

# Beta Testing Results

## LabVIEW. cRio II, Davey Relay, Jaguar

Team 624

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# LabVIEW - Task 1/Results Brief

- Software installation and updates
  - 2 hours to install with update (1)
  - 3 updates required
    - LabVIEW
    - Utilities
    - Driver Station
  - Issues
    - Read error on disk – no retry, program skipped
    - One laptop crashed midway



# LabVIEW - Task 2/Results Brief

- Imaging Tool
  - 1.5 hours to complete
  - Could not connect using tether
  - Used Wireless (after replacing router) – still issues
    - Constantly losing connection
    - Finally successful
    - Interesting interface for module positions
      - Shows where modules should go
      - Tells user if module is incorrect position
  - Modules positions need to be changed – not obvious until later
    - 1 (Analog), 2(digital – sidecar), 3(pneumatic bumper), 7 (pneumatic bumper)
- Robot Project, Development tools
  - Modules initial tried in original position – nothing worked but slot 1
  - After moving modules code worked
  - Camera would not function



# LabVIEW - Task 3/Results Brief

- Operator Control
  - 1.0 hours to complete
  - Major communication issues
  - No problem modifying code and driving bot

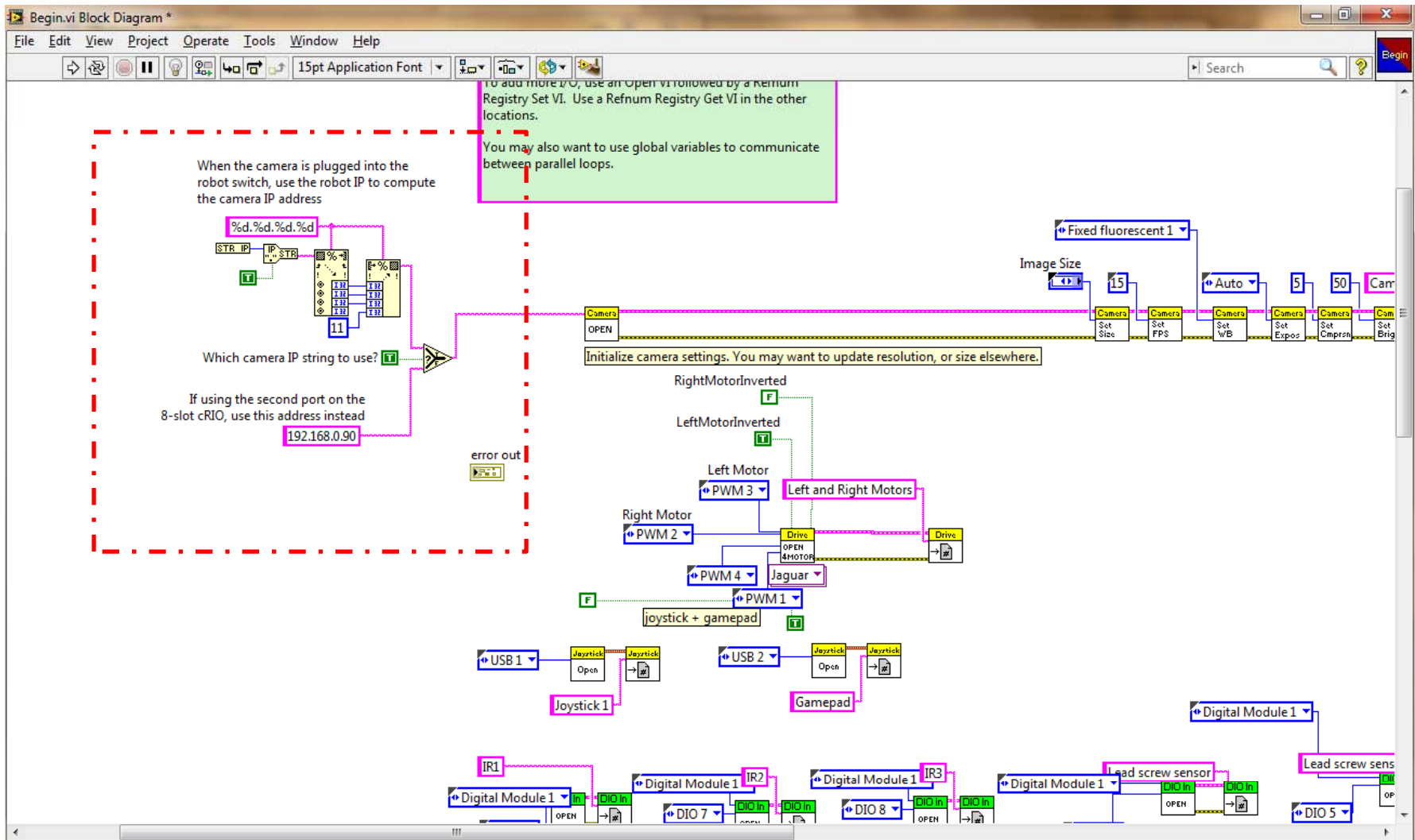
# LabVIEW - Task 4/Results Brief

- Port Last year's Code into Beta Language
  - 17 hours
  - Initial loaded code into software
    - Modules needed to be changed in the code for digital and pneumatics
    - Camera would not function
    - Constantly losing connection
  - Update received (LabVIEW, Utilities, Drivers Station)
    - Update required changing camera VI's
