Irregular Warfare Analysis Workshop
WG 2: SSTRO

Working Group Out Brief

3-6 February 09

Chairs: COL Dean Mengel and Mr. Bill Krondak

Workgroup 2 was chaired by COL Dean Mengel from the Center for Army Analysis (CAA) and Mr. Bill Krondak from the TRADOC Analysis Center (TRAC) at Fort Leavenworth. Assisting the chairs were Mr. Duane Schilling and Mr. Greg Andreozzi, both from CAA. This workgroup was focused on examining challenges to and possible solutions for Stability Operations.

Agenda

- Working Group Purpose
- Participants
- Schedule / Briefs received
- Findings / Suggestions
- Key Take-Aways

This is the agenda for the outbrief to the plenary on Friday, 6 February.

Working Group Purpose/Charges

Purpose:
- Identify SO challenges and problem areas to be solved
- Identify analytical methods that might help solve those areas

Charges:
- Identify challenges and problem areas
- Learn about analytical methods and techniques
- Determine whether the methods/models/techniques will address identified problem areas
- For problems with no solutions, what are desired characteristics of an appropriate tool or method

The purpose of this workgroup was very straight forward – identify challenges areas that need to be solved for those working on Stability Operations (SO) issues and identify analytical methods, models, and tools that might be able to address the problems.

The charges further refined the purpose by adding some other elements. The first charge is the same as the first half of the purpose – to identify the Stability Operations challenges that need to be addressed. The second charge goes beyond just identifying the methods, models and tools. It is also important to learn about and understand how they work and can be applied to the SO problems. Now that the problems and various methods, models, and tools are understood, the third charge can be answered – do the tools address the problems? After each is evaluated, it is likely that each problem area has not been fully addressed by one or more methods, models, or tools. The last charge will result in a list of characteristics for desired tools that should be able to address the remaining problem areas.

Participants

- Shawn Steene, OUSD (P) SOLIC
- Peter Bulanow, Northrop Grumman,
- Vincent Chustz, OASD/HA
- Ken Raab, ATEC
- Duane Schilling, CAA
- Martin Lidy, IDA
- Bill Meyer, ERDC
- Capt Taitano, USAF A9A
- Michael Schmidt, SOCOM
- John Armstrong, SOCOM J9
- LTC Sanders, CAA
- Curtis Bottom, TRAC
- Dave Lindow, TRAC
- Kerry Lenninger, TRAC
- Elizabeth Lyon, USACE

- Curtis Blais, NPS
- Brianne Adams, TRAC
- Mr. Doug Edwards, CAA
- Al Sweetser, OSD PAE
- Mike Esper, PKSOI
- Earl Mathis, NSWC
- Kurt Bodiford, Lockheed Martin
- MAJ Dave Mills, SOCOM
- LtCol Caputo, SOCOM
- Mike Hall, Lockheed Martin
- LtCol Monbouquette, SOUTHCOM
- Greg Andreozzi, CAA
- Tom Gross, Lockheed Martin
- Lisa McComas, JHU/APL
- Bill Krondak, TRAC (co-chair)
- COL Dean Mengel, CAA (co-chair)

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Workshop Summary

This is a listing of those individuals who were registered to attend Work Group 2, but does not necessarily reflect all of those who attended, briefed and participated. At some points during the day and a half of presentations and discussions, there were over thirty participants. It is easy to see that this list, along with those that made presentations on methods, models, and tools represent a wide variety of organizations and disciplines – from operators to analysts, social scientists to geospatial analysts, and included different services and commands. Given the nature of SO, this is fitting as a "whole of government approach" requires a wide variety of skills found in various industries and institutions.

Working Group #2 Agenda - Wednesday

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Wednesday, 4 February		
1300 - 1315	Welcome and Introductions	COL Dean Mengel
1315-1400	Challenges/Areas Requiring Analysis	LtCol Vinnie Caputo, USSOCOM
1400-1430	Challenges/Areas Requiring Analysis	Mr. Martin Lidy, IDA
1500-1545	Challenges/Areas Requiring Analysis	Mr. Shawn Steene, OSD SOLIC
1545-1630	Challenges/Areas Requiring Analysis	Mr. Mike Esper, PKSOI

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Workshop Summary

The agenda for the first day of the workgroup demonstrates the attempt to bring various perspectives to this investigation. The four presentations which laid out our set of problem areas for SO included representatives from United States Special Operations Command (USSOCOM), the Institute for Defense Analyses (IDA), the Office of the Secretary of Defense for Stability Operations and Low Intensity Conflict (OSD SOLIC), and the US Army Peacekeeping and Stability Operations Institute (PKSOI). It was hoped that this diverse group, with different agendas and missions, would provide a wide range of challenges and problems to be solved that were representative of most being experienced in the field. This seemed to be the case, as the four presentations resulted in a recording of fifteen different challenges, representing the different scopes and interests of each organization.

