September 27 2007
Completed the report written by Jean-Paul Davek with the research I made on Solar Charging Circuit. The first part of the report was received via email to all team members on September 27 2007.
October 2 2007
Meet with team members, Jean-Paul, Tai, Mohammed and discussed on presentation and week assignment to be completed by Friday Oct 5 2007. As a result of the meeting, Mohammed would handle logbook email, Tai Qianhua handles creating the powerpoint, Valentine Okonkwo handles minutes and Jean-Paul and Valentine will ensure the motor is installed.

October 3 2007
Jean-Paul and Valentine installed the motor and decided where the servers and some of the hardware will be placed on the drone.
Jean Paul

had to grind the motor to fit motor within mount. Motor is new mounted.

Switch mode charging with this chip is not cost efficient because the source (Solar cells) need to be capable of a 1.3 amp. This means we would need 26 solar cells in parallel just to have that rating. Looks like we will keep the idea of a linear charger with the use of Max 712.

10/5/07 Team split work up. My job this week will be to design a rudder system on the stabilizer.

14/4/07

There will be a wood dial that will be implanted in the rudder as shown in figure. This will distribute the force evenly. In addition, the control tube will lay flat and will not have to bend upward to the lower portion of the rudder. This will make it look better and work smoother.
10/7/07 Worked on rudder, cut rudder out of the original stabilizer.

10/8/07 Covered one side of the stabilizer and added slits for the hinges to be inserted. Covered rudder.

10/9/07 Covered second side of stabilizer with acetate and now the rudder is ready to be connected to the stabilizer. The chip Myx 713 order came in.

10/10/07 Bought hinges for rudder.

10/11/07 Finished rudder system.
RUDDER SHAPE
Tai Q.

(10/05/07) (T&dow) Week C

1. Previous week
   More details (Who do what...?)
   and time.

2. Last week assignment:
   Topics were

3. Don't time research (Conclusion)

4. Complete them in the same way as assignment
   but
   - new complete slide

5. Total # tasks C
   - total of tasks

Here is the discussion we have to
correct inorder to do power point next week.
After the meeting on Friday, I am responsible for slide 4 of PowerPoint and do more research on the chip MAX 712/713.

The maximum rating for the V1 to BAT+ VBAT to ground (±1V). In order to apply for the typical operating circuit:

V1 voltage: 4.5 V

I(V) Current: 5 mA

C1 = 0.5 μF

C2 = 5 μF
MAX712 / MAX713 (NiCd / NiMH) can use either linear-mode or switch mode fast charge circuit can be designed in a few easy steps.

\[ \text{charge time in hours} \]

\[ \frac{1}{\text{charge time in hours}} \]

Capacity of battery in mAh

Depending on battery charging efficiency can be as low as 20\% \rightarrow \frac{1}{3} \text{ fast charge could take 2\,hr} \rightarrow 45\,\text{min} \& \text{15 sec}.

These are many kind of MAX713 But not use MAX713 C 10\% (0\% \rightarrow 70\%) with 16\,\text{pin} flat.
Mohammad Shahid

28th September, 2007
Meet with Dr. S. Shahid at 9:00 am
and discussed the details about the project. Researched
about NiCd charger and battery type.
Also discussed about the details of the Solar figure, panel,
starter, etc.
Arranged to make a model for the key board and also
saved to record the meeting in my formal
power point of weekly work.
Power point will be the progress of the
progress.
* We discussed about the efficiency of the batteries.
* We discussed model of efficiency is better than a linear.
* We also discussed about making a rotor from the tail of the plane in order to improve the landing of the plane.
* We planned to install the hardware in the coming weekend which is Oct 5 2007.
* Meet with team members - Jpaul, Valentina & Tai and discussed the details about the paper details.
* We took some pictures and video clips of our work.
Minutes of the senior design project meeting

Project Advisor: Dr Nikolai Stelmakh (DNS)

Project members:
Jean-Paul Davet
Valentine Okonkwo
Mohammad Shahid
Tai Quach

Highlights
• Tai handled the weekly presentation, with help from team members.
• DNS said good presentation with some comments on changes that should be made for future presentation.
• DNS said each task should be accompanied with names, both individual and team assignments.
• A timetable of assignment should be created with which some of the columns should include but not limited to tasks, weeks, plan, flag etc.
• Weight power and flexibility should be included in the sola power considerations.
• Another table called completed tasks should be done same as the table of assignment, but should include a comment column.
• Need two slides on the results of the solar power considerations (completion and results).
• The solar power consideration should have-total weight, solar power, battery and servos info and surface.
• DNS asked for the energy of the battery (600mAh) with regards to the energy consumed by the motherboard of the servos.
• DNS said engineering approach is needed in every report.
• DNS suggested that some additional power should be considered for future considerations.
• DNS said that on the last slide, time table of global positioning need to be flagged.

Target for next week
• Page of engineering consideration with regards to the solar power (Valentine)
• Work on tail and rotor section of the plane (Jean-Paul)
• Work on fixing the Styrofoam(Mohammad)
• Do more research on the chip MAX712/713 (Tai)