

Design Requirement

Date:	10/25/2021	
Design Project Title:	Solar Powered Remote Control Vehicle	
Team Name:	Aerospace1	
Team Advisor	Dr. Rubaai	
Team Assistant	Selasi Etchey	
Project's Long Term Goal	Develop low latency telemetry and improve use of GaN-FET technology	
Project's Current Academic Year Goal	Develop a solar powered remote control car built from the ground up and demonstrate the real time telemetry results and wifi control	
Team Members (Senior Design Class)	Tyler Borderon, DeAndra Gayle, Dymier Steele, Essien Taylor	
Team Members (Others)		
1-Sentence Problem Statement	The need of Aerospace in the current situation of finding a way to monitor and record the telemetry of systems, observe and improve upon the efficiency of engines and power conversion, and control the remote controlled car with low system's health and provide a means that keeps track of the system's health, provides an efficient engine and power conversion, and controls the car with low latency.	
Requirements	Items	Descriptions
1. Product Specification (or Software Requirement Specification)	NiMH battery	Used to power the vehicle (preferably rechargeable)
	Solar Panels	Used to recharge said batteries
	Chassis	Holds car and circuitry used to power it
	Wheels and axles	Used to move car (forward/backwards)
	Breadboard	To connect circuitry
	Wires	To connect components together
	Battery charging port	To recharge the batteries as needed
2. Constraints	Cost	Max \$400-450
	Time	Be completed and ready to be tested by April 2021

	Environmental and Social Responsibility	We need to limit energy consumption of the car, and not use more materials than necessary to lessen the impact on the environment
3. Compliance to regulations and standards	Standard / Regulations	Must meet the listed specifications given in the AIA's National Aerospace Standards (NAS)
	Standard	
	Patent Intellectual Property	Must not infringe on patent of Edmardo Tomei's solar powered vehicle US4592436A