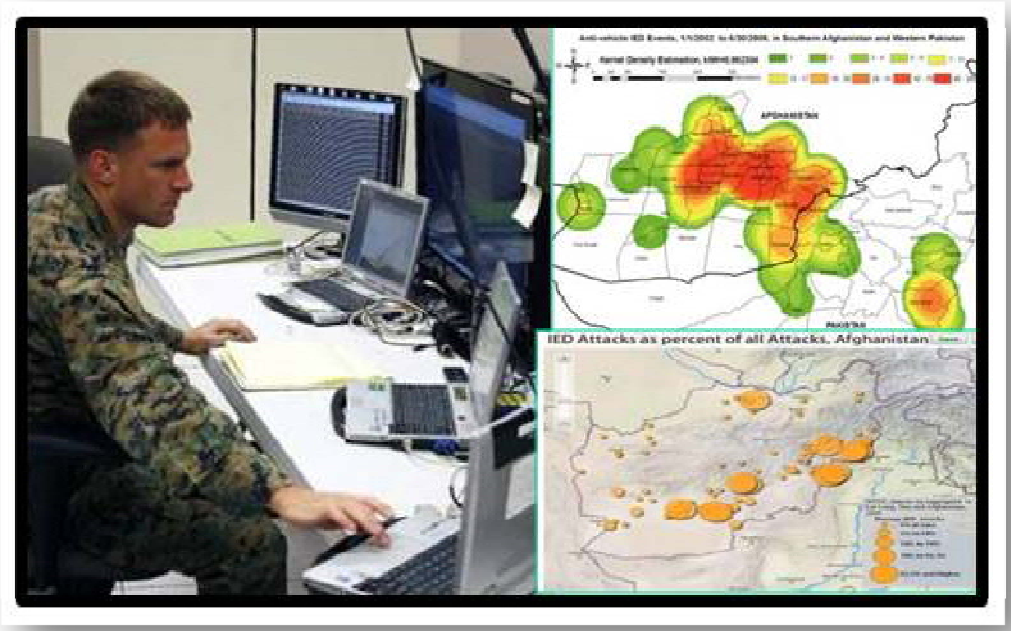

21st-Century Marine Expeditionary Intelligence Analysis (MEIA-21)

Modernizing Tactical Military Intelligence Analysis

September 2011

Core Principles of MEIA-21

MEIA-21 is the process of building analytic modernization on six foundational principles:

1. **Successful operations require reliable tactical intelligence.** Operations are command led and intelligence fed.
2. **Reliable tactical intelligence is achieved through structured, mission-specific applied tradecraft.**
   - Tradecraft is the SMATs that analysts use to develop actionable intelligence from raw data.
   - SMATs originate from field-derived, experiential learning by Marine intelligence analysts.
   - Foundational skills, such as Structured Analytic Techniques (SATs), und0erlie the development and application of mission-specific tradecraft.
3. **Tradecraft-driven intelligence analysis is conducted using analytically rigorous processes.**
   - Marine Corps intelligence analysis must move beyond a reliance on raw intuition and readily available information to scientifically valid, objective techniques.
   - Processes and tools (SMATs) must be vetted for analytic rigor, formalized, documented, and taught.
   - Sustainable analytic rigor requires ongoing critical review and continuous improvement of tradecraft.
4. **Social Science Intelligence (SSI) is essential for successful intelligence analysis in COIN and other nonconventional operations. It also is critical for conventional operations.**
   - Without structured consideration of social factors, our knowledge of human-centered problems is subjective, unscientific, overly informed by raw intuition, and less reliable.
   - SSI uses structured models, approaches, and techniques based upon proven principles and practices from economics, political science, anthropology, and other disciplines that study human behavior.
   - Applied social science is an important way to develop understanding (insight and foresight) in the context of operational requirements.
5. **In an era of enormous quantities of potentially useful data, technology is critical to intelligence work.**
   - People—*not tools*—perform analysis, but machine-aided analysis can help analysts organize, store, and cut through massive amounts of data to discover the nonobvious and unseen and to identify otherwise invisible patterns.
   - Technology empowers analysts to archive, organize, discover, and retrieve information for near-real-time analysis.
   - Models and tools not only save time and cognitive energy, they correct fallible human senses and intuition that, left unaided, may misrepresent reality or distort analysis.
6. **Intelligence analysis is a profession and should be structured as such.**
   - Mastery of tradecraft, not job title, defines the profession of Marine Corps intelligence analysis.
   - Marine intelligence analysts must have a deep knowledge of tradecraft. Area expertise is valuable, but inadequate to develop actionable intelligence or reliable knowledge in the absence of structured applied tradecraft.
   - Structured tools, methods, and processes must be disseminated and institutionalized through formal training, standards, and continuing education. Intelligence analysts should be certified in the practice of their profession.

Modernizing Tactical Military Intelligence Analysis

Information and the reliable intelligence derived from it are the lifeblood of Marine Corps planning and operations when it comes to taking action. Without a robust capability to analyze and interpret intelligence information, the Marine Corps cannot operate effectively in pursuit of the national interest.

21st-Century Marine Expeditionary Intelligence Analysis (MEIA-21) is a formal initiative to structure, standardize, and professionalize tactical intelligence analysis in the Marine Corps. It professionalizes Marine expeditionary intelligence, equipping intelligence analysts with analytically rigorous Structured Models, Approaches, and Techniques (SMATs)—*applied tradecraft—to* provide commanders with actionable, reliable tactical intelligence in conventional and irregular warfare while also instilling the cognitive and creative skills to create and refine that tradecraft.

MEIA-21 will reinforce foundational analytic skills and bring *applied analytic tradecraft to the Marine Corps Intelligence, Surveillance, and Reconnaissance Enterprise (MCISR-E).*

The Mandate

The post-9/11 Intelligence Reform and Terrorism Prevention Act (IRTPA) of 2004 mandates analytic integrity, rigorous methodology, tradecraft quality, improved standards, and lessons learned throughout the Intelligence Community. The Director of National Intelligence (DNI) has implemented these congressionally directed analytic standards via several Intelligence Community Directives (ICDs) (e.g., ICD 203 Analytic Standards, Proper Standards of Analytic Tradecraft [1]–[8]). The reforms have improved the analytic process by clarifying estimative language, developing better sourcing, normalizing the product review and evaluation processes, structuring the way judgments are made, and standardizing the look and required content of intelligence products. These top-down reforms have driven the development of standards and approaches (such as Structured Analytic Techniques (SATs)) that can be described as foundational tradecraft, and they have become the mainstay of training courses and professional seminars in the Intelligence Community.

