



# **SEAPORT-E** Capabilities

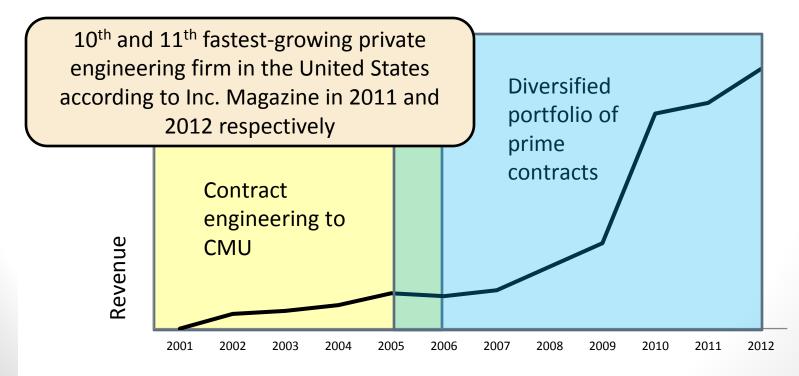
### December, 2013

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## **RE2** Overview

- Founded in 2001
- Carnegie Mellon University Spin-out
- Talented robotics engineers
- Balance of cutting-edge R&D / products



### Manipulation systems



Advanced Explosive Ordnance Disposal Robotic System (AEODRS) ACAT IV Program of Record, entering Milestone C



BS5 Manipulator for Defense Threat Reduction Agency (DTRA) for Soil Sampling (e.g. ChemBio)

NORTHROP GRUMMAN





HD2 manipulator for Air Force EOD. 148 currently deployed in Afghanistan



DS1-MA manipulator. 100 currently deployed in Afghanistan

Development

**User Evaluation** 

Deployed

## **Unmanned Ground Vehicles**

#### QNA Dragon Runner



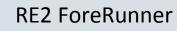
#### **USMC** Gladiator



#### **DARPA** Spinner



Strong UGV R&D background







ForeRunner won the JIEDDO Endurance Challenge in June of 2012 for the Dismounted Class. It was also the fastest robot in all categories (Mounted, Dismounted, Portable, UAS)

Development of RE2 UGVs





## ForeRunner UGV



### Salient Features:

- Speed (40 KPH / 25 MPH)
- Agility (Ackermann, Synchronous, Turn-in-place)
- Stability (suspension and low CG)
- Interoperability (IOP JAUS compliant, modular payload deck to accept sensors such as CBRNE, manipulators, etc.)
- Small robot class (~135 lbs.)
- Eligible to be a Phase III SBIR



### **Unmanned Systems Software**



Development of IMUSE / ICOMC2 and implementation of STANAG 4586. Trusted partner since 2007.



Development of the Master Capability Module based on JAUS for the AEODRS Program of Record



Integration of Interoperability Profile (IOP) compliant manipulator with QNA Dragon Runner 10 in support of upcoming Engineer Squad Robot (ESR) program of record.