

Meeting (7/11/2024):

Conceptual modeling discussed:

Functional Requirements:

DRONES:

- Algorithm for strategic drone positioning;
- Management of adaptability in case of failure;
- Managing different technologies for communication between drones and beyond;

NETWORK:

- Mesh network (WIFI) that can support multiple nodes with one gateway;
- The Wifi mesh network must guarantee connection between the BS to the 5G Core;
- 5G connectivity on the edge drone;
- To access the internet, the network backhaul must be connected to a starlink satellite;

Non-Functional Requirements:

DRONES:

- UAV must be aware of others UAVs;
- UAVs must stay in range, without colliding, with each other. Thus guaranteeing the mesh network and operability;

NETWORK:

- The internet connectivity must be reliable;

DOCUMENTATION:

(DRONES)

- Documentation must be comprehensive enough so that it can be reproduced in any drone fleet;

(NETWORK)

- Documentation must be practical and detailed enough so that one can reproduce the whole network interface (5G and WIFI);

Actors:

- Operator: responsible for setting up and start the mission;
- Technician: setup the multiple network technologies;
- Catastrophe victim: Person that will have the 5G (internet) connectivity;

Use Cases:

Compromised infrastructure,

Operator setup the mission,

Victim with internet connectivity,

Swarm allows to extend the internet connection.