**Project Biding for UAV fleet management(P11)**

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**Team Outline**

In our GRP team, all team members are interested in UAV technology. Two team members had experience in dji UAV operation and one team member own experience with operating video streaming. Especially, we are willing to spend time on difficult technical problems. In fact, there is no mature drone video live broadcast platform on the Internet. Our team hope to create a commercial value and practical products.

**Relevant experience and expertise**

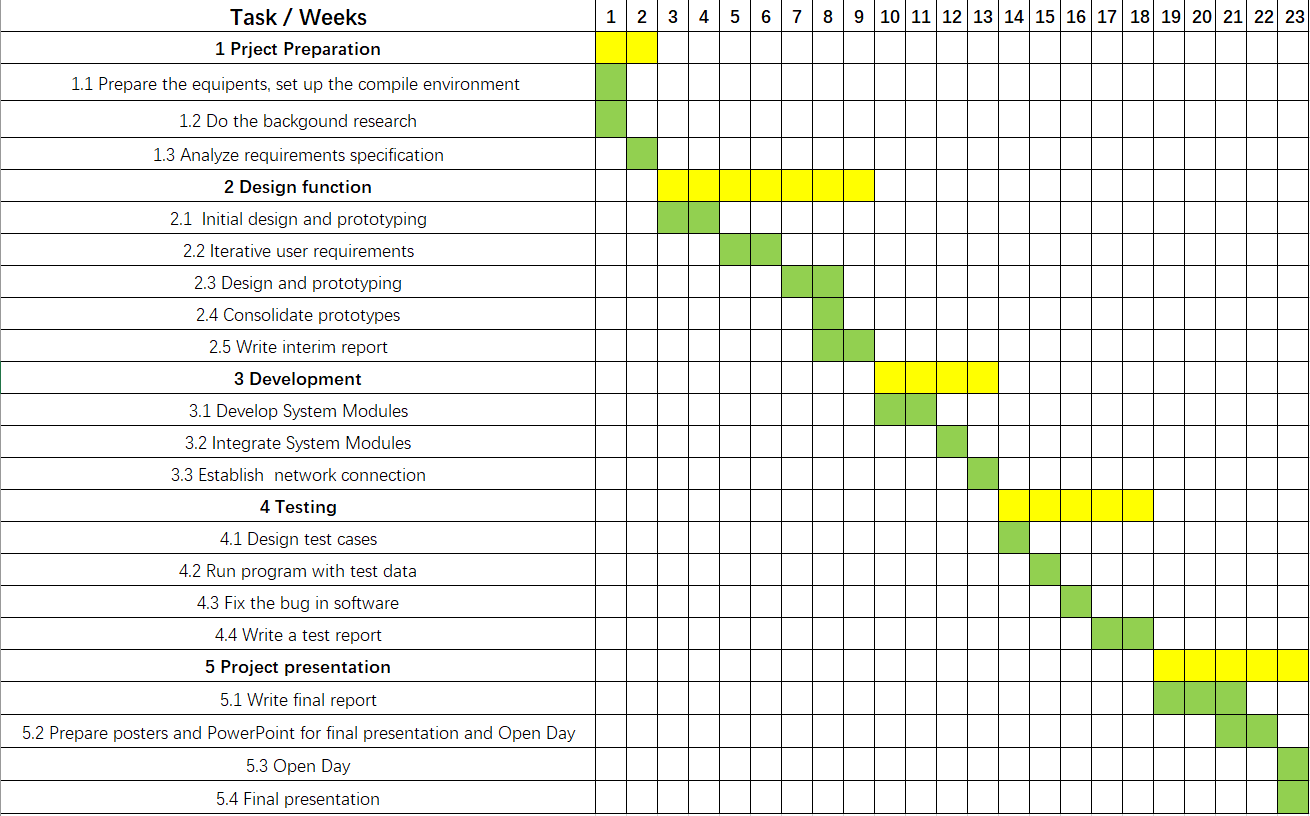
In our team, all the teammates have good skills in programming languages such as C, java and python and all of us know about machine learning. All of them have experience in developing web applications using HTML, PHP, js, and MySQL. Erfan Wang has half-year experience in computer vision and participates in Robotmaster competition as a teammate of UNNC team in this summer vacation. Yuan Xu has experience in system maintenance and database management. Deyan Xu has rich experience in java development, in this summer, his team used java, springboot and vue.js(uniapp) to develop a social software like twitter for UNNC student which publish for three different platforms(IOS, Android, Wechat Mini Program). Dongzhan Xie has rich experience in web development and wechat mini program development. Also, he is the only one in our team who has experience in operating Dji UAV. Zhengduo Xiao is good at database and data transmission, he has experience in video stream transmission and management which are important for this project. Zihan Liu is skillful in java development and has one-year IOS development experience.

Overall, our teammates not only have the knowledge of computer science which we have learned in the first two years in UNNC, but we also have more actual development experience. There is no doubt that we have to learn more things to build great software and finish this project perfectly. However, we believe that the rich development experience and upbeat attitude will help us to solve all the problems we will meet and encourage us on this road.

**Ideas of the project**

1. This project is a web based system to control the unmanned aerial vehicle, in order to achieve it, we need to develop both the frontend and backend.
2. In terms of the frontend, develop an interface to allow user to sign in and sign up, an interface to get the live view, the real-time path and the status of the unmanned aerial vehicle.
3. The frontend could also all the user to control the UAV to take off, land, position control and predefine the path for UAV.
4. In terms of the backend, a map should be imported into the system which could be designed to manage the flight path, check the UAV status and control two UAVs at the same time(share the path and flight status). Also, this system could control the video stream.
5. The App for this project could be developed by using java and some SDKs offered by Dji.
6. This system need user register system to distinguish manipulator and audience, only the manipulator could control the UAV, others could only watch the live video when they log in.
7. The live video could not only appear at the operator’s screen, it could be shared by internet to other people’s desktop like a live. This live video could have a bullet comment system to allow user to do real-time communication.
8. To increase the quality of video, we could manage the video stream to decrease the transmission time and increase its sharpness and picture clarity.

**Timeline**

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