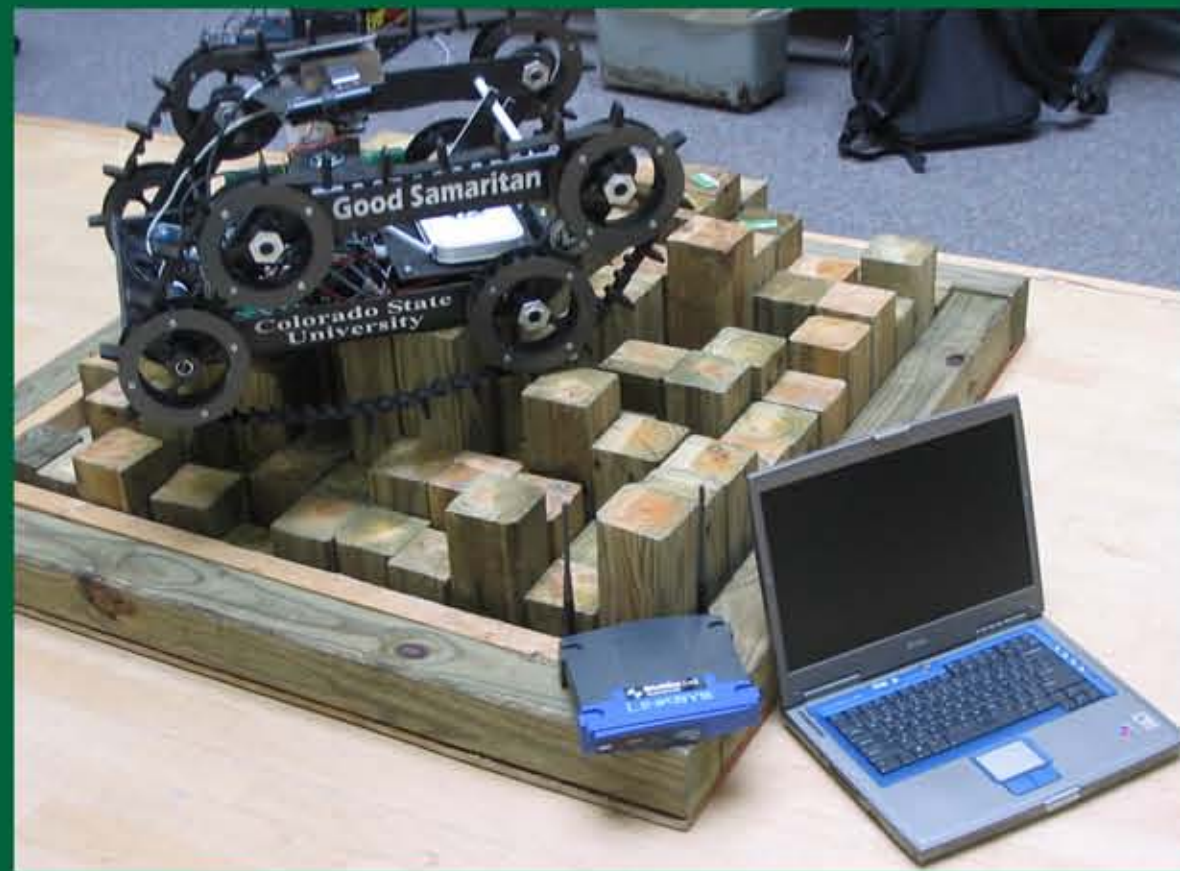


Good Samaritan Robotics User Interface Team

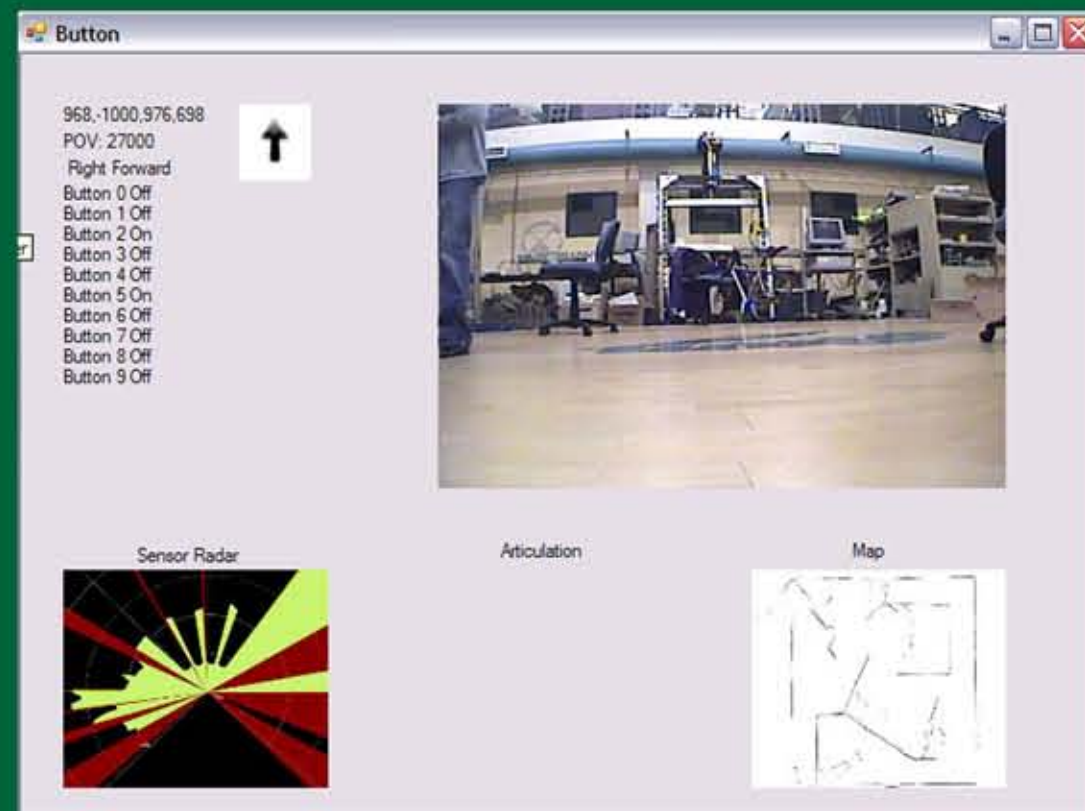


Laptop, Router and Good Samaritan Robot

This poster presents the topic of the user interface team for the Urban Search And Rescue (USAR) Robot, Good Samaritan, senior design project. The USAR senior design project consists of four teams: platform, robotic arm, miniature, and user interface. The user interface team is responsible for: human interaction controls, on-robot computing, networking, localization and mapping, sensing (CO2, distance, audio, visual, thermal), and sending motor controls. The user will input controls using a Logitech gamepad into a laptop computer, which will be sent via 802.11a wireless network to the robot's client-side AMD Geode single board computer. This computer will send the appropriate signals and receive feedback of motor positions and status of sensors. The user will be interfacing with Good Samaritan's Linux computer through C++ software, written by the team, on a Windows laptop.



