MEETING MINUTES

Topic: Meeting with Steven, Review of CN/ER's, Black Box, Functional Model

Thursday, September 21, 2017
4:00 pm – 6:30 pm

Minutes recorded by _Brandon Cook_

Meeting called by __Joshua Smith__

Attendees: _Joshua Smith, Brandon Cook, Miriam Deschine, Dan Edmonds, Steven Hengl, Jerry Feldmiller_

Please bring: _Laptops, research, customer needs, engineering requirements__

Executive Summary:

The main purpose of this team meeting was to conduct a conference call with the client from Orbital, Steven Hengl. During the conference call the team was introduced to Jerry Feldmiller. He is another employee at Orbital who will be helping the team throughout the design process. The conference call consisted of talking with Steven about the list of customer needs and engineering requirements the team established prior to the meeting. Any questions the team had were answered before the call was concluded. After the conference call, the team began to work on a black box model and a hypothesized functional model. The final part of the meeting consisted of the team dividing the roles of writing the first three chapters of the Preliminary report. These chapters include the introduction, background research, requirements, existing designs, and the functional decomposition. The team gantt chart for the entire semester as well as a more detailed gantt chart for items leading to the preliminary report can be found in Appendix A.

Table 1. Record of meeting.

4:00 pm to 4:30 pm	**Conference call with Steven Hengl, Jerry Feldmiller** • Met Jerry, another employee of Orbital who will be helping with the project • We discussed customer/engineering requirements which were not rated by Steven. He told us why they were not as important • Survive 50 miles per hour, above 35 is non-working conditions for workers • He hit on the main customer needs of importance and why they are important • Accessibility should be 360 top to bottom access • Disassembly less than 4 hours • 30,000 dollar for a full scale design, but stick to the 5,000 for the small scale design for this prototype • Safety is of most importance for personnel as well as vehicle • No potential for smashes, crushing, or pinching • Think about lightning! Possibly need to ground the device • Some pads have lightning rods in place	Dub Rm A

	• Assume the launch vehicle is sitting on an empty concrete pad • Primary goal is wind and solar protection • Assume for all rockets the temperature range is between 65-85 degrees • Josh requested Jerry's contact information • Steven prefers a weekly email with all meeting minutes combined • Josh asked for dates of the PDR and CDR PDR- November 6 CDR- Some date before the actual building process begins, look into when this will be	
4:30 pm to 6:15 pm	**Black Box and Functional Model Discussion** • Josh began to draw a black box model with input from the team • Brandon looked up information on creating a proper black box model • Josh and Dan brought up OSHA standards • Josh drew the functional model on the whiteboard while the team provided input • Brandon began creating the black box model in a word document • Miriam pointed out that the setup of the enclosure should be added to the functional model since it is part of our design problem	Dub Rm A
6:15 pm to end	**Plan for next meeting** • The next meeting will be held at the Dubois at 6:00pm • In the next meeting we will be compiling the report sections we have done individually and working on the HoQ	Dub Rm A

Table 2. Tasks Assigned.

Task	**Person Assigned**	**Due Date**	**Date Complete**
Chapter 1 of Report	Josh Smith	9/24/17	
Meeting Minutes	Brandon Cook	9/22/17	
Chapter 3.4 of Report	Josh Smith	9/24/17	
Chapter 2.1-2.2 of Report	Miriam Deschine	9/24/17	
Chapter 3.1 of Report	Brandon Cook	9/24/17	

Chapter 3.3.1-3.3.2 of Report	Brandon Cook	9/24/17	
Chapter 3.2-3.3 of Report	Dan Edmonds	9/24/17	

Next formal meeting: 9/24/17, Dubois Building, at 6:00pm.

