

NASA Rock Mining Competition Software Team

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Progress of current Milestone (progress matrix)

Tasks	Completion	Catherine	Nicholas	To Do
Continue designing, implementing, and testing networking approaches	70%	50%	50%	Work on Embedding VLC into the code in order to send video feeds
Continue designing, implementing, and testing software that will interact with the hardware	45%	50%	50%	Wait for the hardware in order to test the software with the hardware
Continue designing, implementing, and testing the operating system	85%	50%	50%	Start playing with the Jetson TX1 board.
Start researching Automation	30%	50%	50%	Continue to figure out how to automate the current features of the robot.

Discussion of each accomplished task (and obstacles) for the current Milestone:

- Networking - We have been able to send video feeds from one computer to another using VLC. From there we need to attempt to embed VLC in C in order to have it run from the robot to the machine.
- Software to interact with hardware - We still have not been able to work much with this because we are waiting for the other part of our team to finalize the hardware for us to use.

- Operating System - We have finalized using the Ubuntu Light that comes with the NVIDIA Jetson TX1 board. Now we are waiting to receive the NVIDIA Jetson TX1 board in order to continue working with the operating system.
- Automation - We have started to research different techniques in order to make the robot fully automated. We are currently researching different ways to incorporate Bash Scripting in order to automated the robot's boot sequence and some of the controls.

Discussion (at least a few sentences, ie a paragraph) of contribution of each team member to the current Milestone:

- Catherine Grover - Cate has been helping to figure out how to send video feeds from the robot to the control center. She has been researching techniques in order to embed an instance of VLC in the robot in order for the people at the control center to see a video feed. Including this, Cate has been developing scripts using bash to help automate the boot up of the robot.
- Nicholas Persing - Nick has been continuously busy working as the system engineer of the team. He has been trying to help the rest of the team (non software) meet some of their current milestones. When he isn't helping the other team, Nick has been actively researching ways to embed VLC onto the system.

Plan for the next Milestone (task matrix) or

Task	Catherine	Nicholas
Continue researching autonomy, and start implementing it with the software.	Continue to research and implement. . .	Continue to research and implement. . .
Continue to design, implement, and test networking approaches.	Continue to design, implement, and test . . .	Continue to design, implement, and test . . .
Continue to design, implement, and test the software that will interact with the hardware.	Continue to design, implement, and test . . .	Continue to design, implement, and test . . .
Continue to design, implement, and test the operating system.	Continue to design, implement, and test . . .	Continue to design, implement, and test . . .

Discussion (at least a few sentences, ie a paragraph) of each planned task for the next Milestone

For the next tasks we will continue designing, implementing, and testing networking approaches, operating systems, and the software that will interact with the hardware. We will also continue to research ways to make the robot autonomous and start implementing it the robot. Hopefully, as soon as we get back from Winter Break, we will actually have the robot in order to start integrating our work with the actual robot.

Sponsor feedback on each task for the current Milestone

Sponsor Signature: _____ Date: _____

Sponsor Evaluation

- Sponsor: detach and return this page to Dr. Chan (HC 322)
- Score (0-10) for each member: circle a score (or circle two adjacent scores for .25 or write down a real number between 0 and 10)

Nicholas Persing	0	1	2	3	4	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
Catherine Grover	0	1	2	3	4	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10

- Sponsor Signature: _____ Date: _____