



Connectivity meeting #2 UAS Coordination Technical Working Group

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Tour de table

Organization	Contact
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WFP	JeanClaudeAtassa Laouwayi
MSF	Raphael Brechard
WFP	Gabriela Alvarado
WFP	Patrick McKay
WFP	Matthias Boyen
WFP	Masa Sabbah

Opening remarks by Patrick (chair of the Connectivity TWG) and a round of introduction for new members

Deep dive presentation by Omar Namaoui(from ETC), Lars. R (Ericsson response) and Gilles. H (emergency.lu) on **What are the problems that need innovation:**

Starting with a presentation on ETC's current work in terms of connectivity (attach presentation power point)

- In an emergency ETC is deploying one or two VSATs (in the case that there is no connectivity, or the infrastructure is damaged)
- A VSAT has limited bandwidth
- Therefore, user management and bandwidth control is necessary in order to ensure connectivity to those who need it the most
- There is potential that the VSAT bandwidth will be improved in the future, none the less, it will never be able to reach the bandwidth of ISP at homes or offices.
- ETC/WFP uses license free WiFi technologies

A request to make a distinguish and separate license free and license solution was discussed. ETC has offered telecommunication solutions in the past, but it is very limited. Moreover, these solutions have a lot of non-technical challenges that a drone can't solve.

The technical back work that ETC handles was presented and can be found in the attached presentation above; The place where the connectivity equipment can always be found even after a hazard (attached ti church towers, trees... etc) and if not, it can be easily built.

In an emergency context there is a lot of air traffic and that can be concerning when using a drone. Airports are one of the first points of connection.

Looking at how drones can add to their work

Things to consider:

1. Emergencies go along with bad weather like storms or heavy rain; flying a drone will be challenging in these conditions
2. Emergencies go along with high air traffic, not the same can be said for flying a drone
3. To have a balance between capacity and coverage area
4. AP and links can be mount instantly

Therefore, considering drones to deploy equipment or as a temporary link for sites can be looked at.

Discussion:

Lars. P gave his experience with drones and how they were used in emergencies, when coming into a disaster Ericsson Response looks for the highest building or mountain to build the infrastructure to link the connection. When none of that is available (high building, mountain, tower), a drone can actually be deployed. However, running into the aviation regulations and the process that needs to take place before flying the drone is very exhausting and that is why Lars has given up on the idea of using the drones as a solution in that context; he is still interesting into diving to find an easier way to fly the drone as it can be a great solution.

Question from Rapheal from MSF: *as they are doing surveillance monitoring for health in different countries, and in few of them, there is no connection, so could we get a drone to send surveillance data from one point to another?*

Lars. P: *Ericsson response is using drones for line of sight in order to connect the locations. Technically using the drone temporarily should not be a problem if you have the air space and the approvals.*

Omar. N: *it will be hard to justify flying the drone when infrastructure for connectivity can be built.*

Omar. N: *is there a use case for a drone as a bubble of connectivity between the team on the ground, and having small satellite for backhaul connectivity?*

Lars. P: *it is feasible, but there is an idea of using the drones to carry batteries that are needed in an emergency context as power for electricity is heavily consumed.*

Zuheb: *building on what Lars suggested, using the drones as cargo to get some of the equipment that is needed in an emergency context were the accessibility is cut off. Is this something we can consider?*

Discussion around the groups TOR

Please find the TOR document here. Patrick took everyone through the document and there was no input from participants for any edits.

Housekeeping

Suggestion for the next session: there is a couple of commercial entities that would like to present their work and solutions to the group: Google Loon. SpookyAction (tethered drone company) and Elistair.

Next meeting will be held on the 13th of January 2021.