Appendix A: Gantt Charts

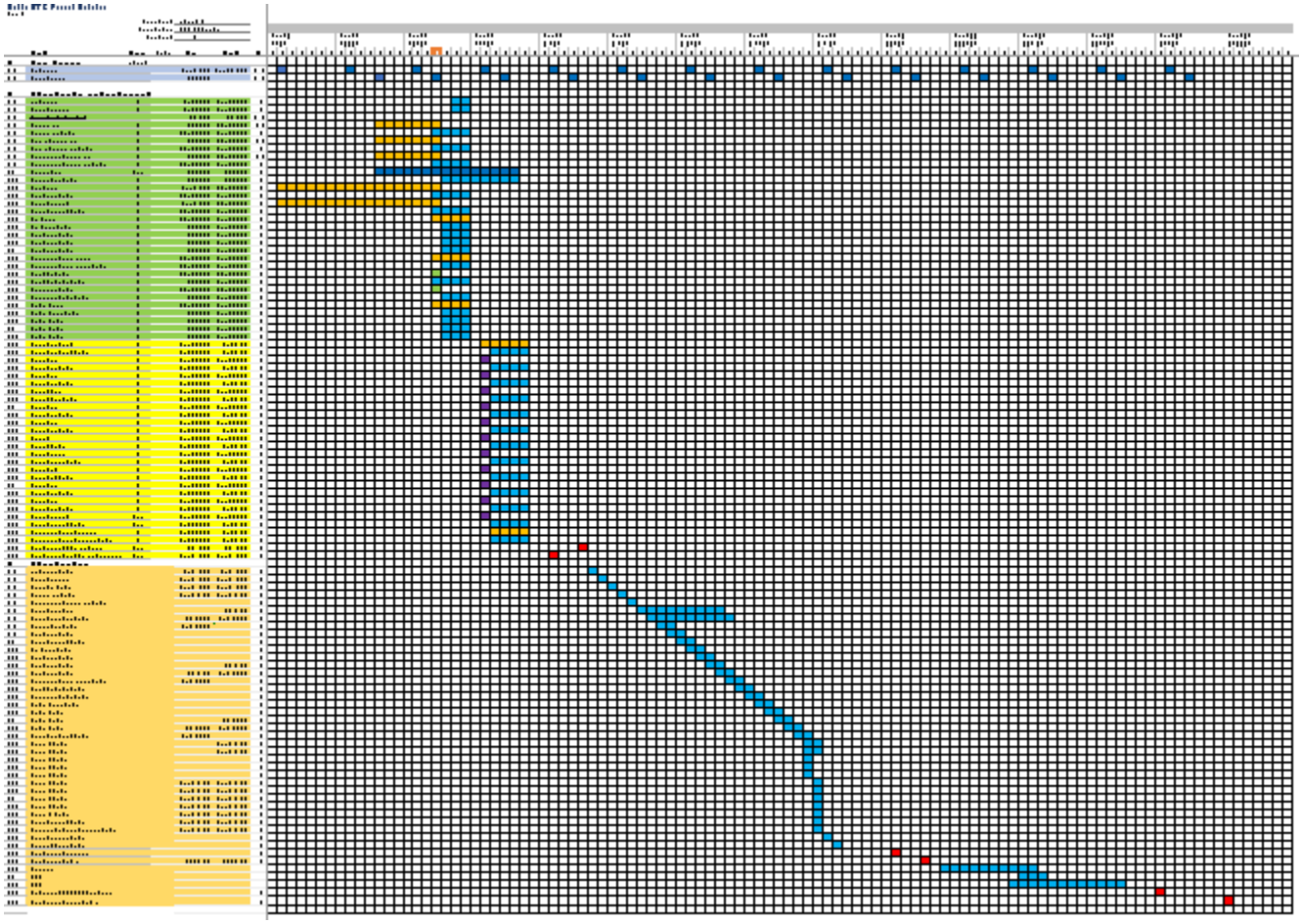

Figure 1: Team Gantt Chart for Entire Semester

Orbital ATK Project Schedule

Team A

			Project Lead:	Joshua Smith		
			Project Start Date:	9/5/2017 (Tuesday)		
			Display Week:	1		
	Task	Lead	cessor	Start	End	Don
2	**Phase One - Preliminary/Background**					
2.01	Introduction	Josh		Sat 9/23/17	Sun 9/24/17	0%
2.02	Project Description	Josh		Sat 9/23/17	Sun 9/24/17	0%
2.03	~~Original System (Not Needed)~~			Fri 9/01/17	Fri 9/01/17	100%
2.04	Requirements	Miriam		Fri 9/15/17	Thu 9/21/17	50%
2.05	Requirements Write Up	Miriam		Thu 9/21/17	Sun 9/24/17	0%
2.06	Customer Requirements	Miriam		Fri 9/15/17	Thu 9/21/17	50%
2.07	Customer Requirements Write Up	Miriam		Thu 9/21/17	Sun 9/24/17	0%
2.08	Engineering Requirements	Miriam		Fri 9/15/17	Thu 9/21/17	50%
2.09	Engineering Requirements Write Up	Miriam		Thu 9/21/17	Sun 9/24/17	0%
2.10	House of Quality	Team		Fri 9/15/17	Fri 9/29/17	0%
2.11	House of Quality Write Up	Miriam		Fri 9/22/17	Fri 9/29/17	0%
2.12	Existing Designs	Brandon		Tue 9/05/17	Thu 9/21/17	0%
2.13	Existing Designs Write Up	Brandon		Thu 9/21/17	Sun 9/24/17	0%
2.14	Design Research	Brandon		Tue 9/05/17	Thu 9/21/17	0%
2.15	Design Research Write Up	Brandon		Thu 9/21/17	Sun 9/24/17	0%
2.16	System Level	Dan		Thu 9/21/17	Sun 9/24/17	0%
2.17	System Level Write Up	Dan		Fri 9/22/17	Sun 9/24/17	0%
2.18	Exsiting Design I Write Up	Dan		Fri 9/22/17	Sun 9/24/17	0%
2.19	Exsiting Design II Write Up	Dan		Fri 9/22/17	Sun 9/24/17	0%
2.20	Exsiting Design III Write Up	Dan		Fri 9/22/17	Sun 9/24/17	0%
2.21	Functional Decomposition	Dan		Thu 9/21/17	Sun 9/24/17	0%
2.22	Functional Decomposition Write Up	Dan		Thu 9/21/17	Sun 9/24/17	0%
2.23	Black Box Model	Brandon		Thu 9/21/17	Thu 9/21/17	0%
2.24	Black Box Model Write Up	Brandon		Fri 9/22/17	Sun 9/24/17	0%
2.25	Functional Model	Brandon		Thu 9/21/17	Thu 9/21/17	0%
2.26	Functional Model Write Up	Brandon		Fri 9/22/17	Sun 9/24/17	0%
