



Joint Framework for Measuring C2 Effectiveness
23-26 January 2012 | JHU Applied Physics Lab, Laurel, MD

Terms of Reference

Working Group 4: Analysis of Human Decision Making in a Networked Environment

Table of Contents	Click to go to
Section #	Page
Background and Working Group 4 Vision	2
Objectives	2
Working Group 4 Organization.....	2
Working Group Operations	2
Agenda.....	4
Security Procedures.....	6
Facilities	6

Background and Working Group 4 Vision

This working group will focus on the analyst techniques needed to understand the dynamics of human decision making in a networked environment. While it is generally accepted that networks applied to C2 result in improved decision making for the commander, successfully and efficiently measuring this improvement remains elusive for a variety of reasons. This working group will look at the challenge associated with the defining and measuring of “better” decision making.

The scope of the working group discussion will consider the impacts of methodology, measurement, materials, humans, and environment on the ability to analyze military decision making in the networked environment from the strategic to the tactical level. The scope will also generate and assess potential solutions to apply in the development, procurement, test and evaluation, integration, certification and operation of networked C2 systems. WG4 will outbrief findings and actionable recommendations to the overall MORS Workshop to provide its input to the workshop report.

Objectives

Objective 1: Identify major factors and/or risks that prevent adequate analysis of decision making in the networked environment.

Objective 2: Identify potential solutions to overcome negative factors and/or mitigate risks to adequate analysis of decision making in the networked environment.

Objective 3: Report findings and actionable recommendations for promoting adequate analysis of decision making in the networked environment.

Working Group 4 Organization

Working Group 4 Chair	Dr. Jennifer Ockerman, Johns Hopkins Applied Physics Laboratory
Working Group 4 Co-Chair	Dr. Sylvia Acchione-Noel, US Army TRAC-WSMR

Working Group Operations

In the agenda, WG4 has five working group sessions (nearly 17 hours) to develop recommendations for analysis of decision making during development, procurement, test and evaluation, integration, certification and operation of networked C2 systems. The WG4 co-chairs will conduct a facilitated problem-solving exercise, from issues to recommendations, to include action planning and outbrief development.

During the first day, attendees will hear presentations of research, testing, and evaluation focused on the difficulties and risks associated with measuring decision

making in a networked C2 environment. Each presentation will be allowed 30-35 minutes. Immediately following each presentation, the attendees will brainstorm on and discuss the factors/risks of inadequate analysis of decision making in the networked environment to create a root cause analysis fishbone diagram. Presentations and analysis will be distributed throughout the first day to keep ideas flowing and attendees engaged. Attendees will be encouraged to generate factors/risks on sticky notes and post them on the wall in the form of a fishbone diagram with notes categorized by methods, measurement, materials, machine, human, and environment. By the close of business Tuesday January 24, the fishbone diagram should be fairly “fleshed out.”

A similar process will follow on Wednesday January 25, however, the distributed exercise will turn to brainstorming potential solutions to the root causes identified previously. The attendees will refine and organize the list of solutions. On Thursday January 26, WG4 will begin outbrief development. At this time, the attendees will summarize the findings from the root cause analysis and solution brainstorming and prioritize the solutions for action as needed. Finally, attendees will develop specific, actionable recommendations and identify potential for follow-up. WG4 efforts will be outbriefed later that afternoon.

Agenda

Monday, 23 January 2012		
1200-1600	Early Registration	MORS Staff
1300-1600	Tutorials	Tutorial Chair
	Mission Command and Mission Command Systems Measurements	TRAC speaker
	Workshop Integration and Synthesis Process	Terry McKearney, Michael Pafford
Tuesday, 24 January 2012		
0715-0800	Continental Breakfast and Registration	MORS Staff
0800-0810	Plenary Session Kickoff and Welcome	Trena Lily, MORS President
0810-0815	Proponent's Welcome	Ms. Pamela Blechinger, Director, TRAC-FLVN
0815-0855	Keynote Address	TBD – flag/SES level with J6 and ORSA background, or NII background
0855-0910	Charter to Working Groups	Lee Lehmkuhl, Terry McKearney
0915-1130	WG4 Session 1 – Presentations and Root Cause Analysis	Jennifer Ockerman, Sylvia Acchione-Noel
0915-0940	Introductions, Objectives, and WG4 Operations	Jennifer Ockerman, Sylvia Acchione-Noel
0940-1010	Presentation 1 – Defining decision making	Sylvia Acchione-Noel
1010-1050	Brainstorming/Discussions	WG4
1050-1100	Break	
1130-1300	Lunch with speaker	TBD – possibly Bobby Junker or Gary Toth from ONR Code 31
1300-1630	WG 4 Session 2 – Presentations and Root Cause Analysis	Jennifer Ockerman, Sylvia Acchione-Noel
1300-1330	Presentation 2 – Difficulties encountered during a project	Attendee
1330-1410	Brainstorming/Discussions	WG4
1410-1430	Break	
1430-1500	Presentation 3 – Difficulties encountered during a project	Attendee
1500-1540	Brainstorming/Discussions	WG4
1540-1600	Break	
1600-1630	Daily Wrap-up	Jennifer and Sylvia