The next few charts capture these challenge areas.

Working Group # 2 – Session 1 Challenge Areas

Wednesday – 4 Feb

Challenge Area <Source>	Description	Severity / Impact	Difficulty with Solutions
1. Foreign Security Forces <USSOCOM>	Need a coherent plan for building and training Foreign Security Assistance (SFA) Forces.	Supply of forces may not be available to meet demand from COCOMs.	Coordination with interagency elements is inadequate.
2. Identification of SFA Requirements (missions, etc.) <USSOCOM>	Need to understand and identify the demands driving SFA requirements.	Related to challenge area above, need to identify demand to plan resources and schedule training.	-Need clarification by identifying total US govt demand and then identifying DOD piece.
3. Prioritization of SFA Requirements <USSOCOM>	- Need tools/methods to prioritize SFA activities.	Each COCOM has high priority requirements but not enough resources to fill needs.	Who has authority to prioritize between COCOM requirements?
4. Personnel Tracking <USSOCOM>	Determine and track training, skill sets, and experience relevant to SO.	Some missions may require special skills or experience. Who has them?	- Need more than skill identification. - Consider implications for career path .

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Workshop Summary

This chart provides a short summary of the challenge areas presented by the USSOCOM representatives, LtCol Caputo and MAJ Mills. They highlighted the need for the Combatant Commands (COCOMs) to identify the Security Force Assistance (SFA) requirements and demands, and under the new guidance, for USSOCOM to prioritize the requirements across COCOMs. They noted that there did not appear to be a coordinated plan for development of SFA capabilities across the services. Finally, they indicated an issue regarding the identification and tracking of personnel with appropriate SFA-related skills, training, and experience.

In addition to showing the issue area, the agency that presented the issue, and a short description, the charts also show some of the working group's thoughts regarding the severity or impact of the issue and some of the difficulties that may be encountered in trying to use the various methods, models, and simulations to address the issue.

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Working Group # 2 – Session 1 Challenge Areas
Draft
Wednesday – 4 Feb

Challenge Area <Source>	Description	Severity \ Impact	Difficulty with Solutions
5a. Information prep of the Operational Environment <IDA>	Determine what needs to be done within each sector. -Determine causes/fixes. -Reconstruction reqts for self-governance. - How to recognize when "self-governing" achieved	Without this info, resources may be misapplied or inappropriate actions may be taken.	Who has responsibility for this? Different agencies have different perspectives. Needs must be relevant the host nation.
5b. Information prep of the Operational Environment <IDA>	Determine potential partners and what they can do. -Affected govt/society. -Int'l partners (donor nations, humanitarian, financial org, non-govt). -USG agencies.	Without this information, inefficient or ineffective efforts may result.	Who has responsibility for leading or coordinating this effort?

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Workshop Summary

Martin Lidy of Institute for Defense Analysis (IDA) presented several issue areas regarding the need for understanding the actual needs of the host nation or region with regard to the Stability sectors. He noted that identifying the international and regional partners and their capabilities was critical to success.

Working Group # 2 – Session 1 Challenge Areas

Draft

Wednesday – 4 Feb

Challenge Area <Source>	Description	Severity \ Impact	Difficulty with Solutions
5c. Information prep of the Operational Environment <IDA>	Determine how to achieve unity of effort. -Collaborative and Cooperative architectures. - Public diplomacy and strategic communications.	Without unity of effort, inefficient or ineffective efforts may be initiated that fail to meet needs and waste resources. This sends negative message to host nation.	Information sharing is hindered by lack of common terminology and political issues.
5d. Information prep of the Operational Environment <IDA>	Determine how to measure progress toward achieving objectives. -Quantitative metrics -Qualitative metrics.	Without proper metrics to measure progress, no way exists to determine whether certain projects or interventions are working or remain appropriate.	Need prior identification of goals/objectives When is "good enough" achieved?

