

## **Automating Assessment of Joint Training**

**Annie Patenaude**  
**Office of the Secretary of Defense (USD(P&R))**  
**Washington, DC**  
**Annie.Patenaude@osd.mil**

### **ABSTRACT**

The Training Transformation (T2) program instituted systematic assessment as an integral part of the Joint Training System (JTS), in concert with a goal of better enabling integrated operations. As a result, the 2007 Block Assessment provided leadership insights into the impact of T2 on joint training readiness when it was completed in December 2007.

Supporting the Office of the Secretary of Defense (OSD), the assessment team developed issue statements to link the assessment to program goals and strategic guidance. The team supported the issues with metrics and data elements that provided rigor for analytic assessments of processes and procedures. They strived for outcome measures to show the results of joint training, as well as measures of efficiency. Among the hurdles overcome through the cooperation of the military Services and combatant commands were the lack of automated data collection and reporting tools. The team developed interim solutions that met the short-term requirement and resulted in lessons for longer-term solutions.

The 2007 Block Assessment provided leadership with many indications of the impact of joint training and the T2 program. It also included recommendations to improve future assessments, such as: (1) Develop an automated framework (tools and processes) to support both internal and leadership assessments; (2) Organizations should develop performance measures to support assessment of the Combatant Commander Exercise and Engagement program and Training Transformation (CE2T2); and (3) Combat Support Agencies should be included in future assessments to better indicate the full scope of “training the way we intend to operate,” a goal of the T2 program.

In both block assessments, analysts spent the majority of their effort collecting, screening, and collating data. To become more efficient, analysts need to automate the process in two ways – by setting up links to electronically collect data from existing sources and by establishing a framework to use available data. This paper will report on OSD’s experience, results, and lessons learned automating an enterprise-level joint training assessment framework.

### **ABOUT THE AUTHOR**

**Annie Patenaude**, a GS-15 and retired Army officer, is currently the Director, Training Transformation Joint Assessment and Enabling Capability for the Office of the Secretary of Defense (Readiness and Training). Ms. Patenaude began her career in the US Army Field Artillery. She has a background in mathematics, modeling & simulation, and weapon systems acquisition and testing. She is on the 2008 Program Committee for Interservice/Industry Training, Simulation, and Education Conference (IITSEC) and is on the Board of Directors for the Military Operations Research Society (MORS). Ms. Patenaude has Bachelor’s and Master’s degrees in Mathematics, and taught in the Mathematics Department at West Point. She served on the Army staff as a military personnel analyst and as executive military assistant to the Deputy Under Secretary of the Army for Operations Research. Following her Army career, Ms. Patenaude was a division manager in Science Applications International Corporation, charged with management of personnel and resources for eight contracts supporting modeling and simulation efforts in acquisition and test and evaluation. She then took a position in Northrop Grumman Corporation as a Strategic Planner and Executive Account Manager. In 2004, Ms. Patenaude returned to Government service.

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### **TRAINING TRANSFORMATION 101**

Following the 2001 Quadrennial Defense Review (QDR), the Secretary of Defense announced an ambitious plan for transforming Department of Defense training to help the Department meet the continuing challenges of the 21<sup>st</sup> century. More recent pronouncements have reaffirmed and refined the challenges, as well as the Department's commitment to meet them.

The Department addressed these challenges by implementing a program known as Training Transformation, or T2. It was guided by a strategic plan that identified two overarching missions: better enable integrated operations, and enable the continuous, capabilities-based transformation of the Department of Defense. These were broken down into objectives<sup>1</sup>, which were in turn linked to an implementation plan. Thus, T2 guidance ranged from strategic level down to very detailed instructions, milestones, and deadlines necessary for a complex program.

To accomplish its mandate, T2 would involve training for individuals, staffs, and units. The T2 Program focuses on joint training, which trains on the Joint Mission-Essential Tasks<sup>2</sup> that combatant commands use to identify the warfighting abilities required by military units that will support them. This training is conducted by the Services and the combatant commands. At the Department level, the Office of the Deputy Under Secretary of Defense-Readiness, Readiness and Training Policy and Programs (ODUSD-R, RTPP, hereinafter RTPP) and the Joint Staff J7 / Joint Exercises and Training Division (JETD) oversee T2, while United States Joint Forces Command (USJFCOM) J7 / Joint Warfighting Center (JWFC), designated as the Joint Force Trainer, is the key implementer. The T2 business model emphasizes open, collaborative, and transparent relationships.

