# Rascal Senior Design Meeting Minutes

*Rascal Internal Document*
*Configuration Management and Quality Assurance (CMQA)*
9/2/2013 --  Revision: -

Revision History

| Rev | Date | Description | Author | Approved | Pages |
|---|---|---|---|---|---|
| - | 9/30/2013 | Weekly Systems Meeting Minutes Format | Tom Moline | TO | All |
| | | | | | |

## Primary Contacts:

Tom Moline     tmoline@slu.edu     630-401-0791

Tyler Olson     tolson6@slu.edu     812-204-1098

## Background:

This document provides a format from which all Rascal Senior Design Meeting minutes will be recorded. It serves as a way of making information on what transpires at these meetings more easily understood and accessible. Along with being e-mailed to each member working on the Rascal senior design project, upon the conclusion of each meeting, these minutes will be stored on the Rascal common server under the CMQA and Rascal Senior Design Meeting Minutes headings at . The items that will be included in each of these minutes are listed in the Table of Contents on the next page. A list of those who attended, along with their contact information, is listed in the table below:

## Team Leadership and Contact Information

| Team | Acronym | Leader | E-Mail | Phone Number |
|---|---|---|---|---|
| Propulsion | PRP | Nate Richard | nrichar8@slu.edu | 608-732-7147 |
| Propulsion | PRP | Jennifer Babb | jbabb1@slu.edu | 636-579-6816 |
| Propulsion | PRP | Bryant Gaume | gbryant1@slu.edu | 636-448-0378 |
| Structures | STR | Tyler Olson | tolson6@slu.edu | 812-204-1098 |
| Project Manager | PM | Tom Moline | tmoline@slu.edu | 630-401-0791 |

# Table of Contents

# Common Acronyms/Terms

**-SSRL: Space Systems Research Lab**
**-SCARAB: SLU Core Aerospace Research Application Bus**
(i.e. Common Elements Used between COPPER and Argus)
**-LV: Launch Vehicle**
**-CubeSat: A Standard Configuration in Which Small Satellites are Constructed as to Ease LV Integration**
**-Pumpkin: Company that Produces CubeSat Skeletons and Electronics**
**-1U: One Standard Unit (10 cm x 10 cm x 10 cm)**
**-P-POD: Poly-Picosatellite Orbital Deployer**
(i.e. The Standard Structure in which Any CubeSat is Stored During Launch and Ejection)
**-VU: Vanderbilt University**
**-AFRL: Air Force Research Lab**
**-UNP: University Nanosat Program**
(i.e. Program Run Out of the AFRL that Conducts Nanosat Competitions as to Aid in the Cost and Development of University Satellites)
**-JPL: Jet Propulsion Lab**
**-ORS: Operationally Responsible Space**
(i.e. The Organization Responsible for Providing COPPER with a Launch)
**-Minotaur: Name of the Rocket in which COPPER will be Launched**
**-ELaNa: Educational Launch of Nanosatellites**
(i.e. Program run by NASA that helps facilitate spots on launches from NASA and DOD facilities)
**-EPS: Electrical Power System**
(i.e. The System Used to Control and Monitor the State of the Battery being Used in a Satellite System)
**-ClydeSpace: Company that Produces CubeSat Size Batteries and EPS'**
**-Spectrolab: Company that Produces Solar Cells and Solar Power Systems**
**-Trac: System Used to Label and Record the Location and Movement of Every Item in the SSRL**

# Action Items List

| Action Item | Team | Individual(s) | Due Date | Progress |
|---|---|---|---|---|
| Send message to Swartwout asking for a list of missions similar to Rascal | PM | Tom Moline | 10/7/2013 | 0% |
| Create a report template and put it on the git server | PM | Tom Moline | 10/7/2013 | 0% |
| Resend the git server URL to the team | PM | Tom Moline | 10/7/2013 | 0% |
| Create orbit analysis for five separate launch vehicles | PRP | Bryant Gaume | 10/12/2013 | 0% |

## General Discussion

1. *Swartwout's Idea for Senior Design*
- **Two reviews this semester**
    - SCR and SRR (System Concept Review and System Requirements Review)
    - SCR: finish RFP
        - SRR: mission requirements matrix with planned out ConOps
        - PDR (Preliminary Design Review) at the end of semester with refined approach for ConOps: all the budgets
- **Very end of senior design is CDR (Critical Design Review)**

2. *Work to be Done on the RFP*
- **SCR: general mission goals**
    - Deadline of Oct. 11, 2013
    - Look into other organizations that are wrong
    - Action Item: talk to Swartwout  by end of day about all the organizations that are doing what we are going (Tom).
    - Have a report for each organization
    - Action Item: have a report template on Git by end of day and resend URL for Rascal Github (Tom)
    - Nate and Jennifer will make summaries for the organizations
    - Determine testing required
    - Action Item: orbital range research and back of envelope calculations for fuel by Saturday (Bryant)
    - Look at five rockets at various orbits
- **Bob can have his payload down to one or two boards**
- **Still need to remove info from RFP that is too detailed.**
- **Should add in a General budget for Satellite**
    - Should also include NASA Gevs and temperature
- **SRR will take place on November 1, 2013**