Approval Panel Presentation

# a. My Supervisor is:

Dr. Stephen Blott

# b. My Project Title is:

Scout Ahead

# c. The Purpose of my project is to: (one sentence description).

* The primary purpose of my project is to provide a planning tool for leading hiking groups through the mountains with my primary market being Scout groups.
* Advantages of planning the route through a digital format would be:
  + You would only have to plan the route once.(GPS Export)
  + Easily see popular routes (Heat map)
  + Using digital maps it is easy to create elevation charts (Easy to pick rest points).
  + Weather data and what it’s affects will be like at the summit (Wind chill).

# d. For my solution, I propose the following major components:

1. Front-End
   * 1. Website
        1. Openlayers
        2. Bootstrap
2. Back-End
   * 1. PostGIS Database/SQL Database
        1. Has additional types etc for handling mapping data.
     2. Server
        1. Mapnik
           1. Open source toolkit for rendering maps.

# e. The major challenges in my project are in the following areas:

1. Getting a tile server configured.
   1. Requires learning two new large API’s.
2. Learning the OpenLayers API.
3. Using the OpenLayers API to be able to generate new layers for my map.
   1. Weather (Rain, Wind, Temp).
   2. Elevation data.
   3. Hostel/Campsite Locations.
4. Generate best possible routes.
5. Display popular routes.