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Workshop Summary

Mr. Lidy continued by citing the issues of how to achieve unity of effort and identifying the metrics needed to measure progress toward achieving the objectives. The charts above show some of the working group's thoughts regarding the severity or impact of the issue and some of the difficulties that may be encountered in trying to use the various methods, models, and simulations to address the issue.

Working Group # 2 – Session 1 Challenge Areas
Wednesday – 4 Feb

Challenge Area <Source>	Description	Severity \ Impact	Difficulty with Solutions
6. What capability and capacity does DOD need for sectors other than security? <OSD SOLIC>	-DOD is both supported and supporting agency for SO, therefore must know what is needed. -What factors should be considered when prioritizing support? -Need metrics to evaluate performance.	Supply of forces of appropriate type may not be available to meet demand from COCOMs.	- Requires decisions and guidance outside DOD. -"Restore" is relatively clear, but "support" is more open-ended
7. Security Force Assistance <OSD SOLIC>	- Need to identify overall SFA demand. - Need process to identify and prioritize SFA needs of partners - Need metrics to evaluate performance.	Meeting overall demand has implications for SOF/GPF and AC/RC Mix.	

Mr. Shawn Steene of OSD presented two major issues and several related subordinate questions. He reiterated concerns identified by previous speakers regarding identifying the needs and SFA demands as well as the identification of appropriate metrics.   As the working group deliberated, the need for an overarching strategy or "vision" regarding the application of "whole of government" resources became apparent.

Working Group # 2 – Session 1 Challenge Areas

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Wednesday – 4 Feb

Challenge Area <Source>	Description	Severity \ Impact	Difficulty with Solutions
8. Lethal and non-lethal capabilities <PKSOI>	Must use mix of methods to set conditions supporting other instruments of power.	Must establish security for progress but not totally alienate relevant populations.	Non-lethal capabilities are more than rubber bullets and tear gas.
9. How should the military support reconstruction and stabilization policy and strategy? <PKSOI>	This requires actions in Doctrine, Organization, Training, Materiel, Leadership, Personnel and Facilities.	This could be a significant resource issue. Leaders must be able to make informed decisions.	Need to clearly understand other agencies capabilities and intent with respect to this area.
10. How do information and info ops support and nest within stability operations? <PKSOI>	Information operations and strategic communications must be informed by data and send consistent messages.	Inconsistent or late info ops and strategic comms make US look bad and can be exploited by rivals and opposition media.	Can problem be solved analytically?

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Workshop Summary

Mr. Mike Esper of the U.S. Army Peacekeeping and Stability Operations Institute (PKSOI) presented several open-ended issues regarding the application of military capabilities in the stability operations environment. The issue of information and information operations generated discussion that reiterated the need for unity of effort and an overarching approach or "vision".

Working Group # 2 – Session 1 Challenge Areas
Wednesday – 4 Feb

Challenge Area <Source>	Description	Severity \ Impact	Difficulty with Solutions
11. Do the joint and service task lists sufficiently address the range of activities required to conduct joint stability operations? <PKSOI>	Must ensure unit missions and Mission Essential Task Lists are updated and that doctrine and training are appropriate.	Supply of forces of appropriate type and capability may not be available to meet demand from COCOMs.	-Army and Joint Task lists recently reviewed as part of Army's SO Capabilities Based Assessment. -Must review other service task lists.
12. Is the military's current approach sufficient for operations where the focus is on "relevant populations" and not an enemy force? <PKSOI>	This requires actions in Doctrine, Organization, Training, Materiel, Leadership, Personnel and Facilities.	This could be a significant resource issue. Leaders must be able to make informed decisions.	-Must be able to identify status of military's ongoing efforts to assess. -Can problem be solved analytically? -How do you measure "sufficient" approach?

Workshop Summary

Mr. Esper's question regarding joint and service task lists had been partially addressed by the HQDA sponsored Stability Operations Capability-Based Assessment conducted by TRADOC Analysis Center (TRAC) and Center for Army Analysis (CAA) in 2006 and 2007. The working group noted that the issues raised by Mr. Esper required the Services to examine their capabilities across the range of doctrine, organization, training, materiel, leadership, personnel, and facilities (DOTMLPF).

