

Project ID:		Client:	Marc Carmichael
Project Title:	UTS Rover Base station Improvement	Affiliation:	UTS Rover Team

Description:

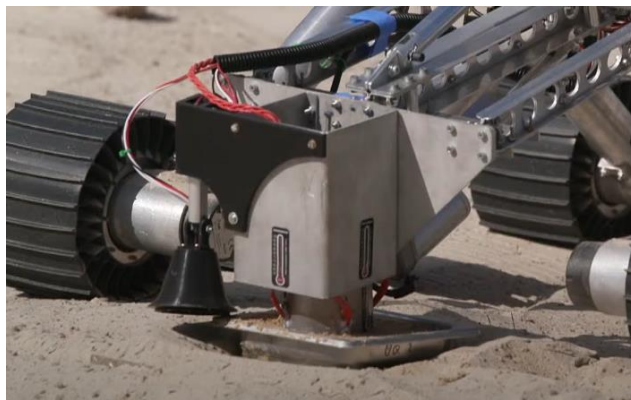
The UTS Rover Team is a student led semi-autonomous rover team that competes in the Australian Rover Challenge (ARC) every year, against 20+ teams from around the world. The competition requires that teams remotely control their rover from a tent removing line of sight to the rover. Monitors, computers, networking and communication equipment are used to facilitate remote control of the rover in this environment

A previous DMMS project involved developing a custom base station housed within a pelican hard case for travel to the competition site in Adelaide. This base station involved 3 portable monitors mounted to custom monitor arms, electronics equipment to power the station from a LiPo battery and a USB C hub to allow connection to a team laptop.

Your team will be tasked with improving and expanding on this current design. A key area of focus will be on improving the monitor mounting system, which needs to be quickly and deployed and stowed without tools whilst remaining resilient enough to withstand the harsh treatment from airport baggage handlers in the stowed configuration during transit.

Deliverables:

- Redesign of monitor mounting solution in CAD
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- Mechatronics solution for actuating and controlling the subsystem, including electronics and control software.
- Manufacturing – once mechanical design is completed and approved complete manufacturing, testing and validation of system in conjunction with UTS Rover Team.



Skills Required	Not required at all	Might be required	Some experience required	Moderate experience required	Significant experience required
Mechanical engineering				X	
Mechatronic engineering				X	
Electronics			X		
Programming			X		
Hands-on manufacturing				X	
CAD (e.g. Solidworks)				X	
Artistic Design	X				