and risk reduction. Feedback and best practices from the group.

Presentation Mozambique response

- Presentation of the Mozambique response with UAVs during Tropical Cyclone Desmond, Idai and Kenneth.
- Mr. Beleza from INGC (the Mozambican Disaster Management Authority) and Patrick and Domingos from WFP will show and tell how data were collected and used in the disasters

(See slide deck and recording)

Questions and Discussion on presentation

- **Matthias:** which methods were used in the Mozambique response
- **Patrick:** mainly used Agisoft during the response, fastest one available. Agisoft has the option to process in lower resolution, this speeds up the processing. Post disaster we used

Open Drone Map. It is significantly slower but has a very user-friendly interface and it is a great way to store the data.

- **Gilles:** how were all the data brought together? All pilots coming back with USB stick to one point, or a system where people could post raw data, one person in charge of the processing?
- **Patrick:** data-ops manager, all communications were down so no possibility of using the cloud. Basically teams would be out flying during the day and at the end of the day the memory cards would come back at night.
- **Matthias:** how were the data used?
- **Antonio:** now a platform where we can see the data, in the presentation which was cut short you can see how we could use the data. With digital elevation models we could simulate where the water would go in the event of heavy rainfall.
- **Matthias:** if for example the logistics cluster needs data how was this done?
- **Patrick:** we had a request system where people could request a set of data. If the data weren't collected yet we would go and collect, process and share the data. Every day in the overall coordination meetings the Emergency Telecommunications Cluster was present and they would show lists of available data and take requests from there.
- **Cristiano:** was there any consideration to make the data accessible to e.g. Open Aerial Map?
- **Patrick:** INGC was the overall owner of the data. If any data would be shared was first cleared. We didn't share anything on public platforms, more because of technical challenge. The whole city was running off a single V-Sat.
- **Antonio:** we are trying to develop a system to have data published in a web platform. Everyone can go there and make use of that information. For Likungu mapping data were published on open aerial maps.
- **Cristiano:** considerations of compressions of the mosaic. Seen times where a geotiff (orthomosaic) can be several GBs but with a simple compression method it can be reduced to a few hundred Mbs.
- **Patrick:** exported to google earth was significantly smaller.
- **Jean-Claude:** data-processing and analysis, as quick as possible, in terms of the time frame how did you process quickly to get the information to the decision makers? And how was the coordination done
- **Matthias:** we are running out of time for this session we need to still go into housekeeping

Housekeeping

- Next few times we will have the same concept in our meetings, a Deep dive followed by discussions.
- If anyone of the group feels like they would be able to do an interesting presentation please let Matthias know by email.
- If you haven't yet could you please send a short paragraph with your bio?
- The Polytechnic University of Turin has already kindly nominated themselves to be a co-chair, is there anyone else who would be willing to be a co-chair of this group please send your nomination by email.
- Minutes and recording will be sent by Monday next week.
- Next meeting will take place on 18 November