SCARF Road Following in conjunction with SAIC
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What is SCARF?
- Supervised Classification Applied to Road Following
- Differentiates between road and non-road in a color digital image

Project Goals
- Test SCARF
- Restore vehicle to working condition

Software System
The software system has 4 stages:
- SCARF processes an image
- A goal point is selected
- Goal point is transformed into vehicle coordinates (see figure at right)
- A steering angle is calculated and sent to the vehicle

Hardware System
The vehicle is a 2001 Honda ATV that was converted into a robotic platform by SAIC. We repaired and modified the vehicle to suit our testing needs. This included:
- Removed MBCU from control loop
- Repaired Emergency-stop system
- Restored corrupted VCU hard drive
- Replaced Laptop
- Mounted FireWire camera onto vehicle
- Removed obsolete wiring and connections

Integration and Testing
The complete testing system consists of our software program integrated with the vehicle hardware. We tested SCARF on a variety of paths around Olin to try to determine the best conditions to run SCARF.

In addition to testing, we produced a user guide for future users of the vehicle platform and software program.

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