

**Joint Robotics Program
Working Group
(JRPWG)**

May 15-16, 2002

TACOM, Warren, Michigan

Minutes of Meeting

1. The 12th semiannual Joint Robotics Program Working Group (JRPWG) was held at TACOM in Warren, Michigan, from 8:30 AM, May 15 until 1:00 PM, May 16, 2002.
2. The meeting agenda is provided at [Tab A](#), and the attendees list at [Tab B](#).

DAY ONE:

3. A “Newcomers Brief” was given prior to the start of the meeting. The briefing is at [Tab C](#).
4. Mr. Lew Goldberg made opening administrative comments.

COMMAND WELCOME

5. Mr. Jerry Chapin, Deputy to the Commanding General, TACOM, gave the official command welcome. Mr. Chapin provided a TACOM overview including locations, vision and product lines. His briefing is at [Tab D](#).

BRIEFINGS

6. **PEO GROUND COMBAT SYSTEMS:** MG Joseph Yakovac, PEO, Ground Combat Systems, provided a “think piece,” asking the robotic community to be careful about being enamored with “Star Wars” and focusing on the importance of setting realistic expectations, keeping them “real” in order to help cultural change and preclude “failure” as a resulting viewpoint of the military’s leadership. His briefing is at [Tab E](#).
7. **TARDEC OVERVIEW:** Dr. Dick McClelland, Director of TARDEC, briefed the current status of the Future Combat System program. He discussed the need to meet the technical requirements of Block 1 within 1 year or risk being out of the program altogether. It is imperative to get demonstrations of technologies such as Leader-Follower now to stay in the race. He also stated that the feeling by the CSA, GEN Shinseki, is that we may be focusing too much attention on robotics. His briefing is at [Tab F](#).

8. **JRP COORDINATOR'S REMARKS:** Mr. Michael Toscano, the Joint Robotics Program Coordinator (JRPC), opened the meeting with preliminary remarks. He stressed the importance of communications and teamwork in the robotics community. He addressed certain challenges we face in the near term in getting our message out. Mr. Toscano stated he prefers to use the term "unmanned systems" versus "robots" for cultural purposes and also addressed that the technology we are engaged in is not a question of "if" but rather "when". It is even more critical today due to funding issues that we present a solid and cohesive front as a community. Mr. Toscano's briefing is at [Tab G](#).

9. **AIR FORCE RESEARCH LABORATORY (AFRL):** Mr. Walt Waltz, Chief, Robotics Group, AFRL, gave an overview of the programs within AFRL and introduced the presenters of the various programs. His briefing is at [Tab H](#).

a. Capt Tim Shulteis and Mr. Woody English briefed the following programs: UAV Battlelab Cooperative Effort, JAUGS 3.0, Marsupial control, Autonomous Vehicle Technologies and Multi-Vehicle Control. The briefings are at [Tab I](#).

b. Dr. Phil Adsit presented the Next Generation EOD Remote Controlled Vehicle program overview which is a joint AFRL-NAVEODTECHDIV-TSWG program. Also presented were ARMS II, Standoff Connectivity and Control Unit (SCCU), and ARTS Alternate Control System (Fiber Optic). His briefing is at [Tab J](#).

c. Mr. Marshall "Doc" Dutton provided an update to the following programs: ARTS Laser Ordnance Neutralization System (A-LONS), Water Cutter, Charge Setter, and Stand-off Munitions Disruption. The briefing is at [Tab K](#).

10. **ARMY RESEARCH LABORATORY (ARL):** Dr. Jon Bornstein provided an update on past accomplishments and future plans for Demo III. He also gave an overview of projects/accomplishments of the Collaborative Technology Alliance. His briefing is at [Tab L](#).

11. **PRODUCT MANAGER, PHYSICAL SECURITY EQUIPMENT (PM, PSE):** LTC Mike Bonheim, PM PSE, provided an update to the Mobile Detection Assessment and Response System-Interior (MDARS-I) and Exterior (MDARS-E). His briefing is at [Tab M](#). This will be LTC Bonheim's last JRPWG as he relinquishes his "PM-ship" on June 28, 2002. The new PM will be LTC Gene Stockel.