Working Group # 2 – Session 1 Challenge Areas

Wednesday – 4 Feb

Challenge Area <Source>	Description	Severity \ Impact	Difficulty with Solutions
13. How do we best determine appropriate MOEs and MOPs for full spectrum operations? <PKSOI>	Must identify Metrics that cover range of sectors, include strategic to tactical level, cover immediate response, transition, and sustaining efforts. Can they be modeled and simulated	Without proper metrics to measure progress, no way exists to determine whether certain projects or interventions are working or remain appropriate.	-Can metrics be modeled and/or simulated? -If some metrics are "qualitative" how do you evaluate?
14. How does the military support emerging security initiatives and DOD policy on Security Sector Reform? <PKSOI>	Must identify how support requirements change with changing policies in this area.	This could be a significant resource issue. Leaders must be able to make informed decisions.	

Workshop Summary

As with previous speakers, Mr. Esper noted the need for Measures of Effectiveness (MOE) and Measures of Performance (MOP) that are relevant and appropriate for the Stability Operations area.

Working Group # 2 – Session 1 Challenge Areas
Draft
Wednesday – 4 Feb

Challenge Area <Source>	Description	Severity \ Impact	Difficulty with Solutions
15. How does the US military's approach nest within the emerging body of interagency, intergovernmental, and allied approaches to reconstruction and stabilization? <PKSOI>	Must identify how force requirements change with changing approaches in this area.	This could be a significant resource issue. Leaders must be able to make informed decisions.	Can problem be solved analytically?

Finally, Mr. Esper's issue regarding the military's approach to nesting within the overall government and allied approaches to reconstruction and stabilization initiated work group discussion regarding the ability to apply structured approaches to this issue.

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Working Group #2 Agenda - Thursday

Thursday, 5 February		
0800-0830	Review of Challenges	COL Dean Mengel
0830-0930	Methods, Models, and Simulations for SO Analysis	Ms. Kerry Lenninger, TRAC
1000-1045	Nexus Network Learner	Ms. Debbie Duong, OSD PA&E
1045-1145	Primary Force Estimator (PRIME)	Ms. Trudy Ferguson, CAA
1300-1345	Wargaming	LTC Dave Sanders, CAA
1345-1430	Task-event-outcome IW Analysis	LTC Russ Schott, TRAC
1500-1545	Workshops as an Analysis Tool	Mr. Greg Andreozzi, CAA
1545-1630	Contingency Operations Tiger Team Initiative and Representing Urban Cultural Geography in Stability Operations	Mr. Tim Perkins, ERDC, Mr. Jack Jackson, TRAC

The agenda for the 5th of February was full of presentations of methods, models, and tools that were to be considered as candidates for solving the problems identified the day before. At the end of the day, seven presentations resulted in nine methods, models, and tools were identified documented. Each presentation explained the basic operation, capability of each method, and how it could be useful for analysis of SO issues. This would be critical as the workgroup went on to determine its applicability to the challenges.

During these seven presentations, nine methods, models, and tools were actually described to the workgroup and documented so they could be referred to throughout the proceedings by filling in matrices capturing the important aspects of each.

Working Group # 2 – Session 2a Methods, Models, Simulations

Method\Model\ Simulation <Agency>	Description	Areas addressed	Current Status
1. Integrated Gaming System <TRAC FLVN>	-Flexible definition of infrastructure and factions. -Stochastic.	-Faction satisfaction. -Infrastructure status. -Military impacts. -Operational insights.	In use.
2. PSOM <UK DSTL/JS J8>	- Strategic and Operational level training assessment. -Social Behavioral response. - Stochastic \ Deterministic.	-High level pol/mil. -Gain insights on operational impacts of high level decisions and resource allocations.	In use.
3. Nexus Network Learner <OSD PA&E>	-Societal Assessment -Bayesian . - Stochastic. - Agent Based. - Modular. - Adaptive to data and other models.	-Assess DIME impact (different COAs) on social changes. - Examine modification of behavior.	In use with continuing development.

