

Rascal Senior Design Meeting Minutes

Rascal Internal Document

Configuration Management and Quality Assurance (CMQA)

10/28/2013 -- Revision: -



Revision History

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

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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 team leads, 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
Principal Investigator	PI	Dr. Swartwout	mswartwo@slu.edu	314-977-8214

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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
Finish next Orbit Plot Code	TM	Tom Moline	11/8/2013	0%
ConOps List	NR	Nate Richard	11/8/2013	0%

Previous Action Items

Not Applicable

General Discussion

1. *Leading up to SRR*

- **Need to work towards Systems Requirements Review, which is on 11/13/2013**
 - What will this consist of?
 - Full Blown, Specific Mission Success Criteria
 - This means having a requirements verification matrix
 - This means having a preliminary CONOPS plan
 - Need to have a good idea of how we are accomplishing the mission
 - Two Three U's? One Five U and a target? Following another resident space object? Etc.
 - Rationale will come from trade studies of previous missions (as documented by Jennifer and Nate).
 - Can create some conceptual drawings along with that
 - Need to lay out the mission in broad terms before any of this can happen
- **Began laying out ConOps for various mission configurations**
 - Considered three options
 - one 6U: deemed impractical because of limited tracking capabilities at SLU
 - 2 3Us: one active and one passive, exploring further by establishing basic conops to see how viable this course is
 - looked at pros and cons of this approach
 - several previous missions have done this
 - 2 3Us: both active, seems viable due to redundancy establishing conops to explore further
 - looked at pros and cons of this approach
 - several future missions are using this approach