This foundational tradecraft, however, fails to provide analysts with any specific means (elementary or advanced) to analyze the nature, cause, identity, and pattern of adversary and population networks—a glaring omission, given the nature of intelligence problems faced today. A further stark omission is the failure to capture the intelligence techniques that have emerged from 10 years of war in Iraq and Afghanistan and fully analyze their strengths, weaknesses, and limitations so they can be improved and reused or removed.

Although foundational knowledge and tradecraft remains the base from which intelligence analysts must operate, MEIA-21 seeks to move the Marine Corps intelligence enterprise beyond the foundational base to provide analysts with a master menu of specific analytic solutions that can be directly applied to produce reliable intelligence across the range of military operations – ***applied tradecraft.*** Applied tradecraft defined under MEIA-21 comprises SMATs that synthesize best practices from the field and are infused with techniques and methods derived from the social and physical sciences. SMATs focus on specific functional areas such as target identification, enemy and pattern-of-life analysis for human targeting, and economics and accounting for threat finance/financial intelligence. Applied analytic tradecraft represents a new class of investment from the already well-developed field of foundational knowledge. It will require commitment of time and resources to evolve the workforce to the point where Marine intelligence analysts instinctively document the techniques they develop, seek to improve

them using scientifically rigorous methods, and deliberately grow applied analytic tradecraft to meet analysis requirements in a wide range of fields. The return on investment is even more significant: With a master menu of applied tradecraft at their fingertips, analysts will much more quickly and reliably answer intelligence questions and provide commanders with actionable intelligence.

The Marine Corps Director of Intelligence (DIRINT) has directed that analysis be improved and enhanced across the MCISR-E and that MEIA-21 is the authoritative exposition that mobilizes the workforce to institutionalize knowledge gained in war and expeditionary experience and to improve analytic practices by using that knowledge to develop *applied* analytic tradecraft.[1] At the September 2011 Intelligence-Operations Assessment Group (I-OAG), the MARFOR and MEF G2s endorsed MEIA-21, and the DIRINT directed its enterprise wide implementation.

Social Science Intelligence and the New Analytic Environment

Marine Corps warfighting has primarily been based on the capability to find, fix, and strike the enemy force. To support this, Marine Corps tactical intelligence was often kinetics-based, target-centric, and optimized for producing intelligence against conventional military formations. Adversaries were well defined, providing a relatively sharp focus for intelligence. But 10 years of operations in Iraq and Afghanistan have repeatedly shown that armed groups confronting Marines today avoid U.S. targeting superiority by operating asymmetrically within congested and cluttered environments. Contending with conventional, counterinsurgency (COIN), and nonconventional operations in the upcoming decades of the 21st century, Marines will once again be exposed to socially complex environments and hybrid armed groups. Many of these threats (conventional and nonconventional) and adversaries (state, state proxies, and nonstate actors) will be more agile, less visible, and possess an information advantage where it is easier for them to see and target us than for us to see and target them.

Given this operational environment, the MCISR-E must analyze more than an adversary's characteristics and capabilities. Expeditionary intelligence must incorporate the context within which adversaries operate; the institutions within which they live; and their fears, perceptions, and motivations; in short, we must consider the totality of the human sphere.

This new approach to intelligence analysis, focusing on understanding human social organization is called *Social Science Intelligence (SSI)*. There has been significant growth in the techniques and technologies of intelligence analysis, especially in the social sciences such as economics, political science, anthropology, and other disciplines relating to the study of human behavior. Because the most advanced knowledge in these fields is dispersed within academia and not directly focused on intelligence-related problems, it's hard to access and consequently plays an inadequate role in tactical intelligence today—Marine

[1] Naval Message from CMC Washington DC Intelligence Department (Unclassified) dated 012207Z Dec 10, Subject: Implementation of 21st Century Marine Expeditionary Intelligence Analysis.

intelligence analysts' knowledge of human-centered problems tends to be subjective, unscientific, technologically weak, and based mostly on the raw intuition and personal experience of the individual analyst.

The challenge is to develop, refine, and deploy applied techniques that enable us to understand the totality of the human domain framework with speed and precision. An analytic modernization plan that captures critical best practices, leverages the best social and physical science know-how available, and makes available sophisticated analytic instruments that analysts can readily apply to intelligence problems is critical to success. When made available, these methods and approaches give analysts social and physical science expertise from the fields that parallel the questions faced by intelligence (e.g., accounting, organizational theory, elite analysis, political science, economics, and census/registry).

The principles of social science intelligence have been validated outside the Marine Corps. For example, a recent report published by the National Research Council advises that the Director of National Intelligence should ensure that the Intelligence Community applies the principles, evidentiary standards, and findings of the behavioral and social sciences to its analytic methods, workforce development, collaborations, and communications.[2]

A Cauldron of Innovation: Collecting Our Hard-Earned Techniques

Over the last 10 years of war in Iraq and Afghanistan and in other expeditionary experiences, Marines have created, but not aggregated and institutionalized, a significant body of analytic processes that are used across the spectrum of conflict. The current conflicts have resulted in a cauldron of innovation encompassing intelligence at every level, from battalion S-2s fighting in urban or rural terrain to division-level analytic cells solving the priority intelligence requirements of general officers. This process of innovation was driven not by Marine policy or doctrine, but by sheer necessity—the lack of clear and adaptable methods, approaches, and techniques required S-2s and G-2s to solve tough problems through personal ingenuity and collaboration.

The typical Marine intelligence professionals have deployed multiple times to fight a complex, asymmetric counterinsurgency—one embedded in a larger alien host culture and played out in austere, geographically difficult settings—armed with an entry-level education in intelligence techniques, a hasty turnover with their departing counterparts, and their innate problem-solving ability and intuition. To flourish in this environment, Marines have engaged in an unstructured process of innovation, developing new tools, products, templates, and methods to solve very difficult problems across the spectrum of battle. The following are but a small sampling of these innovations:

- **Targeting.** In response to the continued high-value targeting (HVT) campaigns in their respective theaters of war, Marine intelligence professionals developed sophisticated and adaptable target package templates and targeting board battle rhythms to meet the individual information requirements of both commanders and operators.
- **Key leader engagement.** In response to commanders' requirements for host-nation intelligence, Marine analysts developed systematic and widespread templates for reporting on key leader engagements with tribal and political leaders.

