




Joint Fight / Joint Solutions

**JRAST and the Joint Concept for
Robotic and Autonomous Systems**

***COL Charles R. Bowery Jr.
NDIA Robotics Division Quarterly Meeting***

- **RAS Development in context**
- **JRAST, Joint Force 2020, and DoD Innovation**
- **Joint Concept for Robotic and Autonomous Systems (JCRAS)
Highlights**
- **JCRAS Milestones and Implementation**
- **Questions**



“We appear therefore to be entering a time of political, strategic, and technological uncertainty; yet a period where the threats seem more indeterminate. Western military institutions confront a future in which they will not receive anything similar to the funding and resources they received throughout the Cold War despite rapid technological change and innovation. Thus, they must innovate with less money and greater ambiguity about potential opponents and the nature of wars they will have to fight.”

“The interaction of technical change and organizational adaptation within a realistic strategic assessment determines whether good ideas turn into real military capabilities.”

- Williamson Murray and Alan R. Millett, *Military Innovation in the Interwar Period*

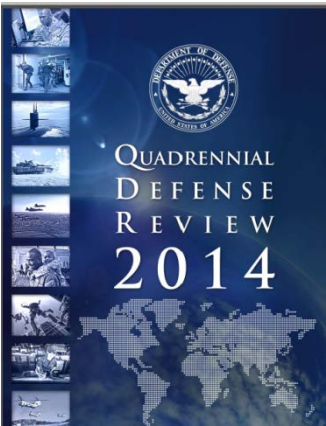
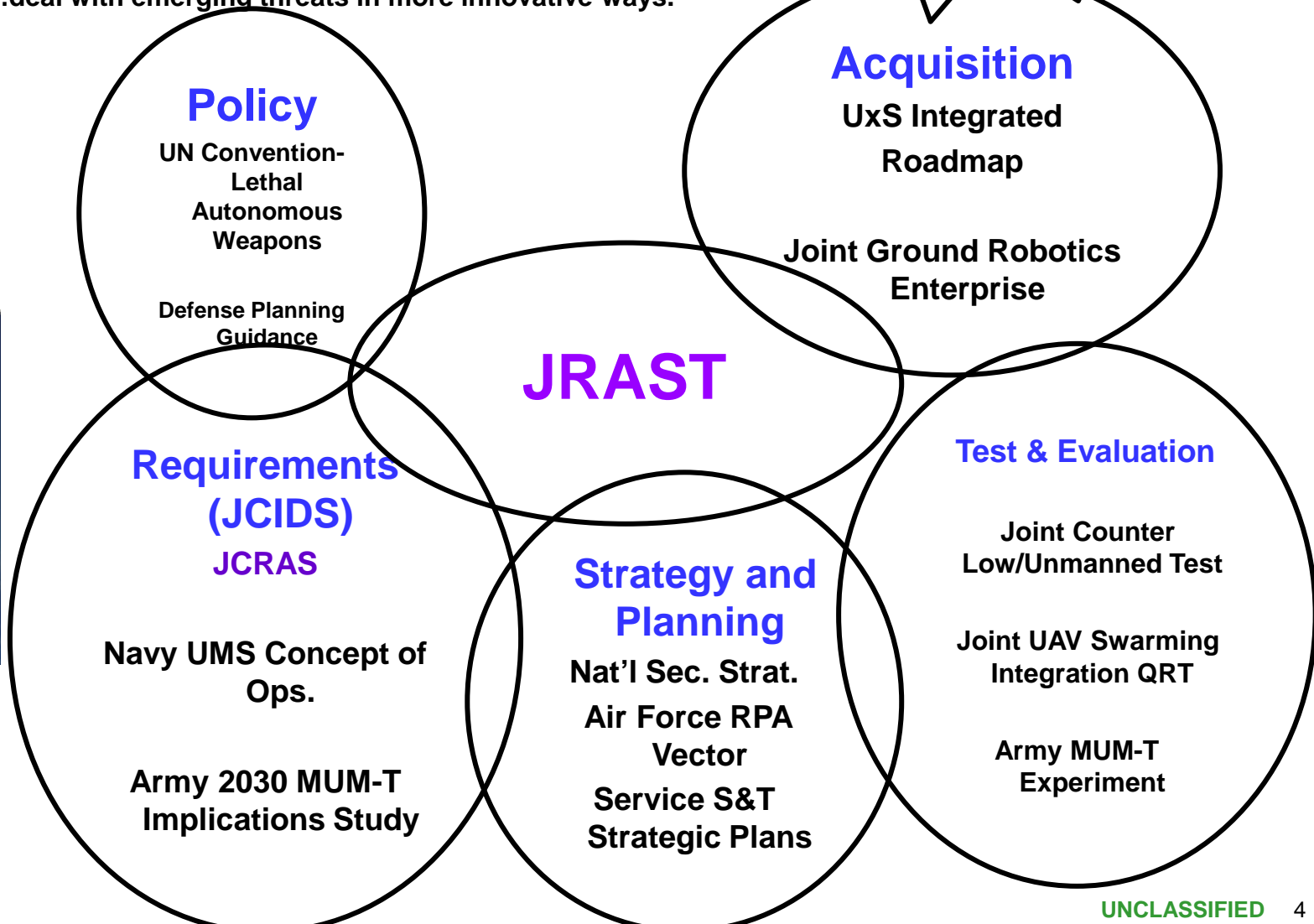
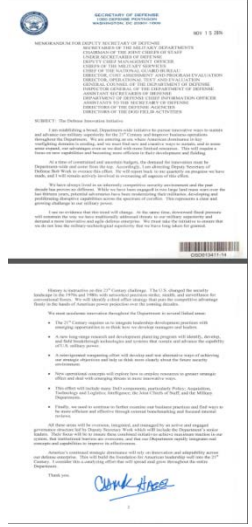
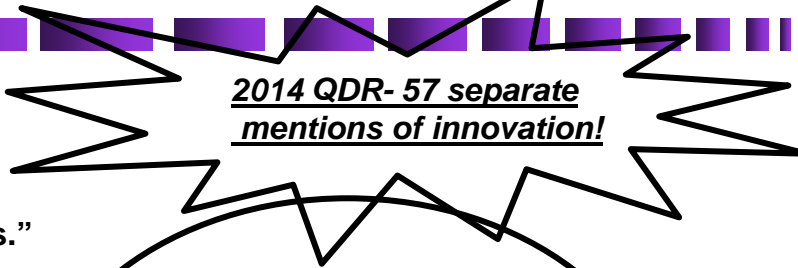
“To maintain our technological superiority as we transition from one warfighting regime to another, we must begin to prepare now. In addition to new technologies, a new offset strategy will require innovative thinking, the development of new operational concepts, new ways of organizing, and long-term strategies.”

