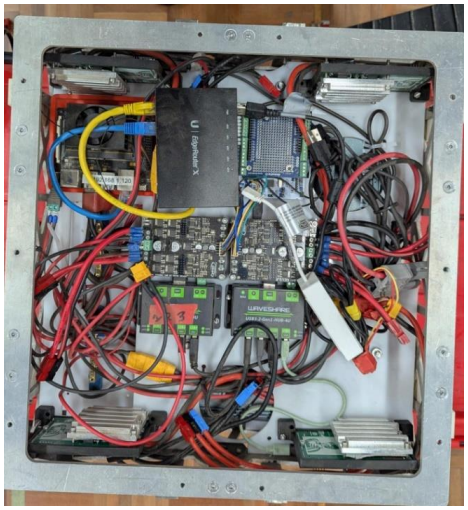
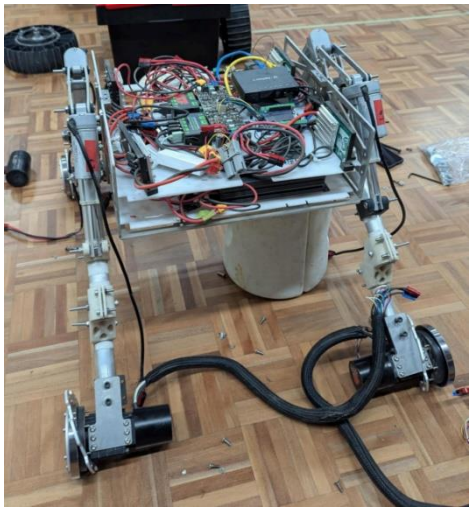
Project ID:		**Client:**	Marc Carmichael
Project Title:	UTS Rover Electronics Additions	**Affiliation:**	UTS Rover Team

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 Rover contains a range of electronics for power distribution, motor control, embedded systems, communications, and safety.

After competing in March a range of issues and missing features were identified, this DMMS project aims to assist the rover team in re-configuring the electronics, adding an inrush current limiter, an antenna power isolator, and power data logging.

A key aim for this project is to improve the access and repairability of the current electronics system by redesigning component layout, component mounting features, and cable management.





The scope of this project is flexible depending on the students' capabilities.

Deliverables:

- CAD design layout and mounting solutions for all components
- Electronics design for inrush current limiter and antenna power isolator
- Sourcing appropriate off the shelf power data logger
- Documentation including electrical schematics, operation instructions, and 3D files
- 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				

Additional desirable skills/interests:
PCB design experience