In 2008, joint training funding across the Department was consolidated into the Combatant Commander Exercise and Engagement and Training Transformation account (CE2T2). Activities that had

been funded under different defense budget accounts would henceforth be under one account, with RTPP assigned responsibility for managing the account.

### **Assessment Background**

From the outset, assessment was one of the basic tenets of Training Transformation. The strategic plan lists capabilities essential to T2 (e.g., enablers such as a global knowledge network), and introduces performance assessment as one of the fundamental activities of the program. Responsibility for assessment is assigned to the Director of the Joint Assessment and Enabling Capability (JAEC) office, under RTPP. The strategic plan provided several guidelines:

- Assessments would be performed every two years;
- Assessments would be part of a spiral-feedback mechanism to provide relevant recommendations to the T2 community;
- JAEC would take the lead performing high-level assessments and assist other T2 leaders in assessing the value of transformational initiatives.

Assessments of Training Transformation were based on two-year blocks of activity identified in the T2 implementation plan. The first T2 Block Assessment was completed in December 2005 and served as a proof-of-concept, JAEC analysts gathered the necessary data, completed a metrics-based assessment, and published a report that informed program leadership.

One of the most significant results of the 2005 assessment was developing metrics that could be reused. Use of quantitative data and longitudinal analysis allowed comparisons over time that either indicated progress or the need for adjustment of various aspects of the program. The nineteen metrics of the 2005 assessment were developed by a group of military training experts and skilled analysts to examine the more innovative areas of the new program. They focused on activities of two joint management offices (JMOs) that were, along with JAEC, pillars of the T2 Program: the Joint

Knowledge Development and Distribution Capability office (JKDDC), focused on individual training, and the Joint National Training Capability office (JNTC), focused on collective training.

In addition to the quantitative metrics, the 2005 report included several qualitative sections that were carried forward for the 2007 assessment, and will be addressed. The biggest hurdle in the 2005 Assessment was that collected data were not otherwise reported and not accessible in a consistent database.

### **THE 2007 T2 BLOCK ASSESSMENT**

Once the 2005 report was completed, the assessment team refined and expanded their efforts to produce the next report, due in December 2007. In addition to making the assessment more valuable to the joint training community, the team had a secondary objective of implementing a lasting methodology for metrics development and data collection. On top of that, the 2007 assessment would expand in scope to include not only the three pillars of T2 (JKDDC, JNTC, and JAEC), but also joint training conducted by the Services and combatant commands.

The analytical team retained many elements of the 2005 report, including the use of different methodologies to more completely assess various aspects of Training Transformation. For the 2007 report, these methodologies were:

- Quantitative Assessments - addressing aspects of joint training that can be evaluated using numerical output.
- Qualitative Assessments - evaluating policy related to joint training and the resource allocation processes for the three component offices of T2. They also included a Joint Training Community Feedback analysis that considered inputs for representatives of the combatant commands and Services.
- T2 Implementation Outcomes - measuring whether JKDDC, JNTC, and JAEC met outcomes described in the T2 Implementation Plan.

#### **Metrics and Data**

Gathering the data continued to be the major hurdle as the analysts planned for the 2007 assessment. To routinize data collection, the project team collected quarterly inputs from more than a dozen organizations scattered around the globe. The assessment team spent weeks carefully refining the metrics to ensure they would be understood by those

providing data, viable in a multi-year assessment framework, and relevant to the expanded scope of the assessment (from the three T2 pillars to “all joint training”). The team increased the number of metrics from the 19 used in the 2005 assessment to 33. Some new metrics addressed the increased scope, while others addressed areas of improvement suggested in the 2005 assessment.

Further, the JAEC analysts consulted with military officers, government civilians, and defense contractors on the headquarters staffs of the Services and combatant commands. In some cases, subordinate staffs were also involved. In March 2006, the assessment team delivered a Microsoft Excel spreadsheet as a data submission tool, then conducted “spreadsheet tours” with Service and combatant command representatives to explain the data and metrics in detail. This data collection required that several team members spend many hours each quarter verifying and validating the data before they were entered into the Microsoft Access database that supported the project.

While data were being collected, the assessment team and Joint Staff JETD prepared for future assessments by entering data collection fields into the Joint Training Information Management System (JTIMS) to support assessments beyond 2007. JETD manages the JTIMS program that provides a Web-based graphical user interface that supports joint training, in accordance with the Joint Training System process.

