Introducing CRG's
Detection Rover

Land management agencies spend immense resources to comply with environmental laws and regulations for endangered species management. Protecting the Mojave Desert Tortoise requires extensive transect surveys performed by biologists. The Detection Rover, a semi-autonomous mobile surveying system can perform these transect surveys, emulating the role of the biologist and minimizing expensive, time-consuming work. The system can perform low-cost, environmental monitoring and full-time tracking with real-time streaming of data viewed by an operator. The systems combine a rugged vehicle with image recognition and artificial intelligence to support the protection of endangered species while reducing manpower needs.

The Detection Rover performs environmental monitoring using the following benefits and features:

Image Recognition
Edge-computing system tested with real burrows with over 80-90% confidence levels

GPS Navigation
Autonomous rover following specified GPS waypoints for environmental monitoring

Data Recording
High definition, real-time video feed and real-time data streaming and monitoring

Smart Remote Control
Smart controlled rover for low-cost, environmental monitoring and full-time tracking with real-time data

Rugged Design
Rugged rover design can maneuver around desert terrain without disturbing environment

Reduces Costs
By minimizing labor intensive biologist transects and providing full-time tracking
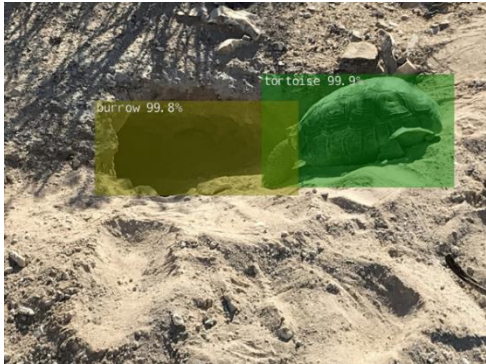
Help protect endangered species
via an image recognition driven, semi-autonomous mobile surveying system

Autonomous Navigation
- Navigation via mesh networking in an area of interest
- Waypoints set and tracked over GPS
- High definition, real-time video feed

tortoise 99.9%
burrow 99.8%

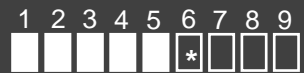**Desert Tortoise and Burrow Recognition in Field**

Detection Rover Status:
Field tested in extreme conditions of Mojave Desert

BWCS
HARDSHELL
— LABS —

Technology Readiness Level:

1	2	3	4	5	6	7	8	9
					*			

Manufacturing Readiness Level:

1	2	3	4	5	6	7	8	9	10
					*				

Tortoise Detection Precision: 0.91

Burrow Detection Precision: 0.77

*TRL/ MRL Phase II Goal

Interested in learning more about CRG's technology?
Contact us at sales@crgrp.com

CRG

www.crgrp.com