    - Still camera would not work
    - Reimaged camera for connection to router
    - Loaded in Boolean of updated project code from update LabVIEW
    - Camera functioned
    - If connection or robot is restarted, camera will not function
      - Must restart dashboard
  - Finally, fully functional
    - encoders, IRs, camera, shifters, etc.

Note: Stop button not used

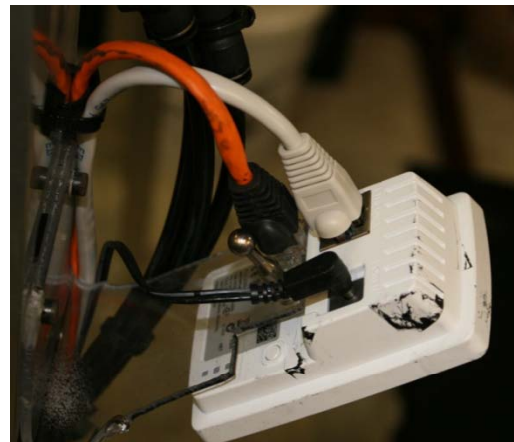


# LabVIEW - Task 4/Results Brief



# LabVIEW - Task 4/Results Brief

## Unit Connections with camera



New Router – problems with old  
-- Camera connected directly

# LabVIEW - Task 4/Results Brief

## Radio(router) with Camera Connection

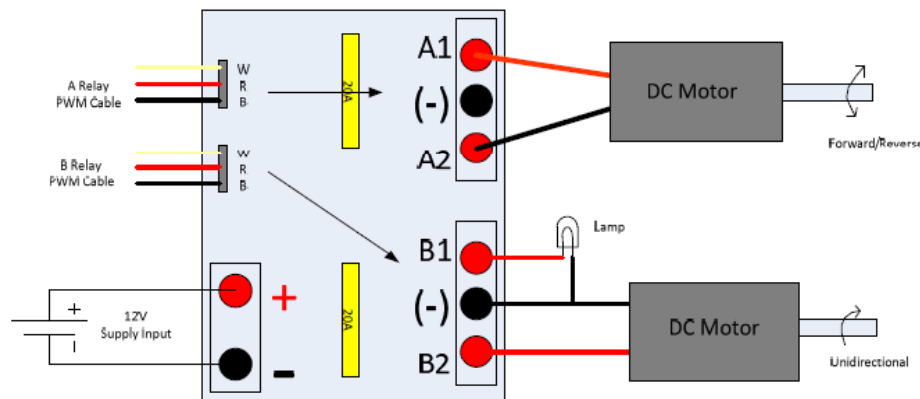
- cRio 1 (8 slot) 2 options
  - Connect camera to port 2 of cRio
  - Connect directly to router
  - Both options require new image for camera
    - IP address change (input team number)
    - Must set camera for one or the other

# LabVIEW - Task 5/Results Brief

- Functionality change or unique code
  - 3 hours
  - Changed the controller functionality and positional assignments for mast and arm
  - No issues noted
  - No description of what was improved or changed in LabVIEW VI's – this would be good information to know.

# Hardware - Task 6/Results Brief

- Jaguar Motor Controller
  - Functioned normally (PWM)
- David Duel Relay
  - Functioned normally (PWM)
  - More capabilities



Examples: H bridge operation and Single ended mode of operation



# Hardware - Task 6/Results Brief

- cRio II
  - Functioned normally
  - Connection issues
  - Worked fine with code previously used – no changes
  - Programs load faster