The community submitted data 30 days after the end of each quarter. Two analysts spent roughly two weeks preparing it for entry into the database. Five pairs of analysts then accessed the database and, in conjunction with the administrator, ran queries and used a variety of other methods to extract insights in key areas. The qualitative assessments (of policy and process) and community feedback segments were conducted by individual analysts or small groups, much like studies frequently conducted throughout the Department of Defense. In this case, however, the studies were integrated with the T2 Block Assessment framework and supported its purpose.

To organize the potentially disparate material, the findings were divided into five categories, which were known as attributes. Each attribute was also stated as a question, as shown in Table 1, to help make it more relevant to the work of the training community.

**Process and Findings of the 2007 Assessment**

The data used for the 2007 assessment covered joint training activities from 1 July 2006 through 30 September 2007. These five quarters included the last one of fiscal year 2006 and the entirety of fiscal year 2007. While the block assessment process, as described by the T2 strategic plan, could be expected to cover a full two fiscal years, coverage was less due to the time required to revise and implement the process for 2007.

The database included 156 collective training events – 83 reported by the Services and 73 reported by the combatant commands. The events to be reported by the Services and combatant commands were different due to the differing focus of their collective training efforts. The assessment team did not attempt to identify the universe of joint training, and was aware that it did not receive data on every collective joint training event (exercise). It was, however, satisfied that the data collected supported a valid assessment.

The 2007 report also included comprehensive data on individual training provided by the JKDDC JMO,

which had begun a comprehensive internal performance measurement program and willingly shared data with the assessment team.

The final report was 230 pages long, with an additional 30-page annex that was classified based on the information sources. It included 30 tables and 25 figures.

The findings presented herein illustrate the types of conclusions developed by the assessment team, and tend toward the higher-level findings. These are all unclassified; the classified report did not result in significant findings counter to the unclassified.

The assessment report included a great deal of amplifying information as well as additional lower level findings. Several assessments based on data were illuminated by case studies. For example, discussion of the benefits of the Joint Training and Experimentation Network (JTEN) included the note that it enabled connecting a live Australian Joint Terminal Attack Controller in Townsville, Australia with a constructive AC-130 gunship in Hurlburt,

**Table 1. Key findings from the 2007 T2 Block Assessment**

<b>Attribute 1. Right Skills and Tasks.</b> <i>Are we training individuals, staffs, and units in the right skills and tasks?</i>
<ul style="list-style-type: none"> <li>Accredited Service training programs addressed 70% of the “key joint tactical level interoperability tasks” identified in the United States Joint Forces Command Joint Training Plan.</li> </ul>
<ul style="list-style-type: none"> <li>Tracked events trained 62% of combatant commander requirements, based on joint mission essential tasks (JMETS) in Joint Training Plans (JTPs) and accredited tasks not in the JTPs.</li> </ul>
<ul style="list-style-type: none"> <li>JKDDC courses currently address 44% of the tasks in combatant commander JTPs.</li> </ul>
<b>Attribute 2. Right Audience.</b> <i>Are we training the right audience?</i>
<ul style="list-style-type: none"> <li>70% of combat units received accredited joint training prior to deploying to theater.</li> </ul>
<ul style="list-style-type: none"> <li>The full spectrum of the Total Force participated in collective training, both as training audience and event support.</li> </ul>
<b>Attribute 3. Right Learning.</b> <i>Are we achieving the right learning outcomes?</i>
<ul style="list-style-type: none"> <li>The Block Assessment found readiness and training improvements associated with joint training, but the findings in this area were presented in the classified annex.</li> </ul>
<b>Attribute 4. Adaptable.</b> <i>Is joint training adaptable?</i>
<ul style="list-style-type: none"> <li>Distributed networks such as the Joint Training and Experimentation Network (JTEN) help make training more adaptable.</li> </ul>
<ul style="list-style-type: none"> <li>Networks enabled completion of training despite schedule changes, by moving electrons instead of people and equipment.</li> </ul>
<ul style="list-style-type: none"> <li>Networks enabled first-time participation in training events by high-value US capabilities (such as Patriot air defense systems) and coalition partners.</li> </ul>
<b>Attribute 5. Efficient.</b> <i>Is joint training efficient?</i>
<ul style="list-style-type: none"> <li>JTEN use was associated with lower Strategic Lift costs and higher percentage of participants at home station.</li> </ul>
<ul style="list-style-type: none"> <li>JKDDC development costs are in line with benchmarks, and are lower than reported in the 2005 assessment. JKDDC distribution costs have continued to decrease.</li> </ul>

Florida, for rehearsal of Joint Close Air Support for Australian forces preparing to deploy to Afghanistan. Another example was use of the JTEN to tie geographically separated sites together: exercise Unified Endeavor 07-1 (a mission rehearsal for the US Army 82nd Airborne Division preparing for Afghanistan) included personnel from Arizona, Florida, Kansas, North Carolina, and Virginia.