[2] Committee on Behavioral and Social Science Research to Improve Intelligence Analysis for National Security; National Research Council, *Intelligence Analysis for Tomorrow: Advances from the Behavioral and Social Sciences*, National Academies Press, 2011.

- **IED threats.** In response to concerns over IED threats, logistics intelligence professionals created a standard methodology for accumulating threat data, analyzing those data, and reporting their assessments to convoy operators and planners in a systematic graphic format.
- **Enemy assessments.** In response to commanders' concerns regarding combat momentum, Marine analysts developed unique, rigorous methods for analyzing incident reports and attack data to determine the level of insurgent effectiveness in initiating and executing operations.
- **Insurgent group profiles.** In response to concerns over enemy organization and structure, Marine intelligence professionals have improved the manner in which we use existing social science intelligence and collection resources to template an enemy's shadowy underground system of financial support and command responsibility.

Although Marine intelligence units' analytic experience and methodological innovations are at an all-time high, the Marine Corps has yet to consolidate this body of knowledge and make it part of an enterprise system of analytic tradecraft. Units pass intelligence techniques informally to other units on a local or ad hoc basis. Frequently, disparate methodologies by neighboring units within the same time period resulted in important intelligence information sitting unused because of incompatibility of formats and standards across unit boundaries. Over time, as analysts rotate through theaters, hard-earned tradecraft is lost. In some cases, owing to time constraints or a high operations tempo, units fail to develop intelligence methods and techniques during their deployment. Anecdotal evidence collected from intelligence leaders who have served in Iraq and Afghanistan suggests that intelligence units deploying with a strong set of analytic tools and methods experience less difficulty directing the intelligence campaign during COIN warfare.

In addition, there is great value in having the range of tradecraft available to bring to bear on an intelligence problem. Each applied technique has value in and of itself when used to explain a part of an operational situation *(Figure 1).* When intelligence analysts have a wide breadth of tradecraft to apply to a particular operational situation, they can paint a much more complete picture of the situation *(Figure 2).*

Figure 1: The View with a Single Piece of Applied Tradecraft

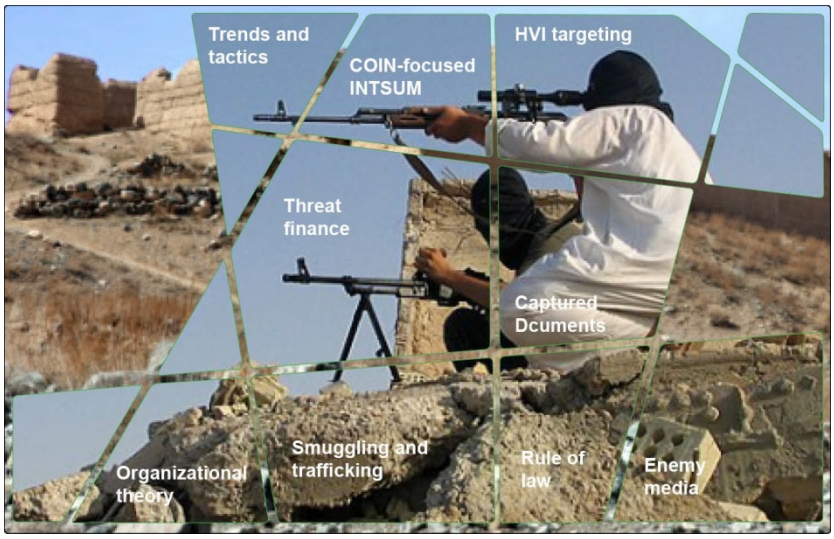

Figure 2: The View with a Suite of Tradecraft

The absence of a single repository of analytic methods, combined with high unit turnover, also creates a problem in continuity that perpetuates loss of valuable tradecraft expertise and diminishes intelligence capabilities when they should be improving. Combat deployments, already difficult because of steep learning curves associated with an unfamiliar environment, are even harder when units must figure out methods on their own. A major complaint from battlefield commanders is the uneven performance of intelligence from unit to unit and its adverse impact on campaign continuity and effectiveness.

As seen in Iraq, Afghanistan and other expeditionary experiences, Marine intelligence analysts make judgments about threats that are hybrid; adaptive; networked; urban; embedded with unfamiliar cultures; and employing asymmetric combinations of traditional, irregular, and criminal tactics in old and new ways. The evolution of new, analytically rigorous Marine Corps applied intelligence tradecraft, based on principles from the social and physical sciences, will lead to higher reliability, reduced errors, significant explanatory power, and self-correcting techniques. It will generate new knowledge and reliable, actionable intelligence about the enemy and the environment in which the enemy operates.

Toward Expert Analysis and the Learning Organization

Marine Corps expeditionary intelligence analysts are expected to assemble and interpret all types of information and distill their analysis into understandable formats or products. They must make judgments that provide warning; explain intentions, perceptions, plans, opportunities, risks, and trends; and ultimately anticipate future events. This work is partially achieved by the heavy lifting of intelligence work: finding information, data entry, sorting, sifting, keeping chronologies and databases, building dossiers and case files, and methodically cataloging thousands of small fragments of information for the development of trends and tactics. These expectations require intelligence analysts to make complex judgments that demand a special expertise, special abilities, and skills. For the military intelligence analyst, *these special skills constitute foundational and applied tradecraft fitted to the tactical intelligence question or problem they are likely to face.*

- **Foundational Knowledge.** Military intelligence analysts must possess basic foundational qualifications, such as the ability to communicate verbally and in written form; think critically; recognize bias; conduct information triage; make basic decisions and judgments about what they

see; and learn structured approaches that will help them make sense of incomplete, messy, and often contradictory data.