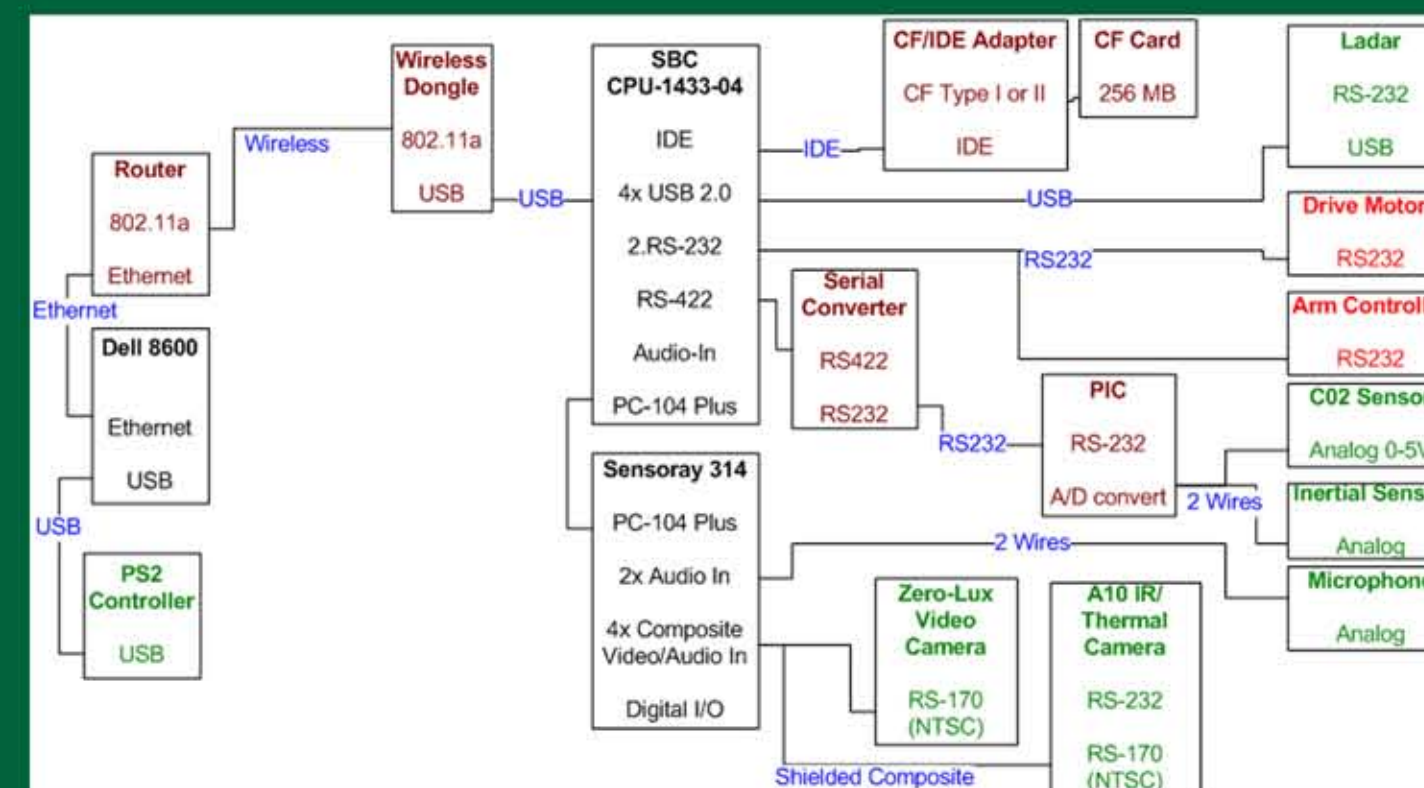
LADAR and Carbon Fiber Protective Shell



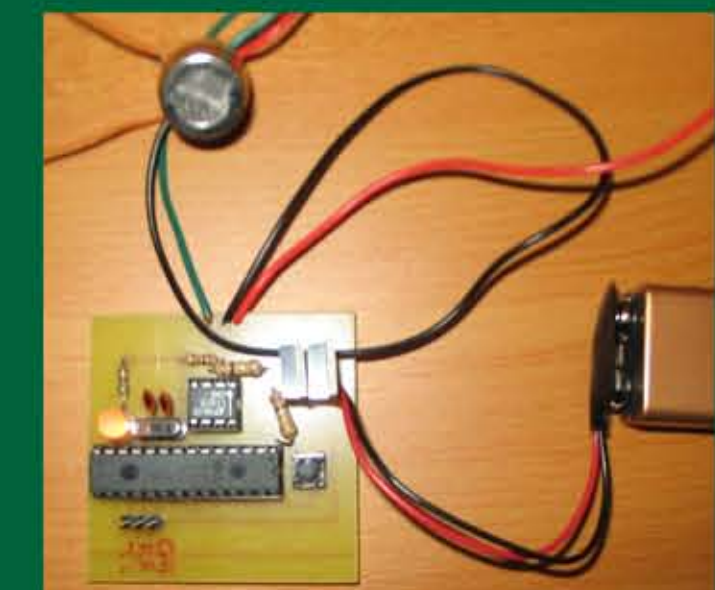
Preliminary Version of User Interface



AMD Geode Robot Computer



Thermal Imager and 0-lux Camera



CO2 Sensor & Circuitry

Kenneth Darbonne
Stephen Goebel
Shea Robinson

Josh Schmitt
Steve Tranby
Brent Wilkins