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Workshop Summary

The next few charts are the workgroup's attempt to capture the important aspects of the methods, models, and simulations that could potentially be applied to the issues. Kerry Lenninger of TRAC provided an overview of the Methods, Models, and Simulations for Stability Operations Analysis that assessed the applicability of 26 tools in this area. As a result of this study, two of the high ranking models meeting various screening criteria were obtained and used for trials. TRAC obtained and applied the Integrated Gaming System (IGS) and the Peace Support Operations Model (PSOM). She presented the insights and requirements for use of these tools.   Based on her presentation, these two models were included in the list of methods, models, and tools to be evaluated by the workgroup.

Dr. Deborah Duong presented information on her agent-based approach titled Nexus Network Learner, a cognitive social agent model that utilizes individual level agents that model resources flowing through social role networks. This approach assesses behavioral changes of populations in response to various stimuli, and is designed to be composable with various other models and approaches.

Trudy Ferguson of CAA presented on the developmental tool ATLAS that is designed to determine what Army forces are needed to fulfill certain SO missions and tasks. The tool is designed to be user friendly, include geospatial aspects of the area of operations, and responsive. The force list generated would act as a "start point" for deliberations and refinement and is based on the user's choices of SO sector missions and other factors from the scenario.

LTC Dave Sanders of CAA provided an overview of the wargame that CAA has been using to support commander's decisions in Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF). The workgroup was not considering these efforts as possible candidates for viable methods, models, or tools, but rather the structured approach and human-in-the-loop approach present in wargaming. Of note was the wargame's ability to include political, diplomatic and economic factors that impact security.

Working Group # 2 – Session 2a Methods, Models, Simulations
Thursday 5 Feb

Method\Model\ Simulation *<Agency>*	Description	Areas Addressed	Current Status
6. Task Event Outcome (TEO) IW Analysis *<TRAC >*	- Tactical focus. - Human in the loop Wargame. -Quick turn around. -Ties in to Lines of Effort (LOE)	- Analyze changes in organization equipment and TTP. -Identify required changes in MOE (different metrics). - Capture, analyze and disperse experience/ information gained in the field. -Link actions to LOE to higher PMSEII states.	Requirements under development.
7. Workshops *<CAA>*	- Provides an established structure to examine non-quantitative issues. -SME-based. -Senior level reviews.	-Investigate a wide variety of issues related to stability operations.	Available and in use.

Workshop Summary

LTC Russ Schott and Mr. Paul Works of TRAC White Sands Missile Range discussed the developmental tool designed to use and evaluate a "task-event-outcome" approach to SO and IW. The tool is a human-in-the-loop wargame that is focused on the tactical small unit and soldier issues. The desire is to use this model to help determine which actions conducted at the lowest tactical levels have the biggest (or smallest) impact on the population. This might serve as a means to determine which Courses of Action attain the desired effect.

Mr. Greg Andreozzi of CAA presented the workshop approach that has been successfully used by CAA for many years in addressing complex issues. This method provides an established structure where subject matter experts (SMEs) can discuss the relevant issues surrounding the problem. Charges to the group provide direction and goals for outcomes that are recorded for later synthesis. The important element of this method is the collection of the appropriate SMEs to examine the problems and provide the insights. Mr. Andreozzi specifically discussed the application in the recent HQDA SO CBA.

Working Group # 2 – Session 2a Methods, Models, Simulations

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Thursday 5 Feb

Method\Model\ Simulation <Agency>	Description	Areas Addressed	Current Status
8. Contingency Operations Tiger Team (COTT) <USACE \ TRAC>	-Provides recommendations relating to USACE and ERDC R&D, analysis and studies for reconstruction, stability, contingency, aid, and relief efforts.	- Understand challenges and build collaborative solutions to complex problems in reconstruction and stability efforts. -Develop, identify, and validate potential R&D solutions to strategic and mission-level stability and reconstruction challenges. -Link capabilities from different sources or programs.	COTT formed, collaborations being established.
9. Agent-based model for cultural geography in SO	- Stochastic - Agent Based - Stand alone tool - Tactical focus	- Provide evaluation of impact of SO infrastructure projects on social perceptions.	Under development.

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Workshop Summary

Tim Perkins of TRAC and Ms. Elizabeth Lyon of U.S. Army Corps of Engineers discussed the Contingency Operations Tiger Team (COTT) approach that includes several initiatives regarding data gathering and assessment approaches. This effort is establishing a central point of contact which will act as a facilitator for collaboration on SO matters. Given USACE's involvement in SO activities, it is logical that office would serve as conduit for USACE and Engineer Research and Development Center (ERDC) R&D, analysis and studies for reconstruction, stability, contingency, aid, and relief efforts. The initiatives include such efforts as the Measuring Progress in Conflict Environments (MPICE) and a variety of geo-spatial visualization tools.

