Gas Operated Land Intelligent All Terrain veHicle (GOLIATH)

Project Need

Currently there is no off road vehicle platform for autonomous research and design in CISCOR's inventory

CISCOR
CENTER FOR INTELLIGENT SYSTEMS, CONTROL, AND ROBOTICS

Project Goal

Modify an existing all terrain vehicle (ATV) to be capable of full autonomous navigation by designing, researching and manufacturing components to allow unmanned locomotion control

THROTTLE

Schneider M-Drive 23

Stepper Motor

0—Full Throttle: 500ms

Torque Required: 1.2 N-m

BRAKE

Schneider M-Drive 17

Linear Actuator

0—Full Brake: 250ms

Force Required: 115 N

GEAR SELECT

Schneider M-Drive 23

Linear Actuator

Park -> High: 4 sec

Force Required: 135 N

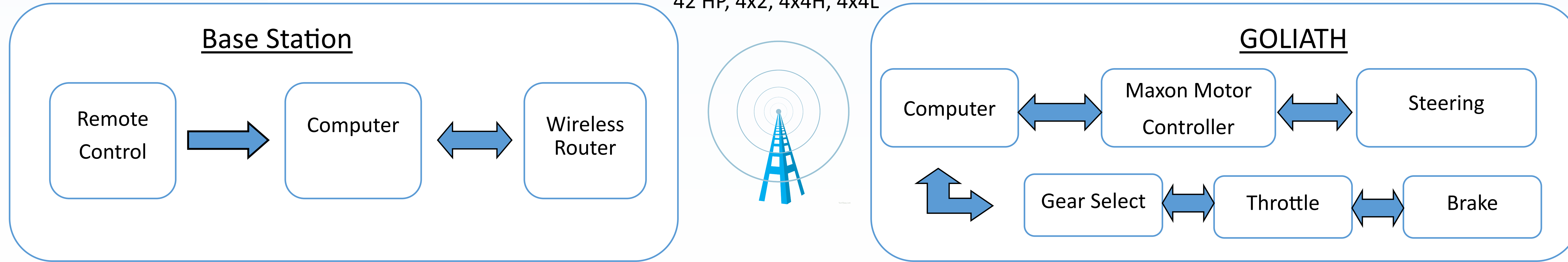## STEERING

Maxon 150W DC Motor

Chain Driven

Full turn (120°): 700ms

Torque Required: 15 N-m

2012 Polaris Sportsman 550

Electronic Power Steering

42 HP, 4x2, 4x4H, 4x4L

Base Station

Remote Control → Computer ↔ Wireless Router

GOLIATH

Computer ↔ Maxon Motor Controller ↔ Steering

Gear Select ↔ Throttle ↔ Brake

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