- **Applied Knowledge.** Foundational knowledge and mastery of intelligence processes, critical thinking, writing, and verbal presentation skills are necessary, but not sufficient in today's environment. The military analytic environment of today requires expert analytic skills rooted in the discipline of specific methods and models (e.g., economics, political science, geography/geology, accounting, and statistics), in addition to the broad treatment of structured analytic processes. Confronted with a vast array of intelligence questions on a daily basis, military intelligence analysts need an equally broad array of discipline-specific models and approaches at their disposal, and their mastery of this tradecraft will be the single greatest asset they bring to the fight.
- **The Learning Organization.** The Marine Corps intelligence enterprise must support both the creation of analytically rigorous applied tradecraft and the development of a workforce enmeshed in foundational and applied tradecraft. As outlined in detail in the sections that follow, MEIA-21 will achieve this through the creation of a professional rapid-learning organization that captures and refines analytic methods developed on the front lines by subjecting them to review and improvement and making them available for reuse across the MCISR-E and indeed across the Intelligence Community. This rapid-learning organization will in turn have a direct positive impact on the usefulness and accuracy of intelligence analysis provided to the commanders operating at the forward lines.

The DIRINT envisions the Marine expeditionary analytic workforce under MEIA-21 as a credentialed workforce of expert analysts who apply rigor and discipline to analysis, using a framework for knowledge creation based on expert analytic skills and processes; social science intelligence; and a culture that foments the rapid capture, refinement, training, and institutionalization of analytic methods emerging from the front lines.

Structured Models, Approaches, and Techniques for Marine Expeditionary Intelligence

Applied Tradecraft

In Iraq and Afghanistan, the dynamic nature of COIN warfare has created an environment in which junior analysts tackle complex intelligence questions every day, and a significant percentage of their work involves the production of written analysis products. Here, analysts at the junior level use Microsoft Word and PowerPoint to convey intelligence and a majority of their time is spent reading and synthesizing all-source information to create these products. This work is not trivial; for example, these analysts may be assessing the possibility of insurgent reintegration, deconstructing the meshing of drug and criminal elements with an insurgency, or trying to unpack and make sense of what's going on in a highly kinetic environment within population and adversary networks. Analysts' understanding of battlefield conditions is conveyed to consumers in the form of regularly produced intelligence summaries, commander updates, and ad hoc short-fuse written assignments.

Applied analytic tradecraft has important implications for development of this type of intelligence product. Because analyzing information and creating understanding are *the* decisive elements of the intelligence process, what analysts know how to do, what they can produce (and how efficiently), and the degree to which it is accurate are vitally important. It is here where social science concepts and applied tradecraft techniques, informed by social science intelligence, will prove important. In addition to knowing Intelligence Preparation of the Battlefield (IPB) and intelligence production approaches, there is an overwhelming requirement for analysts to know the tradecraft of human understanding found in the social sciences.

Under MEIA-21, social science methods are inserted into applied tradecraft called SMATs. Distilled into models and approaches, SMATs give analysts an outline, a representation of social dynamics that fuses the current or past techniques of analysts with social science. Social science–infused SMATs increase understanding so that analysts can generate *insight* (knowing why something has happened or is happening) and *foresight* (being able to identify and anticipate what may happen). Building the analytic capability to create insight and foresight requires the purposeful creation and application of applied tradecraft.

To produce reliable intelligence about an enemy organization, for example, analysts need access to the rich body of tradecraft regarding organizational theory, including organizational adaptation to stress, complexity of task correlating with complexity of structure, and social network analysis. When analyzing the success or failure of insurgent reintegration, analysts need to be armed with an understanding of the limited subset of motivations underlying insurgencies (known as the "greed or grievance" theory) and the ways in which they can be undermined. When conducting enemy trends analysis, analysts need to understand the statistical complexities of using SIGACTs as a baseline of data, because SIGACTs are often driven by operational tempo rather than enemy activity. Social science underpinnings are needed to help frame the complex and diverse body of data that flood the inboxes of all-source analysts struggling to provide insight and foresight.

SMATs are the knowledge vehicle or container for examples, theories, and structured methodologies for critical lines of analysis (such as enemy underground analysis, threat finance, elites, trends and tactics, and smuggling) to be stored and then grown over time. They are created through collection and documentation of analytic techniques from combat and other expeditionary experiences, after being cleaned and reworked by a team of analytic methodologists. A board of social scientists then reviews

the tradecraft for analytic rigor and infuses it with social science intelligence principles. Once refined and validated, the SMAT is placed in an electronic repository, enabling the workforce to search for and retrieve them as necessary, even from the field of battle. The expensive, hard-earned knowledge gained from the field—now improved, reworked, presented in a standard format, and certified as a reliable, repeatable knowledge-producing technique—is a critical tool for frontline expeditionary intelligence analysts.

Technology and machine-aided analysis play a central role in many SMATs. In Helmand Province, Afghanistan, Marine analysts now use *Advanced Analytics* software on a daily basis—and the impact of this tool on how analysis is performed is significant. This associational database, with which analysts can geospatially and quantitatively depict intelligence information, has reduced the time spent on gathering/collating data and on intelligence production by a significant margin. Rather than spending large amounts of time assembling data and then linking insurgents or government officials by hand in Microsoft PowerPoint briefings, creating trends and tactics charts in Microsoft Excel, or drawing threat zones for aircraft or convoys in FalconView, analysts can accomplish all these tasks *in less time and with better dissemination to collaborators* using a single technology. Analytic units have reported a significant decrease in the amount of time needed to conduct routine analytic functions using this tool. And new forms of analysis enabled by the technology are leading to increased comprehension and understanding in critical areas. As modern commercial tools such as this become commonplace and integrated into the stream of analysis in a rigorous and thoughtful fashion via SMATs, applied tradecraft will grow in new ways.

The Structure of a SMAT

SMATs are Explicit, Rigorous, and Reliable Applied Tradecraft

- A SMAT is a structured approach to addressing a specific *intelligence question* (e.g., What do we know about the organizational structure of an insurgent group or how stable is the rule of law in a given operational landscape?).
- Within that overarching framework, the SMAT *defines and explains the theoretical basis* (e.g., social network theory) for the analytic structure it defines. It guides the analyst in using specific theories to enhance understanding.
- In addition to insights from social science theory, the SMAT contains *explicit direction as to how to create intelligence products,* including the types of raw collection reports used, tools for conducting machine-aided analysis, and guidelines on how to use the specific theories to produce sound analysis to support operations.
- SMATs include *model intelligence products* that analysts can use to convey their findings to commanders in clear, actionable, and precise ways.

