

# Hackday V Indigo Blue Results

## 1. Activities

The main activity in this Hackday challenge was to implement a working UGV and UAV model in a simulator complying with the requisites set forth in the SysML model present in the organizational GitHub.

## 2. Difficulties

The initial learning curve of the simulator environment used, V-REP PRO, was a considerable challenge since no member of the team had any prior experience with the tool. Additionally, the LUA coding language employed in V-REP was also a challenge, although a slightly less difficult one, since no member of the team had any experience with it either. As a positive, the V-REP API documentation is very well laid out which helped us in overcoming these difficulties.

## 3. Results

The following results were obtained by team IndigoBlue during this Hackaton:

1. A pdf file (IndigoVResults.pdf) specifying the activities, difficulties and results obtained during the challenge.
2. A V-REP file (hackdayVScene.ttt) containing the code for the simulation and control of the UGV, the UAV, the building and the fire models.
3. A video (scenarioRecordingIB.avi) illustrating the functioning of the UAV and UGV models regarding the MBZIRC firefight challenge.
4. A SysML model (ibHackday.di ibHackday.notation ibHackday.uml) modifying and adapting the SysML model provided by Ricardo Sanz to fit our implementation of the simulated system.