12. **TANK-AUTOMOTIVE and ARMAMENTS RESEARCH, DEVELOPMENT & ENGINEERING CENTER (TARDEC):** Two briefings were presented followed by a TARDEC demonstration.

a. Mr. Curt Adams provided a program update on Vetronics and Robotics including the Crew Integration & Automation Testbed and Robotic Follower technologies. His briefing is at [Tab N](#).

b. Dr. Grant Gerhart provided a program update on the Intelligent Mobility program and introduced other projects of the TARDEC Robotics Mobility Lab (TRML). His briefing is at [Tab O](#).

c. The TARDEC Lab provided a 2 hour demonstration/reception demonstrating the following technologies/projects:

- ODIS Demo
- Motion Capture/Obstacles
- Lionhearth Head Tracking System, Stereo Vision
- Vision Imaging Systems
- VRML & Behavioral Sims (ODIS, T1, TFS)
- Vetronics Technology Testbed (crewstations)
- SABER (mine detection)
- Roving Intelligent Mobility Demo

DAY TWO:

13. **NAVSEA PMS-EOD/NAVEODTECHDIV:** Mr. Byron Brezina briefed on the Robotic Ordnance Neutralization System (RONS) MK 3, Mod 0 and the RONS Continuous Improvement Program (CIP). Additionally, he briefed on the Man Transportable Robotic System (MTRS), the Basic UXO Gathering System (BUGS), and the EOD Robotics Roadmap. His briefing is at [Tab P](#).

14. **UGV/S JOINT PROJECT OFFICE:** Ms. Stephanie Daffin, Chief, Logistics Division, provided a program update to the Standardized Robotic System (SRS), GLADIATOR, Man Portable Robotic Systems, VIKING, and discussed contingency deployment from the JPO. The focus of her briefing was on the logistics package necessary for fielding of the equipment. The focus of the briefing on logistics was as of a result of a briefing that the Joint Robotics Program Coordinator gave last month at a TACOM Logistics Symposium. Mr. Toscano stated that with the increase in fielding of prototype systems and the anticipation of EMD and Production systems being fielded, logistical concerns had risen higher on the priority list. Ms. Daffin's briefing is at [Tab Q](#).

15. **AVIATION AND MISSILE RESEARCH, DEVELOPMENT AND ENGINEERING CENTER:** Mr. Robert Wade presented a briefing on Cooperative Unmanned Ground Attack Robot (COUGER) and addressed the continuing development of JAUGS in the private sector. His briefing is at Tab R (waiting for arrival).

16. **AIR FORCE RESEARCH LABORATORY (Continued): Two additional AFRL briefings were presented:**

a. Capt Marshall Malhiot briefed the work being conducted in Fire Fighting Robotics including the ARTS Deployed Nozzle and the P-19 Crash Rescue Vehicle. His briefing is at [Tab S](#).

b. Mr. Brian Skibba briefed the progress in Active Range Clearance including Advanced Automated Ordnance Excavator (A-AOE), Automated Bulldozer (ABD), Multi-Vehicle Operations for UXO Removal and Remote Vegetation removal. His briefing is at [Tab T](#).
SPAWAR

17. **SPAWAR:** Mr. Robert Bruch briefed activities being conducted/supported at SPAWAR including a Small Robot Pool, MPRS URBOT Waypoint navigation, Chemical LOE and technical developments. His briefing is at [Tab U](#).

18. **INSTITUTE FOR DEFENSE ANALYSIS:** CDR Tom Clemons of the Joint Advanced Warfighting Program briefed the Unmanned Systems in the Future Joint Force: A Human in the Loop Experiment. His briefing is at [Tab V](#). CDR Clemons, who retires shortly, was recognized for his outstanding contributions to the unmanned systems community.

19. **WRAP UP:** Mr. Toscano placed emphasis on the criticality of demonstrating capabilities at every opportunity as we are facing the challenges of supporting the current, transitional force and objective forces. We must do our best to influence the acceptance of technologies, such as JAUGS in those forces. It is imperative that we leverage off of one another for demonstrations, etc.

20. **NEXT MEETING:** The next meeting is tentatively scheduled for December 3-5, 2002 in the vicinity of Eglin AFB, FL, hosted by the Air Force.

21. **ADJOURNMENT/ACKNOWLEDGMENTS:** Mr. Toscano recognized Dr. Gerhart and Henry Andrusz for their contributions in hosting the JRP on behalf of TARDEC. The meeting adjourned at 1:00 PM.