- Deputy Secretary of Defense Robert Work

The Joint Staff, RAS, and DoD Innovation

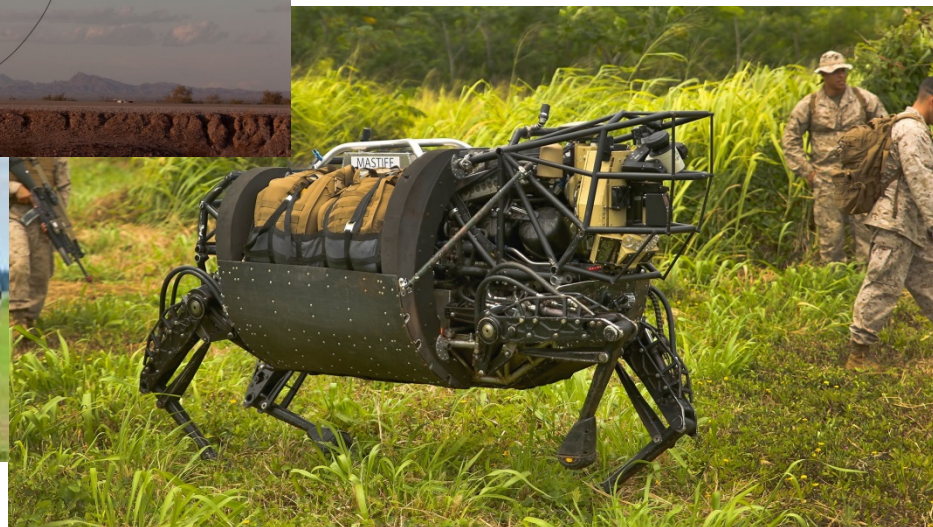
Nov 2014- SECDEF Innovation Initiative

- Long range R&D program to “identify, develop, and field breakthrough technologies and systems”
- New operational concepts will “explore how to ...deal with emerging threats in more innovative ways.”



From This.....







The Joint Concept for Robotic and Autonomous Systems (JCRAS)

What it is:

Joint Concept Development “is intended to improve the future Joint Force within the context of strategic guidance and the anticipated future security environment.”

Once approved and signed by the Chairman, “Joint Concepts provide an *azimuth* for future force development.” They propose “new approaches for addressing compelling challenges.” (CJCSI 3010-02)

Holistic in nature: Addresses range of DOTMLPF-P implications

JCRAS Operational Challenge: *How will the future Joint Force integrate and employ RAS to create operational advantage in an environment characterized by rapid and diverse RAS technological development and increasingly capable spectrum of threats and adversaries?*

What JCRAS is not:

- **Regulatory**
- **Prescriptive**
- **Acquisition focused (will complement the Unmanned Systems Integrated Roadmap)**



The Joint Concept for Robotic and Autonomous Systems (JCRAS)

Road to Publication:

- **January 2015: DJS Memo establishes draft JCRAS and writing team structure**
- **February-July 2015: Writing team events, industry and S&T visits to assess RAS development**
- **September 2015: Concept Red Team Evaluation**
- **October 2015: Capability Development Workshop**
- **December- January 2016: Formal Staffing, leading to JCS Tank Review**

- **April 2016: Publication target**

After Publication:

- **Concept Implementation: via JRAST or other designated Working Group**
- **Follow-on capability development: in conjunction with services at AT&L**



Questions?