Mr. Leroy "Jack" Jackson of TRAC-Monterey presented information on the development effort focused on Representing Urban Cultural Geography in Stability Operations. This is an agent based modeling approach that is tactically focused and will provide evaluations of the impacts of SO infrastructure projects on cultural and social perceptions.

Working Group #2 Agenda - Friday

Friday, 6 February		
0800-0845	Review of Products	Mr. Bill Krondak
0845-0930	Additional Challenges/Methods	Mr. Bill Krondak
0930-1030	Attributes of Desired Methods/Tools for challenge areas not addressed	Mr. Bill Krondak

The last session for the workgroup focused on assessing the ability of presented methods, models, and tools to addressing the identified challenges by filling in a matrix depicting challenges vs. methods. The remainder of the session shifted to "filling in" for any areas not covered. Certainly there were other challenges and problem areas that were not identified by the four presentations. The workgroup wanted to capture any that were known to the participants. Although the group would not be able to pair appropriate methods, models, and tools to these new areas, this was done to help make the list more complete for any follow-on works. The same was true of possible methods. With only seven presentations, it would be impossible to list all the possible methods, models, and tools available to investigate the issues in SO. Again, the workgroup participants were asked to think of and provide other tools so they could be listed and provide a more complete listing. And finally, the workgroup was tasked to list any attributes, characteristics, or products/results required by a method, model, or tool that was required to address the challenge areas not deemed as "solved" by the original nine tools evaluated against the original fifteen challenges. With this complete, the workgroup had fulfilled its charges and could hand off a completed product for use by USSOCOM and the SO community at large.

The next several charts capture Friday's discussions.

Working Group # 2 – Session 2b Assessment
Thursday 5 Feb
(A)=Available Tool

Method \ Challenge	1 (A) IGS	2 (A) PSOM	3 (A) NEXUS	4 PRIME	5 (A) WAR GAME	6 TEO	7 (A) WORK SHOP	8 (A) COTT	9 ABM
1. SFA plan					X		X		
2. SFA demand					X		X		
3. SFA priority							X		
4. SFA skill tracking									
5a Sector Needs			X			X	X	X	X
5b. Partner capability							X		
Unity of ...		X					X		

The working group next turned to assessing which of the methods, models, and simulations (MMS) presented had the capability to either wholly or partially address the issues identified by earlier speakers. The chart above and those that follow show the issues and the group's assessment of MMS applicability. The group noted that some of the MMS were available now while others were still under development and perhaps not "ready for prime time". A consistent view was that no one tool could fully address an issue but that each tool selected could provide results that would partially inform decisions.

Working Group # 2 – Session 2b Assessment
Thursday 5 Feb

(A)=Available Tool

Method \ Challenge	1 (A) IGS	2 (A) PSOM	3 (A) NEXUS	4 PRIME	5 (A) WAR GAME	6 TEO	7 (A) WORK SHOP	8 (A) COTT	9 ABM
5d Sector Metrics		X	X			X	X	X	X
6. Sector needs		X			X	X	X	X	X
7. SFA demand					X		X		
8. Lethal/non-lethal	X	X	X		X	X	X		X
9. Support to policy	X			X	X	X	X		
10. Nest info opns	X	X	X		X		X		X

Workshop Summary

As the group deliberated, it became apparent that tools that applied human in the loop (HITL) techniques were much better suited for addressing the multi-faceted issues relating to populations and political-social problems.

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Working Group # 2 – Session 2b Assessment
Thursday 5 Feb

(A)=Available Tool

Method \ Challenge	1 (A) IGS	2 (A) PSOM	3 (A) NEXUS	4 PRIME	5 (A) WAR GAME	6 TEO	7 (A) WORK SHOP	8 (A) COTT	9 ABM
11. Task lists sufficient				X	X	X	X		
12. Focus on Population	X	X	X		X	X	X		X
13. MOE & MOP			X			X	X	X	X
14. New policy					X		X	X	
15. USG, allied & NGO approach	X	X			X		X	X	

Workshop Summary

The CAA wargame and the CAA workshop approach appeared to be the best-suited tools for this HITL approach. The IGS and PSOM also apply subject matter expert (SME) "white-cells" or high-level pol/mil games to identify the operational approaches that will be adjudicated in the models.

