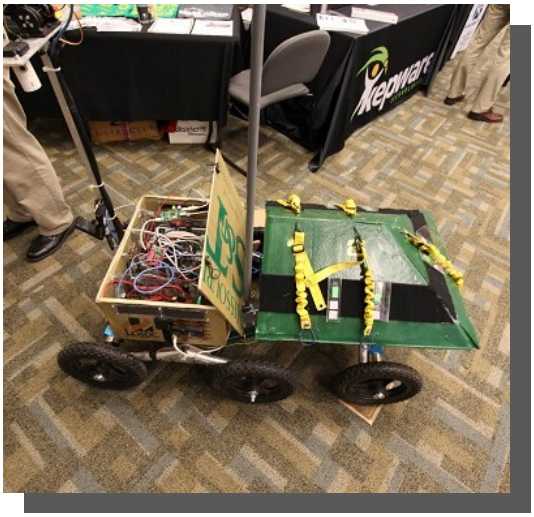
Logic, Inc. Is a proud sponsor of the Missouri S&T Mars Rover Design Team. The team was founded on January 11th, 2012. It operates like a small business, and is modeled after an engineering firm, with technical and administrative branches. Three students joined us at our annual Automation Tech Expo. We asked Ian Lee, a junior in Engineering Management and CFO of the Mars Rover Design Team about their organization and the international competition.

Q: Who is the Mars Rover Design Team?

A: The Mars Rover Design Team is a hands-on opportunity for students at Missouri University of Science and Technology to extend their education. Students who engage in the team actively apply and learn experiential skill-sets: from engineering on a large multi-disciplinary team, to team leadership and management, finance, public speaking and more. By helping improve each member's capability, knowledge, and desire to serve, the team fulfills its dedication to build a better future for all mankind.

Q: What is the S&T Mars Rover and what are the unique features of it?

A: MRDT's 2013 rover has been affectionately named "Akers" after Col. Tom Akers: the first astronaut from Missouri S&T. The rover features four IMS stepper motors with 12.5" wheels for its drive system, a Raspberry -Pi for its microcomputer, Arduino and TI launchpad microcontrollers, a rocker-bogey style aluminum and steel chassis, four lithium-polymer batteries allowing for several hours of drive time, and a powerful communications system that allows for zero-latency wireless communications past a two-mile radius. In addition, the rover was designed to be modular, allowing astronauts in the field to quickly modify the rover for their needs. To this end, the team built a robotic arm capable of manipulating up to 12kg within a 4ft envelope. The arm also had the capability to swap end-effectors, so that the rover could maintenance equipment, deliver payloads, analyze and attain samples to test for life.



Q: When was your competition and what was the result?

A: The competition took place in Hanksville Utah, from May 29 – June 1, and our team took 10th in the internationally attended bout. (continue)

As a first -year team with no experience in any robotics, we were very proud of our team's success: designing, fabricating, fundraising, and delivering a rover to the competition field. We took the opportunity of the lulls in the competition to talk with other teams, see how they made their robots, and to identify many of the gaps in our knowledge so that we will be better prepared for next year's competition. The team is enthusiastically preparing to take next year's rover competition by storm.

Q: What changes do you see in the future?

A: The team is currently undergoing a total retrospective analysis focusing on a few key areas: team structure and organization, member efficacy, design methodology and implementation, and scheduling. Some proposed changes include creating a new science-centric sub-team, a stricter adherence to the design schedule, a stronger emphasis on testing, or implementing some new officer positions. We want to be careful to identify and solidify the gains from last year, while building capability in our identified weak areas. Officers are already hard at work processing everything we learned last year, in order to make informed and effective decisions for the future of the team. How all these changes, if any, may look, we can't say yet – but we will continue to strive for the perfect team and rover.

Q: Where can people find out more about the program and how to support it?

A: Anyone interested in the program or supporting the team can contact us through:

Email: marsrover@mst.edu

Facebook: https://www.facebook.com/MissouriMRDT (Check out our photo album from competition!)

Website: http://marsrover.mst.edu