Each SMAT is contained and described within a defined structure that includes the following user-friendly documentation, training, and implementation elements:

- A concise paper explains the intent of the SMAT, the theory behind it, and how it is employed. Each paper contains the following:
  - Introductory material
  - Background and history
  - Source(s) of information
  - Strength(s) and weakness(es) of the approach

  - Implementation
  - Key takeaway(s)
- Training materials include the following:
  - A presentation for formal instruction
  - A practical application exercise
  - A final exam
  - A course facilitator's guide
- Applicable analytic tools and technologies
- Model intelligence products

SMAT Maps

Each example of applied analytic tradecraft must be situated within the context of all related tradecraft. To ensure this, a map relates each SMAT to surrounding tradecraft. These SMAT maps help intelligence analysts to understand how output of each SMAT can be productively combined with other SMATs to answer specific intelligence questions. The example in Figure 3 shows the relationship of the Non-Kinetic Targeting (NKT) SMAT to other approaches and to different models and techniques. It illustrates how the SMAT maps guide analysts in combining various tradecraft to produce more robust and reliable analysis.

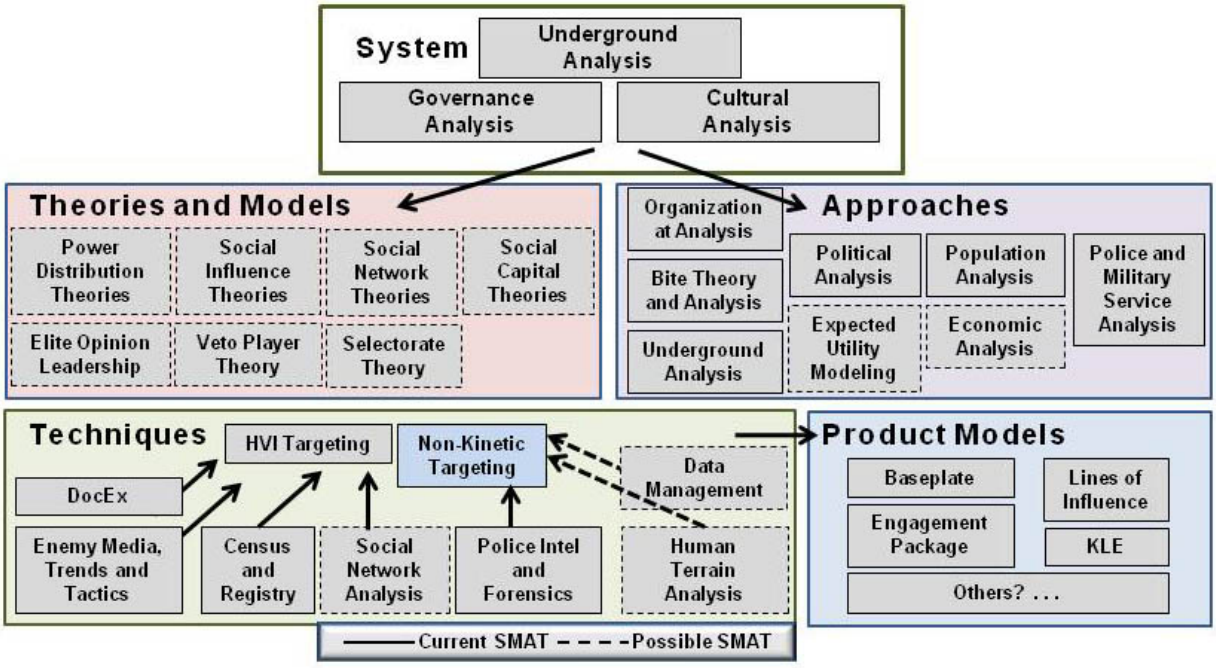

Figure 3: A SMAT Map (Non-Kinetic Targeting)

Organizational Learning and Knowledge Management in the Marine Corps Intelligence Enterprise

Speed of Learning

The MCISR-E is moving toward a culture that reflexively institutionalizes new and innovative analytic techniques developed by analysts in expeditionary operations. With intelligence analysts deployed in the most acute areas of international instability, the Marine Corps has become especially adept at innovating intelligence approaches to meet emerging operational realities "on the fly." By consciously creating a culture and structure to capture, refine, train, archive, and redeploy these techniques, Marine expeditionary intelligence analysis is transforming into a rapid-learning enterprise. Capturing emerging analysis tools and quickly refining and redeploying them, this rapid-learning organization will in turn have a direct positive impact on the usefulness and accuracy of intelligence analysis provided to the commanders operating at the forward lines.

More than just tradecraft and professionalization, MEIA-21 is about an accelerated speed of learning—Marines deploy and return with new tradecraft developed as they answer new intelligence questions. This learning is captured in SMATs, processed, reviewed, and made available for reuse at a rate unprecedented in the Intelligence Community.

The Center for Marine Expeditionary Intelligence Knowledge (CMEIK)

CMEIK is the organizational entity that instantiates the MEIA-21 vision for the MCISR-E; it serves as a repository for, and caretaker of, tradecraft expertise. The fixed-site CMEIK collects analytic methods developed in the field by Marines, from other Intelligence Community (IC) elements, from academia, or from tradecraft groups functioning in the Operating Forces. The CMEIK validates, cleans, and standardizes them and then creates an easy-to-use SMAT package that can be used by individuals or units to train with and master.

The CMEIK is the nexus for intelligence analysis tradecraft in the MCISR-E. It is the caretaker of tradecraft, providing quality assurance, training, archiving, a portal for dissemination, and organizational continuity. Because it is a fixed site, the CMEIK requires an institutional link into the forward-operating components of the intelligence enterprise.

Tradecraft Groups

Tradecraft groups are the keepers of tradecraft within analytic elements of the intelligence and radio battalions and in other Marine intelligence formations (e.g., wing, division). Consisting of certified *analytic methodologists* with expertise in applied intelligence tradecraft and advanced social science analysis, tradecraft groups provide the practicing intelligence analysts in the formation with up-to-date knowledge on tactical intelligence tradecraft and reinforce analytic rigor and community-accepted standards for analysis. They are the on-site experts in analytic methodology and applied tradecraft, overseeing the coaching and use of foundational skills (e.g., SATs) and applied tradecraft (SMATs) within the unit. They also engage in the improvement and development of SMATs in the field and communicate related developments back to the CMEIK. As an integral fixture of the unit they serve within, tradecraft groups also have a permanent and strong dotted-line connection to the CMEIK (see Figure 4).

