



AirLife - A Medical Drone System

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INTRODUCTION

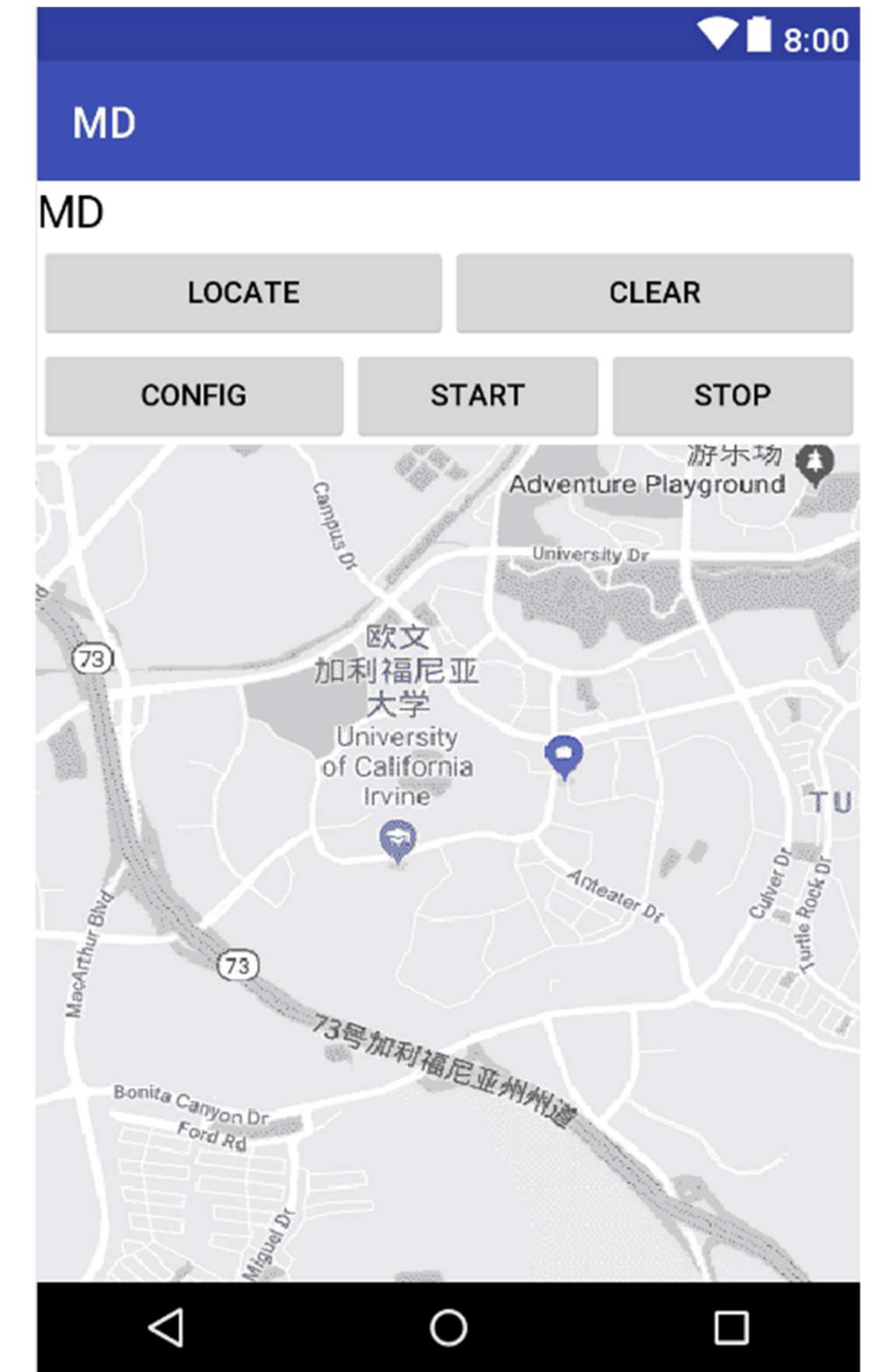
Drones have great flexibility and can travel a distance of half a kilometer in a few minutes. When an urgent medical situation occurs, a drone can reach the scene and carry a moderate amount of medical supplies in a few minutes. Meanwhile, an ambulance may take 15-20 minutes to reach the scene and provide help. We plan to build a medical drone system that aims to be a supplement to the ambulances distribution system, which can remarkably reduce the workload of system and provide more effective service. The system is great for places like schools, park, shops malls and can provide medical supply (mainly medicines) for medical situations including heart attack, asthma, epilepsy, etc.

GOALS & PURPOSES

The objectives of the project are to establish a system, which includes user application, network server, automatic drone controller, and a drone. Users are supposed to be able to require medical support on their smartphones with the application installed. The server should receive request from users and send the request to the drone controller. After processing the request, the drone controller should be able to fly the drone automatically to users and deliver the medical support they have required.

CURRENT PROGRESS

We have developed our user App in order to exchange GPS data with the server. Meanwhile, we are building our cloud server to process the request and GPS data received.