2.27	Subsystem Level	Josh		Thu 9/21/17	Sun 9/24/17	0%
2.28	Subsystem Level Write Up	Josh		Fri 9/22/17	Sun 9/24/17	0%
2.29	Subsystem I Write Up	Josh		Fri 9/22/17	Sun 9/24/17	0%
2.30	Subsystem II Write Up	Josh		Fri 9/22/17	Sun 9/24/17	0%
2.31	Subsystem III Write Up	Josh		Fri 9/22/17	Sun 9/24/17	0%
2.32	Designs Considered	Josh		Tue 9/26/17	Sat 9/30/17	0%
2.33	Designs Considered Write Up	Josh		Wed 9/27/17	Sat 9/30/17	0%
2.34	Design One	Josh		Tue 9/26/17	Tue 9/26/17	0%
2.35	Design One Write Up	Josh		Wed 9/27/17	Sat 9/30/17	0%
2.36	Design Two	Josh		Tue 9/26/17	Tue 9/26/17	0%
2.37	Design Two Write Up	Josh		Wed 9/27/17	Sat 9/30/17	0%
2.38	Design Three	Miriam		Tue 9/26/17	Tue 9/26/17	0%
2.39	Design Three Write Up	Miriam		Wed 9/27/17	Sat 9/30/17	0%
2.40	Design Four	Miriam		Tue 9/26/17	Tue 9/26/17	0%
2.41	Design Four Write Up	Miriam		Wed 9/27/17	Sat 9/30/17	0%
2.42	Design Five	Brandon		Tue 9/26/17	Tue 9/26/17	0%
2.43	Design Five Write Up	Brandon		Wed 9/27/17	Sat 9/30/17	0%
2.44	Design Six	Brandon		Tue 9/26/17	Tue 9/26/17	0%
2.45	Design Six Write Up	Brandon		Wed 9/27/17	Sat 9/30/17	0%
2.46	Design Seven	Brandon		Tue 9/26/17	Tue 9/26/17	0%
2.47	Design Seven Write Up	Brandon		Wed 9/27/17	Sat 9/30/17	0%
2.48	Design Eight	Dan		Tue 9/26/17	Tue 9/26/17	0%
2.49	Design Eight Write Up	Dan		Wed 9/27/17	Sat 9/30/17	0%
2.50	Design Nine	Dan		Tue 9/26/17	Tue 9/26/17	0%
2.51	Design Nine Write Up	Dan		Wed 9/27/17	Sat 9/30/17	0%
2.52	Design Ten	Dan		Tue 9/26/17	Tue 9/26/17	0%
2.53	Design Ten Write Up	Dan		Wed 9/27/17	Sat 9/30/17	0%
2.54	Design Selected	Team		Tue 9/26/17	Tue 9/26/17	0%
2.55	Design Selected Write Up	Team		Wed 9/27/17	Sat 9/30/17	0%
2.56	Rationale for Design Selection	Miriam		Wed 9/27/17	Sat 9/30/17	0%
2.57	Up	Miriam		Wed 9/27/17	Sat 9/30/17	0%
2.58	Background & Preliminary Report	Team		Fri 10/06/17	Fri 10/06/17	0%
2.59	Presentation	Team		Tue 10/03/17	Tue 10/03/17	0%