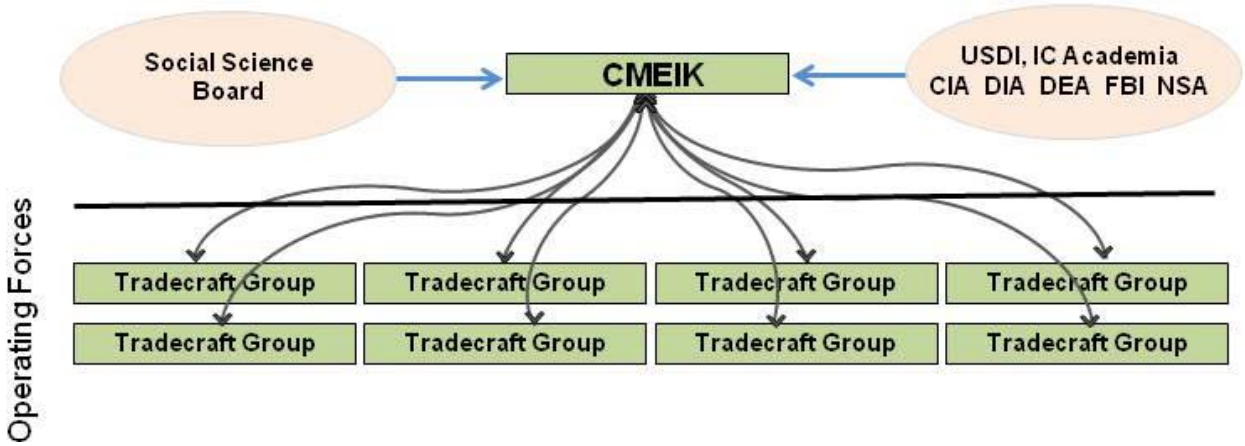

Figure 4: The CMEIK and the Tradecraft Groups

Nine Months of Progress

Institutionalizing and Growing Marine Corps Applied Analytic Tradecraft

Under MEIA-21, an important method for measuring the health of analysis within the MCISR-E is to study its analytic techniques or tradecraft – the special knowledge that forms the basis for how understanding (insight and foresight) is created. This means auditing on an annual basis the amount and quality of tradecraft coming in from across the enterprise. Growing tradecraft, accounting for the amount of old tradecraft being improved and new tradecraft is measured and reported as a general analytic health index. In its first 9 months, MEIA-21 has collected 27 instances of applied tradecraft.

- **First-Level Applied Tradecraft.** These SMATs have come from frontline analysts and have been accepted and refined by the CMEIK, but they have not yet undergone critical review by the social science intelligence experts. to date, they include the following:

Enemy Analysis SMATs

- HVI targeting
- Organizational theory
- Trends and tactics
- Enemy media
- Captured documents
- Smuggling and trafficking
- IED weapons analysis
- Intelligence summary
- Underground analysis
- Air threat analysis
- Sources of information
- Threat finance
- Route threat analysis

Social Environment SMATs

- Security service analysis
- Police intelligence and forensics
- Rule of law
- Cultural analysis
- Infrastructure analysis
- Resource analysis
- Governance and reconstruction
- Elite Analysis
- Registry/Census analysis
- Non-Kinetic targeting
- Performance analysis
- Key leader assessments
- District/Village assessments
- Tribal analysis

- **Second-Level Applied Tradecraft.** These SMATs have undergone a rigorous validation process conducted by external social scientists and are undergoing improvement based on those reviews

to ensure that they are valid, reliable, and analytically rigorous. As of this writing, the following SMATs are undergoing this process:

Enemy Analysis SMATs

- COIN-focused intelligence summary (INTSUM)
- Threat finance
- Underground network analysis
- Organizational theory

Social Environment SMATs

- Non-kinetic targeting
- Analysis of elites

Nine additional pieces of tradecraft have been fielded as SMATs and will later be improved by deployed operational forces. Improved tradecraft of this sort is reviewed by the CMEIK and then posted rapidly for reuse. In certain cases, it may go back to the Social Science Board for review and improvement, if required.

Documenting and improving tradecraft form a critical new investment area. Taking expensive, hard-earned knowledge, developing it into standard methods, and then putting this knowledge to use on a reusable scale as fast as possible constitute a source of important competitive advantage for 21st-century expeditionary intelligence operations.

SMAT Training Course

Members of major intelligence sections have been trained as analytic methodologists to serve within unit tradecraft groups. Analytic methodologists master a curriculum of SMATs and SATs. In conjunction with the CMEIK, they serve as the standard bearers for Marine Corps intelligence tradecraft innovation, professionalization, and inter-Service collaboration. In 9 months, 112 Marines have been trained as analytic methodologists at the CMEIK training site.

Analytic methodologists at unit-level tradecraft groups conduct SMAT training as one of their core unit responsibilities. Usually, these local training courses run 7–9 days and are based on the applied tradecraft distributed from the CMEIK Web site. To date, 311 Marines have been trained, and courses occur at all the major intelligence formations each month.

The CMEIK Portal

The CMEIK's knowledge management mission is focused on the development of the CMEIK classified portal, available at http://www.mcia.usmc.smil.mil/cmeik. Analytic methodologists and members of tradecraft groups can create accounts (called *analyst profiles*) that enable them to participate in discussion boards, create/revise wiki entries, and review individual SMAT pages. Analysts can also choose to participate in a Community of Interest or Discreet Analytic Field, as defined by methodology, geography, or mission.

The heart of the CMEIK portal is the cataloging of tradecraft—SMATs— that members can download and use. Unlike past implementations, in which portals tended to be document driven, the CMEIK portal is designed to connect people, permitting person-to-person as well as document-to-person sharing. Reuse of effective knowledge by the intelligence enterprise is the driving impetus for the portal. Knowledge is stratified in a hierarchy of databases, with elite knowledge, such as the SMATs, separated from larger databases or holding tanks of raw information. The portal is intended to engender a culture of mentoring, sharing, and transparency. The cornerstone of the effort, however, lies in energizing the

Marine Corps intelligence enterprise to create intelligence knowledge (documents) and move it to the portal through tradecraft groups so that scale in knowledge reuse can be realized in battlefield intelligence to support operations.