Even in an automated process, analysts would need a mechanism for capturing particularly noteworthy contributions made by T2 initiatives to fully reflect the value of the program.

### **FUTURE CE2T2 ASSESSMENTS USING STREAMLINED PROCESSES**

In taking a step back and designing future assessments, the JAEC team reconsidered the notion of “joint training readiness.” How does one quantify that a unit/staff/individual has enough training to deploy as part of a joint operation in a multinational and interagency environment? For the past four years, JAEC analysts have developed metrics and supporting data elements to attempt to capture the value of what Training Transformation contributed. Certainly the mission rehearsal exercises led by the Joint National Training Capability contribute to the commander’s assurance that the unit and staff are ready to perform as necessary. The JKDDC Joint Knowledge Online (JKO) portal enables individuals to access joint courses to prepare for their duties. Joint training exercises ensure the Military Services are training with each other on Joint Mission Essential Tasks, which we can capture in the data submitted in JTMS and DRRS. Will that be enough to know joint force readiness? How does one measure that an Army captain will have the knowledge and skills to brief an Air Force mission in support of an operation?

On direction of leadership, the JAEC analysts reviewed available data sources. Timely for the analysts, CE2T2 required program recipients to brief Measures of Effectiveness (MOE) for Program Budget Requests (PBR). Though in the first iteration, these measures will be valuable in collecting data to assess the enterprise trends across the Services and Combatant Commands. Other data elements will need to be developed and systematic collection implemented. For example, as a staff officer prepares to deploy to a Joint Task Force and takes a course on JKO, the course completion is captured. There is not yet a mechanism for the gaining command to get insight into that completion

or for the commander to know how many of the staff have completed the training.

Another major incentive for change was timeliness. The original concept for Block Assessments was to produce a report every two years, but the dynamic nature of today’s military operations and the pace of training argued for more frequent feedback to ensure that the T2 Program best serves DoD. The enterprise framework JAEC developed will focus on a few leadership priorities. These priorities will be supported by metrics defined in unit, staff, and individual areas. Analysts will still be required to read through the comment sections in JTMS and DRRS to gain insights not immediately evident by the data presented. In this delivery, JAEC analysts expect to brief leadership on emerging trends each quarter and prepare an annual enterprise look at the program.

In the future, DoD continues to build metrics to tie program outcomes to budgets. JAEC analysts can leverage these metrics to build an enduring framework to provide analysis of the value of joint training to the force.

The joint training community remains supportive of the need for assessments, and has been encouraged by the application of lessons from three years of work. In view of recent changes in the training community and the budgetary environment, the assessment team has an implicit task: integrate two large, established processes – planning, programming, and budgeting with training and readiness assessment – without significantly burdening either one. Notwithstanding these developments, the ultimate goals for the assessment team remain the same:

- Inform T2 and CE2 leadership of significant trends and the impact of training programs,
- Support key enterprise decision making,
- Provide key information on the program to support dialogue with professional congressional staff members.

### **NOTES**

1. The T2 Missions in the strategic plan, and their supporting objectives, are:
  - a. Better enable integrated operations.
    - i. Continuously improve joint force readiness by aligning joint training and education capabilities and resources with combatant command operational needs.

- ii. Achieve a training unity of effort across Services, agencies, and organizations.
- iii. Develop individuals and organizations that think joint intuitively.

b. Enable the continuous, capabilities-based transformation of the Department of Defense.

- i. Prepare forces for new warfighting concepts and capabilities.
- ii. Develop individuals and organizations that improvise and adapt to emerging challenges.

2. Joint mission-essential task (JMET): A mission task selected by a joint force commander, deemed essential to mission accomplishment, and defined using the common language of the Universal Joint Task List in terms of task, condition, and standard. Definition contained in Joint Publication 1-02.

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