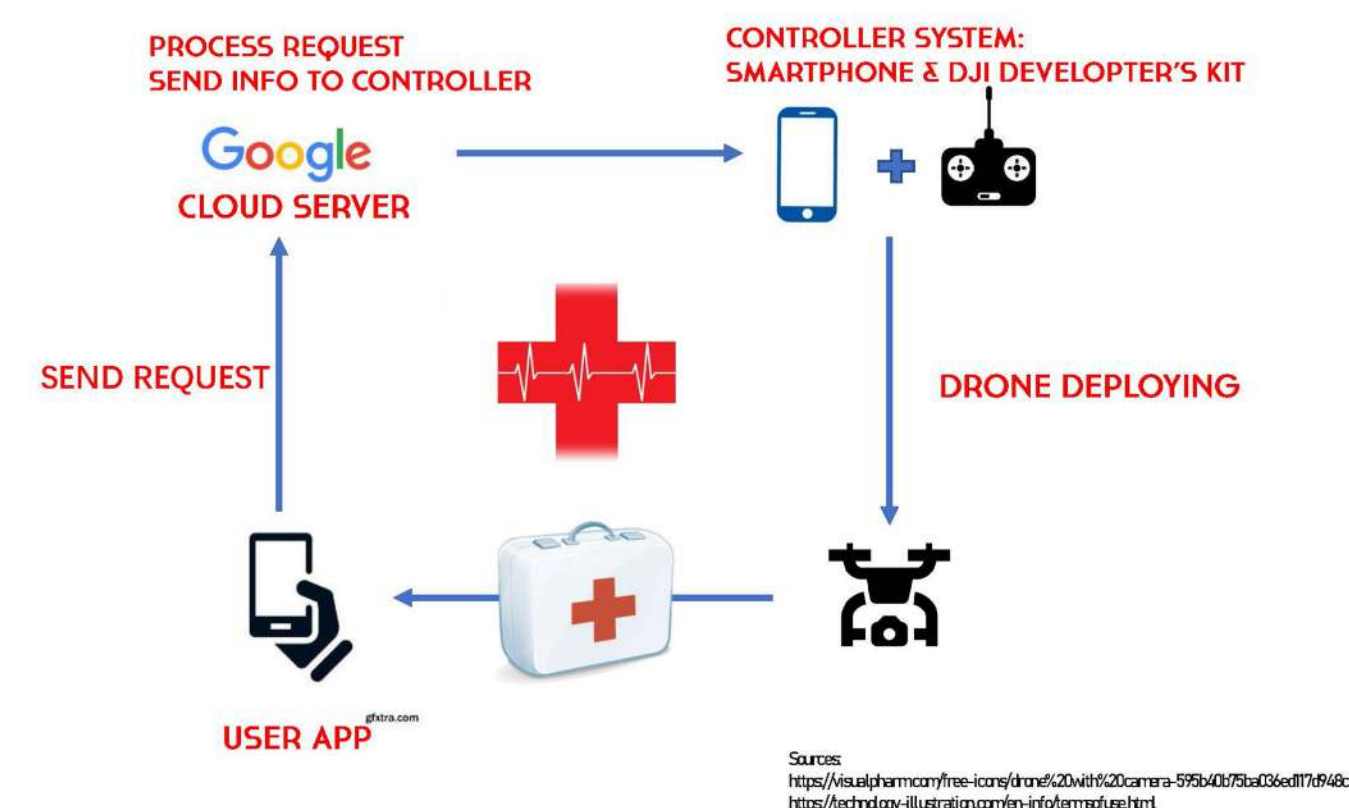


FUTURE WORKS (BY THIS FALL)

We plan to exchange information successfully between the server and the App by this quarter.

Since we are applying for fundings from UROP, we should be starting to work on our drone and controller when we purchase the drone.

AIRLIFE — A MEDICAL DRONE SYSTEM



Timeline

Task	Task Name	Duration	Start
Init	Project Design	7	2018/10/5
	Task Deconstruction and Plan	5	2018/10/12
	UROP Proposal Composition	7	2018/10/17
	Check Plan and Detail with Mentor	7	2018/10/24
User App	UI	3	2018/11/1
	Post Request	7	2018/11/4
	Exchange GPS Data with Server	14	2018/11/18
	Receive Video from Server	21	2018/12/9
Server	Receive Request and Answer	10	2018/11/1
	Exchange GPS Data with Server	14	2018/11/18
	Send Video to User App	21	2018/12/9
	Exchange GPS Data with Server	14	2018/11/18
Control App	Decode Video to Data Stream	21	2018/12/9
	Control App: Send Video to Server	21	2018/12/30
	Train Multiple Model	14	2018/11/24
	Integrate with Control App	7	2018/12/15
Vision	Realize Following Function	28	2018/12/22
	Realize Self-Navigation Function	28	2019/1/19
	Integrate Request and Answer	7	2018/11/11
	Integrate GPS Communication	7	2018/12/2
Integrate & Milestone	Integrate Video Transfer(Server and User)	21	2018/12/30
	Integrate Video Transfer(Control and Server)	21	2019/1/20
	Compare and Select Model on Test Dataset	7	2018/12/8
	Run the whole System with Basic Goal	14	2019/2/10
	Improve System	23	2019/2/24



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