Activity plan and research project

The research activity envisions the use of UAVs (Unmanned Aerial Vehicle) carrying Base Stations (UABS). The main reason/goal is to offer super-reliable links to UEs, in particular, for the paradigm of challenging IoT scenarios. Two categories of IoT applications targeting a 6G scenario will be the object of the activity program, being:

- Other flying objects needed to be served as user equipment (UE) by the UABSs, which are offering line-of-sight links;
- Vehicles moving in urban environments since may benefit from highly reliable two-hop links.

Goals of this activity include:

i)   Assessment of the possible number of the theoretical number of IoT devices possibly served by one or more UABSs;

ii)   Participate in the development of a dynamic simulator having flying UABSs, moving UEs, computing mutual interference;

iii) Design of new strategies for joint UABS path and radio resource management.