The Way Forward

Refine and Validate Existing SMATs: The Social Science Board

SMATs emerge from the operational environment on a regular basis and can prove immediately useful in producing better intelligence analysis. However, to achieve the analytic rigor required of truly reliable tradecraft, SMATs must be objectively evaluated by domain and subject matter experts—the *Social Science Board (SSB).* Once analytic weaknesses and gaps are identified, SMATs must be adjusted to produce a robust and rigorous SMAT. The SSB evaluation includes the following:

- Clarifying intelligence questions and objectives
- Providing theoretical foundation
- Ensuring rigor through reliability, validity, and other process standards
- Assessing/defining links with other SMATs *(the SMAT map)*
- Assessing intelligence products
- Defining data requirements

These evaluations follow their own analytically rigorous methodology and produce findings that are sound and actionable. Figure 5 shows the evaluation metrics used in an actual SMAT evaluation. Upon SSB review, this SMAT was found to be in the weak-to-acceptable range and underwent substantial enhancement as a part of the SSB review process.

Once shortfalls are identified, the SSB refines the SMAT to address them, using well-formulated social-science techniques. Although this process is involved, it is a vital element of MEIA-21: Most of the SMATs that have been evaluated by the SSB thus far have initially fallen in the “poor” and “weak” categories. Robust and rigorous tradecraft requires scientific review and refinement that can come only from a construct such as the SSB.

Continue to Identify and Construct New SMATs

Twenty-seven SMATs currently within the pipeline reflect all-source techniques used in Iraq, Afghanistan, and other expeditionary experiences from 2008 to the present; however, they also represent the experiences of a relatively small portion of the Marine Corps intelligence enterprise. MEIA-21 will awaken and achieve the goal of growing sound, applied tradecraft at all levels through a deliberate campaign of education, inducement, and reward. For example, units will be encouraged to contribute updates or add new SMATs by operational orders that direct units to contribute this knowledge within a specified period of time after they return from combat or other deployment. In addition, individuals will be recognized for their achievement in this area through formal awards. Further, the CMEIK will play a key role by visiting units and helping local tradecraft groups spot, assess, and then gather critical new or rework old tradecraft.

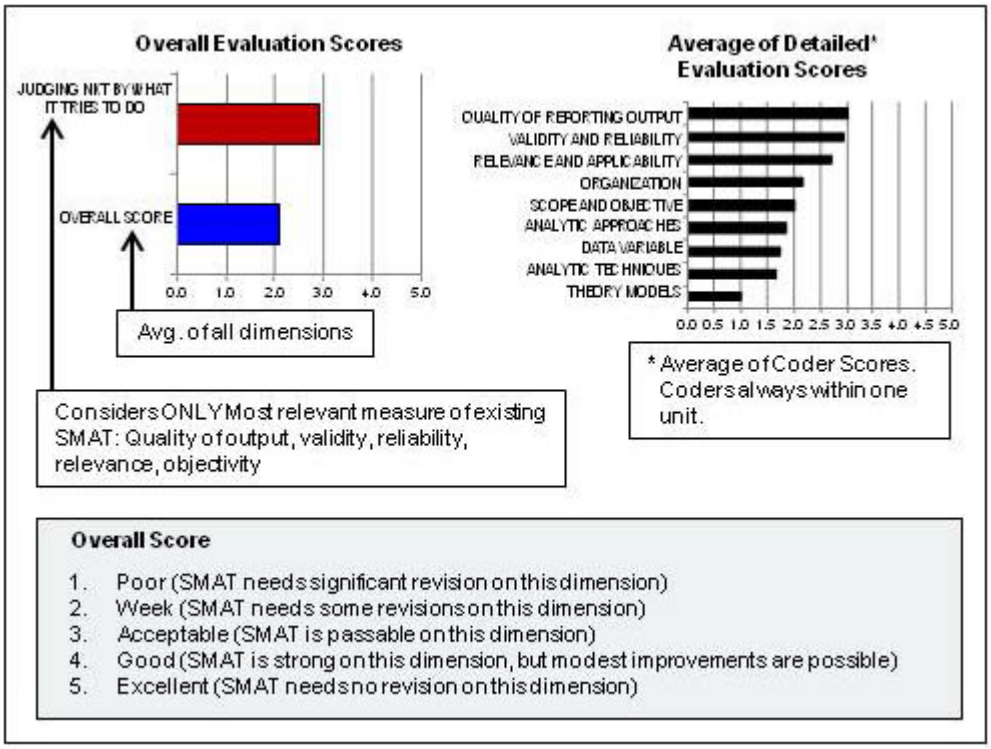

Figure 5: The SSB SMAT Evaluation

Outreach Within the Intelligence Community and Beyond

An important area that will advance this endeavor is incorporating the methods of other Intelligence Community agencies and commercial and academic entities to improve existing or create new SMATs. Although SMAT production for the first years will be largely an internal USMC campaign to collect, refine, and institutionalize service content, incorporating and integrating knowledge of others will be crucial to elevating SMATs to the level that is expected.

Moreover, outreach is a two-way street: Through MEIA-21, the Marine Corps intelligence enterprise will lean forward in its willingness to support other DoD elements, as requested, to share both its experience with the development and use of applied analytic tradecraft for tactical intelligence and its experience with methodological review and validation of SMATs. Wherever other Intelligence Community agencies can benefit from MEIA-21 and related USMC efforts to further professionalize intelligence analysis through tradecraft enhancement, the Marine Corps intelligence enterprise will be well positioned to assist.

Operational Assessment

The Director of Marine Corps Intelligence has mandated continuous audit and evaluation of the enterprise's analysis modernization program, ensuring that applied tradecraft will be evaluated on the basis of whether it produces reliable knowledge and makes a difference operationally. The goal is to create a repository of reliable knowledge, produced through the rigorous use of applied tradecraft in support of commanders leading a wide range of military operations. Achieving this will require hard

work, sustained leadership, and an ongoing assessment of progress. MEIA-21 will be evaluated at periodic intervals against a number of performance indicators, including the following:

- Institutionalization (e.g., Are analysts increasingly using applied tradecraft?)
- Effectiveness (e.g., How well or how poorly are analysts performing?)
- Impact (e.g., How much is this enhanced analysis also enhancing operations?)

MEIA-21 can be judged as successful only when its role in transforming Marine Corps analysis significantly enhances analytic support to decision making and operations and can be demonstrated empirically.

