SDP General Fault Finding

Don't panic - Be methodical

Use your senses - Look, listen, smell, touch
Does something look faulty?
Does it make a strange sound?
Does it smell funny?
Is it hot?

Cables and Connectors - Wear and tear, exposed wires, loose connectors, broken solder joints.

Multimeter
Continuity Testing - Open Circuit - Closed Circuit
Voltage testing

Check Wiring Diagrams

Check and compare specifications match - example - are you trying to take sample readings from your sensor at a higher speed than the sensor supplies them? Are you running the serial port on the Arduino at a higher baud rate than it is capable of. Is your motor power too low to move the weight of your robot?

Logical substitutions - switch one part at a time and keep testing

Spares
Office Hours - ask us for a spare
Out of Office Hours - Natural Redundancy. Ask around the other groups to borrow a cable or motor etc so that you can check your problem, Not everyone will be using all of the kit that we have provided, so there should be a reasonable amount of spares amongst you already.

Common Issues/Questions
Python - Tabs are important

Arduino Motor Test Code - Use the I2C shield and the motortest code (linked via the wiki) - not the Arduino guide test script (that is only for low voltage output devices)/ Download the SDPArduino and the motor library - create working folder for your sketch and place your library files in it as well

Ordering parts:- Can take about a week from initial parts request to delivery of parts. Use existing stock for electronics/electro mechanical stock and build from lego for initial prototypes

Main sources of parts:- onecall.farnell.com - electronics, rswww.com - electro mechanics, active-robots.com and robbosavvy.com - robot parts

We are currently experiencing issues with a couple of our main suppliers, which we hope will be resolved in the next few weeks.

If possible provide me with suppliers order code numbers and quantities, if unsure come in and ask for help.

Batteries - Charge & Test - Spares

SDPRobots vs Eduroam Wifi

Questions?

Suggestions?
Next Time - Prototyping and Soldering
Topics for next time?
New Equipment, facilities or resources?