Project Name: Drone Control via Android Cell			
User Requirements		**System Requirements**	
Req ID	**Description**	**Req ID**	**Description**
UE-01	Allow remote user to send a point on map/coordinate/pattern in space or a direction at a given speed.		
UF-A	Remote user must be able to use a UI provided by mobile android application.	SF-A-01	Application should provide remote user with drone telemetry (to include but not limited to, drone attitude, heading, altitude, location, battery status and video feed)
UF-B	Mobile android application should have autopilot functionalities (i.e. navigate to waypoints)	SF-B-01	The mobile application should be able to receive waypoints in the form of GPS coordinates.
UF-C	User should be able to remotely control / remotely access the drone through android application.	SF-C-01	null
UF-D	Application must be able to run on an Android phone.	SF-D-01	The Android mobile app must be written in the Java programming language.
		SF-D-02	The IDE used to create the Android mobile application will be Android Studio.
UP-01	Software system should enact stabilizing procedures when the integrity of the flight path is compromised.	SP-01-01	Drone will balance itself based on tilt of phone which is given by the gyroscope.
		SP-01-02	Algorithm can be used to control motors of drone.
UP-02	Application should interact with drone flight controller to assist in flight operations.	SP-02-01	The system should integrate data from the GPS, accelerometer, and gyroscope within 50 milliseconds.
		SP-02-02	null
UP-03	If the user loses communication to the mobile app device, system application should be able to reconnect to the computer as soon as possible.	SP-03-01	The computer should constantly ping the device to check connection.

Acknowledgment: Generated from the CapStone process management system ©2024