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| **---------------------------------------------------------**  **ROVER PC SOFTWARE**  **---------------------------------------------------------**      The software helps the user to process commands from the command PC software into commands usable by the Arduino systems managing the motors. It allows the user to maneuver the Rover wirelessly.  **ROVER ARM CONTROL**  The software enables control of the rover's articulating arm in order to pick up objects. The joystick is used in order to maneuver the arm up and down as well as side to side.  **ROVER CAMERA VIEW**  The Rover sends camera streams back across the network to the Command PC. It provides the user the video stream they want to see in order to best allow for rover control and maneuvering. | **Team 1**  **Daniel Bittner**  **Edward Carter**  **Jun He**  **Matthew Ng**  **Dakota Pollitt**  **Zhentao Zhong** | **Software Engineering**  **Fall 2014**  **Team 1** Rover Command and Control System |

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| **------------------------------------------------------**  **THE ROVER COMMAND AND CONTROL SYSTEM**  **---------------------------------------------------------**    The Rover Command and Control System was developed for the purpose of managing the command systems of a simulated NASA Rover built by the Rowan University Engineering department. | The Rover C&C System serves as a method to remotely control the Rover.  The software has two component parts:   * A component that works for a Command PC that serves the purpose of providing user GUI and managing user input that will be sent to the rover. * Another component on the Rover PC which receives Command PC instructions and processes them into motor controls while sending back video feed.   ------------------------------------------------  **THE COMMAND PC SOFTWARE**  ------------------------------------------------  **COMMAND JOYSTICK CONTROL**    The Rover is controlled using a USB Joystick that is plugged into the command PC. The joystick allows the Rover pilot to navigate and command the Rover. The throttle allows the user to navigate and control both the rover and arm systems. The throttle allows the pilot to manage rover speed and acceleration. | **COMMAND GUI**    A software graphics user interface provides the pilot a visual update of the rover status. It has options for displaying two cameras from multiple options. Users get real time stream from the cameras. They can select from a variety of different view options from the rover. It also keeps the user updated on the current status of the rover connection.  **COMMAND NETWORK CONNECTION**  The software manages the wireless connection between the Command PC and the Rover PC. It keeps the user updated on the status of commands being sent across the network and the current connection status of the rover. |