1730-1900	Mixer	MORS Staff
Wednesday, 25 January 2012		
0715-0800	Continental Breakfast and Registration	MORS Staff
0800-1130	WG 4 Session 3 – Presentations and Potential Solutions	Jennifer Ockerman, Sylvia Acchione-Noel
0800-0820	Review	Jennifer and Sylvia
0820-0855	Presentation 4 – Solutions tried during a project	Attendee
0855-0940	Brainstorming/Discussions	WG4
0940-1000	Break	
1000-1035	Presentation 5 – Solutions tried during a project	Attendee
1035-1120	Brainstorming/Discussions	WG4
1120-1130	Break	
1130-1300	Lunch	Speaker TBD – possibly panel discussion with Service and DoD experts to discuss “real world” senior management perception of C2 value.
1300-1630	WG 4 Session 4 – Presentations and Potential Solutions	Jennifer Ockerman, Sylvia Acchione-Noel
1300-1330	Presentation 6 – Solutions tried during a project	Attendee
1330-1410	Brainstorming/Discussion	WG4
1410-1430	Break	
1430-1500	Presentation 7 – Solutions tried during a project	Attendee
1500-1540	Brainstorming/Discussion	WG4
1540-1600	Break	
1600-1630	Daily Wrap-up	Jennifer and Sylvia
Thursday, 26 January 2012		
0730-0800	Continental Breakfast and Registration	MORS Staff
0800-1200	Working Group 4 Session 5 – Outbrief Development	Jennifer Ockerman, Sylvia Acchione-Noel
0800-0850	Summarize Findings for Root Causes	WG4
0850-0910	Break	
0910-1000	Summarize Findings for Solutions	WG4
1000-1020	Break	
1020-1100	Prioritize Solutions	WG4
1100-1150	Develop Recommendations for Joint Framework	WG4

1150-1200	Break	
1200-1300	Working lunch in Working Group sessions	MORS Staff
1300-1330	Working Group 1 Outbrief	LTC Gerry Benard
1330-1400	Working Group 2 Outbrief	Working Group 2 Chair
1400-1420	Break	MORS Staff
1420-1450	Working Group 3 Outbrief	Clyde Smithson
1450-1520	Working Group 4 Outbrief	Jennifer Ockerman, Sylvia Acchione-Noel
1520-1550	Synthesis Group Outbrief	Mike Pafford
1550-1630	Wrap up and Conclusion.	Trena Lily, Lee Lehmkuhl, Terry McKearney, MORS Staff
Friday, 27 January 2012		
0800-1200	Working Group and Synthesis Chairs gather to prepare final report draft	Lee Lehmkuhl, Terry McKearney

To educate workshop attendees and support WG4 discussions, tutorials and posters are encouraged. Our intent is to identify one or more Tutorials about recent efforts in analysis of decision making to be presented on Monday, January 23. If there is interest in demonstrating a method, tool, measure, and/or analysis, please contact the WG4 chair about the potential for conducting a tutorial. We also intend to provide a wall space for posters about the measurement of decision making in the common area outside the working sessions. WG4 attendees who offer content in the form of tutorials and posters should ensure the content aligns with objectives of WG4.

Security Procedures

This workshop will be conducted at the UNCLASSIFIED level. Participation from non-U.S. experts involved in the issues of networked command and control is invited.

Facilities

This workshop will be conducted at the Kossiakoff Center, Johns Hopkins Applied Physics Laboratory in Laurel, MD.

The conference hotel for the workshop will be the Columbia Sheraton, 10207 Wincopin Circle, Columbia, MD
(877) 207-9358.