

Projet YAFC

Yet Another Flight Controller

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1 Context, Objective

2 Needs

3 Organisation

- Project Management
- Development Management
- Customer - Supplier Communication



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Yet Another Flight Controller (YAFC) is a project being held within the Computer Science Master at Université Paul Sabatier.

Zhenyu Bai expressed their interest in drones. In particular for drones :

- that are cheap to produce ;
- physically basic ;
- easily configurable.

The project thus aims to provide a fonctionnal drone that complies with the aforementioned critierias.

While the Flight Controller (FC) is the piece of software that controls the different physical components of the drone itself, the autopilot is what autonomously controls what the drone does.

Today, completely fonctionnal and ready-to-use drones are expensive. But it is technically possible to produce cheap drones using or inspired by PixHawks.



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From a provided fonctionnal drone frame, Zhenyu Bai expressed the need :

- to produce the Arduino code using PixHawks and PX4 ;

Subsequently, gradually, the following elements may be produced :

- the files to produce a custom-made PCB ;
- a custom-made FC inspired by PixHawks ;

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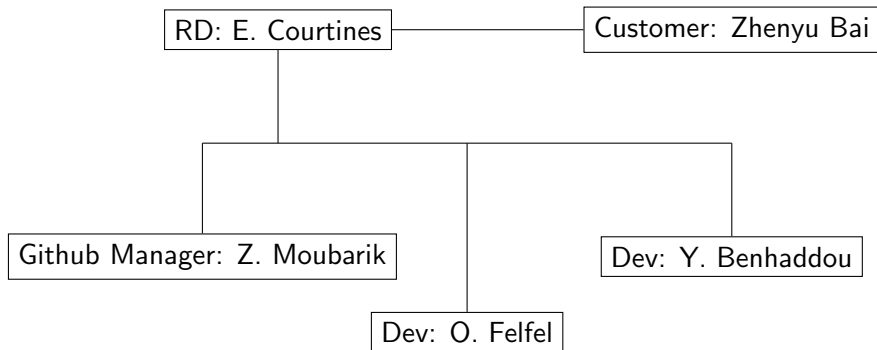
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Project Management Deliverables :

- Kick Off Meeting presentation and minutes (project Plan V0)
- Project Plan V1
- Project Plan V2
- Project Plan V3
- "Soutenance"

Technical Deliverables :

- Archive containing the Arduino code that uses PixHawks and PX4 ;
- Archive containing all the required documents and files to reproduce a custom-made drone.



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A Github organisation has been created for the project :
<https://github.com/OYEZ-YAFC>

A private Repository will contain all of the code of the project. The Customer will be able to access it.

While most of the code will be written in C, there will also be LaTeX and components description files.



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Most of the communication will happen on Discord, while the important exchanges will be done by email.

If needs be, the client will be able to submit issues directly on the Github Repository.



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