Working Group # 2 – Session 1 Challenge Areas

Friday, 6 February

Challenge Area	Description	Severity \ Impact	Difficulty with Solutions
1. Data collection and information sharing	- Needed to Support modeling - No common structure - Need for common nomenclature - Accessibility of data	Without valid data, analysis is subject to major errors in results.	Data is costly. Valid data is even costlier.
2. Need for common nomenclature for SO	-Some terms used by a discipline are unfamiliar to or have different meaning for another discipline.	"Failure to communicate" can result in embarrassment or failure.	Must understand different use of terms by various analytical, military, and social science disciplines.

Workshop Summary

On the last day , the workgroup identified two additional challenge areas that seemed to underlie many of the other issues. Data identification, collection, and validation was a critical area.   Based on the presentations and discussions, it was also apparent that common nomenclature or common definitions and understanding of terms was essential to achieve unity of effort in the stability operations area. The terminology issue arises from the different terms (or different understanding of a single term) for an activity used by the military vice the other government agencies or social scientists.

Working Group # 2 – Session 2a Methods, Models, Simulations – Friday, 6 Feb

Method\Model\Simulation	Description	Areas addressed	Current Status
1. Use of the Analytic Agenda	Helps forecast demand based on Defense Planning Scenarios and analytical baseline results.	Range of scenarios to include "steady-state" situations/vignettes.	Available for multiple scenarios but IW/SO scenario work is still underway
2. Multi-attribute Decision Analysis	Provides structured process to help prioritize elements when multiple factors must be taken into account.	Supports decision making when data or factors may not be measurable.	Available but requires decision maker, staff, and key SME to participate.
3. Program evaluation and review technique (PERT) or Critical Path Method (CPM)	Provides structured approach to identify sequential and parallel tasks and highlight those that are critical to overall success in either time or value.	Could be used for structuring and prioritizing sequential or parallel tasks within or across sectors.	Available but requires SME on tasks and the "inputs" and "outputs" of tasks to help sequence and prioritize.

Workshop Summary

The group then identified some additional methods that had not been presented during the sessions. Application of the analytic agenda and analytical baselines results may be of use in determining demands for SFA and SO capabilities.

The multi-attribute decision making (MADM) process may have applicability to problems and issues involving multiple factors and perspectives.

Finally, the PERT and CPM techniques may help staff and decision makers understand the temporal and sequential relationships between the many tasks needed to accomplish a certain program or objective set.

Working Group # 2 – Session 3 Final Discussion
Friday 6 Feb

Desired Attributes of Methods, Techniques, and Models for Investigating Stability Operations Issues

Attribute	Description
1. User Friendly	Ease of set-up, ease of use, transparency
2. Quick Turn around	Ability to assess multiple options, various data inputs, or courses of action to inform time-critical decisions.
3. Flexible	Applicable to a wide variety of conditions, quick reset, represent dynamic iterative process,
4. Availability\usability of data	Data must be able to be collected and validated and stored/organized in forms for ease of use and input to methods, techniques and models.

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Workshop Summary

The working group debated and identified several desired attributes of a MMS for application in the SO area. This chart and the following chart shows those attributes.

Working Group # 2 – Session 3 Final Discussion
Friday 6 Feb

Desired Attributes of Methods, Techniques, and Models for Investigating Stability Operations Issues

Attribute	Description
5. Inter-operability	Ability to connect, compose, or federate various tools and methods to achieve appropriate resolution/visibility of multiple aspects.
6. Integrate all aspects of social and military factors relevant to Stability Operations	Multi-disciplinary tool to assess population interests, behavior, and status, and evaluate the impact of diplomatic, information, military, and economic, efforts or interventions.

Workshop Summary

One of the key attributes is the ability to integrate the many aspects of the SO environment into the tool. Item 5 above is an attribute that may assist in doing that through connection, composition, or federation of specialized MMS.

Critical insights
Friday 6 Feb

- No single method, model or simulation (MMS) will provide complete answer, but many can provide results to help inform decisions in one or more areas.
- Several of the MMS can be used immediately:
  - IGS, PSOM,
  - Wargaming,
  - Workshop Methods,
  - COTT,
  - Analytic Baseline products, and
  - MADM, PERT, or CPM.
- Many MMT under development have promise.
- Identification of metrics is absolutely critical.
- Identification and collection of relevant data is difficult but must be done.