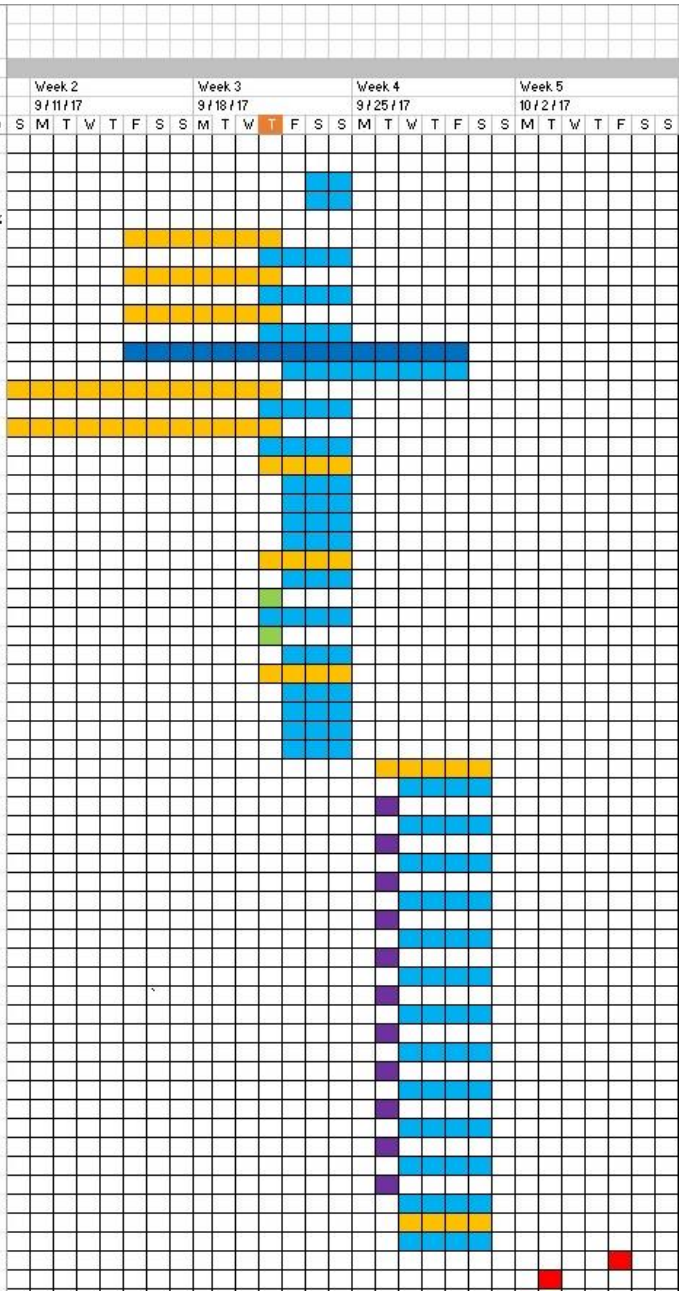

Figure 2: Team Gantt Chart Up To Preliminary Presentation