Conclusion

The growth and use of applied tradecraft—an area that might be considered by some as a secondary enabling function—will be battle defining in the coming decades.

With a clear direction and well-defined program methodology already borne out by measureable success, MEIA-21 is the pathway to overcoming the analytic shortfalls of the present and to increasing and sustaining the professionalism of Marine Corps intelligence analysis.

As our SMATs are expanded and refined, they will become our most precious resources. The quality of analysts will be measured on the basis of their ability to use and master SMATs and to contribute to the growing professionalism of Marine Corps intelligence analysis through the increasing use of applied analytic tradecraft that will provide unprecedented insight—and foresight—to battlefield commanders.

Ground Lines of Communications: A SMAT Case Study

By Cpl Ben Archiga, 1st MLG

Origin: Operation Enduring Freedom

This SMAT emerged from the experience of the 1st Marine Logistics Group (MLG) G-2 Intelligence Analysis section in Operation Enduring Freedom (OEF) 10.1 and 10.2. Although it proved immediately useful in theater, the high operational tempo of OEF 10.1/10.2 was not conducive to methodological validation and refinement; therefore, the methods used in the initial SMAT fell short of the analytic rigor and objectivity required of robust and mature tradecraft.

Injecting Analytic Rigor

Upon their return from theater, the 1st MLG G-2 analysts began working closely with the CMEIK, at first through the course of a week-long engagement at Camp Pendleton, to identify critical analytic methodological shortfalls in their approach to the analysis of route threats and route vulnerabilities and to outline and execute a course for the refinement of that approach. The approach they developed partnered a Marine from the 1st MLG with other analytic organizations to substantially improve the methodology behind the tradecraft. After 1 month of continuous work, a fully formed and analytically rigorous Ground Lines of Communication SMAT was ready for redeployment. The toolset that emerged includes a geoprocessing capability enabling robust spatial analysis that previously was not widely available within Marine Corps intelligence.

Training and Dissemination

The Marine who led the effort to refine the Ground Lines of Communication SMAT has since instructed Marine analysts and analytic methodologists on its implementation and methodological underpinnings at the Marine Corps Intelligence Activity, and he has also trained the intelligence Marines within 1st MLG. Plans have been developed to continue to expand the scope of training aboard Camp Pendleton and also to extend it to both other stations and deployed units. Training plans are also in place to extend instruction in the SMAT to Special Operations Forces (SOF) elements preparing for deployment as well.

A crucial part of the training program: The SMAT's practical application stresses the creation of an all-source analysis environment that uses the developed toolset; it requires the analyst to deliberately walk through the methodology and explicitly record, stepwise, the analytic process leading up to his or her assessment. It also requires the analyst to create a visualization that will aid the communication of intelligence assessments to his or her commanders.

Full Circle: Redeployment and Continuous Improvement

Currently, this valuable example of tradecraft is available to SOF units in theater and is a part of the training package being prepared for the Marines of 2nd MLG Forward. Feedback from the SOF units using the tool in theater has been overwhelming positive, and the tool and underlying methodology are continuously improved using input from deployed units and commanders, including feedback collected via formal surveys. It illustrates the origin, early testing, enhancement, and expanded use of field-developed tradecraft in support of Marine operations.

Threat Finance: A SMAT Case Study

By GySgt Michael Austin, Intelligence Support Battalion

The Threat Finance SMAT was originally developed in 2008–2009 by former members of the Operation Iraqi Freedom (OIF) 08.01 Multi-National Force West (MNF-W) Economic & Political Intelligence Cell. Before development of the original SMAT, threat finance analysis at the tactical and operational levels consisted primarily of identification and monitoring of smuggling routes and gray/black market oil and fuel prices.

To expand situational awareness of enemy funding streams, Marines used their experience in OIF to develop a Threat Finance SMAT focused on identifying and exploiting the financial networks of underground organizations. Going beyond the physical movement of goods and funds and analysis of black market trends, the SMAT concentrates on *sources and methods of financing* and identifying *key financial nodes* of underground organizations.

The Teaching Package

Once the analytic framework was defined, the Marines developed the following training materials:

- A 12-page technique paper
- A 40-minute PowerPoint-based lecture
- A 2-hour practical application period, during which students read through a series (~12) of information sources and describe the structure of a threat finance network, to include a link chart, as part of an insurgent group profile

Refined with the Analytic Rigor of the Social Sciences

The Threat Finance SMAT was then subjected to evaluation and validation by the Social Science Board (SSB), comprising experts in anthropology, organizational psychology, and insurgent financing analysis. Based on the SSB's recommendations and with its assistance, the SMAT was enhanced by **(1)** explaining the threat finance process through existing **economic models** (Leites and Wolf's *Economic Model of Insurgency*); **(2)** enhancing graphic portrayal of **the analytic steps involved** in threat finance analysis; **(3)** increasing discussion on **developing collection requirements and driving collection** of threat finance network–associated information; and **(4)** more specific information on threat finance organizations and **resources within the Intelligence Community**.

Practical application of the enhanced SMAT still includes development of a link chart, but the final evaluation/exam portion is **enhanced to include the creation of *Source-Directed Requirements*** and the completion of a narrative information for inclusion into an Insurgent Group Profile.

Disseminated and Deployed

The original SMAT has been taught to **more than 300 Marines**, encompassing a number of deploying Marine Corps intelligence units, by three training cadres (the CMEIK, the Intelligence Support Battalion (ISB) Methods Group, and the 2d IntelBn Methods Group). It is taught as part of the Economic & Political Intelligence Cell's and 2d Intelligence Battalion's predeployment training packages; was a core required class in ISB's FY2009 and FY2010 Training, Exercise, and Evaluation Plans (TEEPs); and is actively used by II MEF (fwd) in the Regional Command – Southwest Analysis Center (SWAC). The enhanced Threat Finance SMAT has been taught to approximately 110 Marines, the vast majority of whom are enlisted Intelligence Specialists, but also Signals Intelligence Analysts, Senior All-Source Intelligence Analysis Officers, MAGTF Intelligence Officers, and others within the Marine Corps intelligence enterprise. The enhanced SMAT will be operationally deployed to the SWAC in August 2011, is a core required class in ISB's FY 2012 TEEP, and is taught by the CMEIK and its associated Tradecraft Groups. The teaching module is available on the CMEIK portal.

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SEPT 2011

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