Workshop Summary

Finally, the working group and the co-chairs identified the critical insights from the working group sessions and discussions. The chart above highlights those insights.

Findings & Suggestions

- Findings:
  - Even though everyone agrees that Stability Operations requires whole of government, non-government, coalition, and host nation/public participation, most of our methods, models, and techniques do not account for all of them
  - It appears that many of the challenge areas are indirect results of an absence of overarching strategies and goals
  - It is hard to understand how some tools, methods, and models work without common terms of reference – the same is true for data
- Suggestions:
  - Develop common terms of reference for understanding how tools, methods, and models work and for describing data
  - Ensure future collaboration efforts continue and expand to include the entire SO community-of-interest

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Workshop Summary

Stability Operations and Irregular Warfare provide immense challenges, not only for DOD, but for our nation, other nations, and affected populations everywhere. As such, the solutions for these challenges will be all-encompassing and many faceted. However, most of the methods, models, and tools which were discovered and discussed during this workshop only address a small part of the problem. None of them are capable of solving all aspects of SO, and perhaps it is impossible for a single tool to accomplish this. No single approach will work, and consequently, no single analysis tool will be able to support the efforts. Compounding some of the difficulties being experienced by those trying to tackle these issues is the lack of overarching strategies and goals which would lead to some organization created to lead, oversee, and integrate the activities of various institutions required. The workgroup, as the entire workshop, recognizes that these types of inclusive efforts need to continue, and where possible, expanded to include as many participants from this community-of-interest.

During discussions in the workgroup it was obvious we have a problem within the community of problem solvers in conveying to each other the capabilities, logic, and products of the various methods, models, and tools that are available and being developed. Given the diverse backgrounds and experiences of those being drawn to solving these issues this is no surprise. The multi-discipline approach brings with it a variety of ideas, practices, and words for communicating them. The same is true for data – its sources, labels, structures, and uses are different in many of the disciplines. This is important because as we realize we need a multi-faceted approach with a multi-discipline flavor, a common basis for understanding is necessary to understand, use, and integrate the various methods, models, and tools along with the data they use and produce. It appears that the creation of a "terms of reference" for the community would be very helpful. Such a reference would put all parties working these issues on common ground that will facilitate better communications.

Key Working Group Take-Aways

- Though Stability Operations is only a part of Irregular Warfare, it still presents a large problem space
- Challenge areas presented by different agencies had some common threads:
  - Determination of demand/requirements
  - Prioritization of efforts/risk management
  - Determination/use of metrics
  - Attaining "whole of government" approach
- Many challenge areas are not adequately addressed by current analytical methods, models, and techniques
- Many promising methods, models, and techniques are in development

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Workshop Summary

The problems presented by SO are many. The thought of focusing in on SO during the Irregular Warfare workshop would somehow make the problems easier to address did not come to fruition. The complex nature of SO tasks, as well as those of Irregular Warfare, will remain a challenge that can only be addressed by large integrated effort of a large community of problem solvers with various backgrounds and skills.

Even though this workgroup had various perspectives on the challenge areas within SO, it was interesting to observe some common threads which ran through most of them. The ability to determine the current and future demands for SO activities, and the resultant requirements for forces and other resources, seemed to be a common concern among many of those planning for SO. Once those activities are identified, the next challenge is to prioritize them so they wisely allocate their limited resources to them. In almost all cases, a determination of which metrics to use, along with the development of measures of performance (MOPs) and measures of effectiveness (MOEs) was raised as stumbling blocks. Finally, the idea of "whole of government" approach is not something easy to model or analyze, but it must be the framework for any analysis attempting to solve SO problems.

By looking at our resulting matrix showing which challenge areas could be assisted by the various methods, models, and tools, one can see a fair amount of "white space" indicating not all areas are being adequately addressed. It is interesting to note some of the patterns. For instance, some tools apply to many areas, while others are very limited – at least in their applicability to these issues. As noted earlier, no one method presented is able to address the wide variety areas required. The concept of the need for a composition of models to fully address all aspects of SO and Irregular Warfare was discussed and captured as a desired characteristic of future methods, models, and tools as development continues in these areas.