Proposal Structure

Close-quarter Explosion Protected Aerial Drone (CEPAD)

1. ~~Analyse the Need~~
2. ~~Aerodynamic Design~~
   1. ~~Aerodynamic Theory~~
      1. ~~Momentum Theory~~
      2. ~~Disk Loading~~
   2. ~~Rotor Types and Configurations~~
   3. ~~Atmospheric Conditions~~
3. ~~Electrical Design~~
   1. ~~Intrinsic safety~~
   2. ~~Encapsulation~~
   3. ~~Drive systems~~
   4. ~~On board sensor pack~~
      1. ~~Camera~~
      2. ~~Inertial Sensors~~
      3. ~~GPS~~
   5. ~~Battery Management~~
   6. ~~Remote Control~~
4. Mechanical Design
   1. Impact Resistance
   2. Sensor Pack Capabilities
   3. ~~Explosion/flame proof~~
   4. ~~Motors~~
   5. ~~Material Selection~~
5. Control
   1. Algorithms
   2. Aircraft modelling
6. Software
   1. Interfaces
      1. RC
      2. Debug
      3. USB-Serial
   2. Firmware
   3. Control
7. ~~Certification~~
   1. ~~Designed for Testing~~
   2. ~~Not be a pre requisite for the project.~~