BATTLE DAMAGE ASSESSMENT: IT DOESN'T HAVE TO BE THAT HARD

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U.S. Army Soldiers of C Company, 2-28th Infantry Regiment, 172nd Infantry Brigade, Task Force Black Hawk, prepare to move to another location, November 9, 2011, outside Combat Outpost (COP) Margah, Paktika province, Afghanistan. The Soldiers are evaluating the damage after a failed attack to COP Margah, November 8. (U.S. Army photo by SPC David Barnes)

Introduction

In the *FY20 Mission Command Training in Large-Scale Combat Operations Mission Command Training Program (MCTP) Key Observations*, the Center for Army Lessons Learned staff identified a number of consistent issues across the divisions and corps that had conducted warfighter exercises throughout the year. One key intelligence observation was that the intelligence staff had failed to effectively obtain and evaluate battle damage assessment (BDA) in order to influence the commander's understanding of the battlefield. The comments in the report were direct and to the point:

Observation: The G-2 process for obtaining and evaluating BDA did not effectively influence the commander's understanding or ability to visualize the battlespace, which resulted in subordinate brigades' inability to maintain momentum.[1]

Discussion: The G-2 targeting section did not have an effective process for collecting BDA reports from data sources or tracking the number of destroyed systems across the battlespace. The BDA was not effective in delivering an assessment of relative combat effective strength to inform the commander, planners, or targeting cycle. The lack of a combat-effective strength assessment of enemy forces in the briefings and targeting working group resulted in an incomplete understanding of the enemy's remaining capability and intent.[2]

These comments are likely not surprising to anyone who has been in an intelligence (G-2) section for a warfighter exercise, especially those who have been in the analysis and control element (ACE). However, it is disheartening to see that the Army as an institution still struggles with this problem, and it is particularly disheartening for those who have seen a G-2 section succeed at this task. For that reason, this article offers an effective and proven methodology for conducting BDA in a warfighter exercise.

Battle Damage Assessment Management during Warfighter Exercise 18-04

During warfighter exercise 18-04, the 1st Infantry Division G-2 targeting cell was responsible for tracking and reporting BDA to the commander and the rest of the division staff. The cell was understaffed because of manning shortfalls and other training requirements—with one captain, the officer in charge, and one specialist (military occupational specialty [MOS] 35F, Intelligence Analyst). Another specialist (MOS 35F) from outside the organization augmented the cell during the exercise but was not available to train on processes and procedures before the warfighter exercise. As a result, the cell needed a simple, easily trainable and maintainable method to conduct this critical task. This would allow all members of the cell to maintain the system while not detracting from the cell's other critical task—identifying targets for the division's shaping efforts.

Effective BDA management involves three tasks that are interconnected but require their own specific considerations:

- The cell's reporting must be accurate, accessible, and sufficient without being overwhelming.
- The cell must conduct effective analysis, requiring an advanced knowledge of the battlefield.
- The cell must disseminate the information effectively across the staff and to the commander in order to facilitate effective planning and decision making.

However, this all begins in the planning process, with an understanding of the enemy and a method to track BDA.

Planning

Before any operation and during the military decision-making process, the targeting cell has a number of duties, the primary one being development of the high-value target list (HVTL) for approval and development into the high-payoff target list. However, the key task relating to BDA is developing an understanding of enemy forces and a method for tracking enemy forces as they are destroyed or damaged.

An understanding of the enemy is important both in HVTL development and in BDA planning. Targeting analysts work with the fusion cell during intelligence preparation of the battlefield, especially during step 3, evaluate the threat, and step 4, determine threat courses of action. Targeting analysts should focus their efforts on understanding the threat characteristic factors, including weapon systems capabilities. This will help them to understand both what forces the enemy has on the battlefield and how those forces can accomplish enemy objectives. They should also understand the enemy courses of action that the fusion cell develops. This will feed into an understanding of the battlefield that allows them to make the assessments required during the engagement.

In order to track BDA, the 1st Infantry Division G-2 targeting cell developed a Microsoft Excel spreadsheet to organize enemy force information in an orderly manner and to maintain a running estimate of their strength. Figure 1, on the next page, shows a sample section of this spreadsheet.

The BDA spreadsheet is a data-centric representation of the fusion cell's development of the enemy's most likely course of action. It is displayed by doctrinal enemy zones—disruption zone, battle zone, and support zone—each with its own tab. As the fusion cell develops and refines the most likely course of action, the targeting cell arrays the forces in their zones within the spreadsheet. The enemy order of battle provides the unit types and associated equipment and strengths. When the analyst updates the number destroyed, the formulas in the spreadsheet automatically update the Remaining column and the CE% column (combat effectiveness percentage), along with the Battle Zone Total section at the bottom of the spreadsheet. In this way, the targeting cell always has access

to an up-to-the-second estimate of enemy strength by zone, unit, and equipment type. The spreadsheet also populates a final tab, which displays the overall totals for the battlefield. (Additional details about the spreadsheet are in the Analysis section of this article.)

Key Recommendations for Planning:

✦ Develop a BDA-tracking spreadsheet that displays enemy key equipment by number, unit, and zone.

✦ Ensure that the spreadsheet incorporates formulas to auto-update all numbers when the analyst updates the number destroyed.

BATTLE ZONE						
		SYSTEM	STARTING STRENGTH	DESTROYED	REMAINING	CE%
831st AR BDE	1st BN (AR)	T-62	31	27	4	13%
		BTR-60	5	2	3	60%
	2nd BN (AR)	T-62	31	4	27	87%
		BTR-60	5	0	5	100%
	3rd BN (MECH)	BMP-2	31	4	27	87%
		BTR-60	5	3	2	40%
	FA BN	2S3	18	4	14	78%
		Zoopark-1	2	0	2	100%
452nd FA RGT	1st BN	2S3	18	7	11	61%
		BTR-60	3	1	2	67%
	2nd BN	2S1	18	1	17	94%
		BTR-60	3	0	3	100%
	3rd BN	BM-21	18	5	13	72%
		BTR-60	3	2	1	33%
	TAB	Zoopark-1	2	0	2	100%

BATTLE ZONE TOTAL				
SYSTEM	STARTING STRENGTH	DESTROYED	REMAINING	CE%
T-62	62	31	31	50%
BMP-2	31	4	27	87%
BTR-60	24	8	16	67%
2S3	18	7	11	61%
2S1	18	1	17	94%
BM-21	18	5	13	72%
Zoopark-1	4	0	4	100%

Graphic adapted from original provided by author

Figure 1. The BDA spreadsheet displays enemy forces equipment by unit and zone across the battlefield

Receiving Reports

Effective reporting requires coordination and guidance on exactly what the cell expects and where and when the cell expects to receive the information. This calls for a primary, alternate, contingency, and emergency (PACE) plan for reports, as well as reporting criteria. Effective reporting also requires a feedback loop from subordinate units to ensure that the picture of the enemy remains consistent across echelons.

The PACE plan can use whatever methodology suits the organization and its standard operating procedures. The 1st Infantry Division used a BDA chat group as the primary means for all BDA reporting. The G-2 targeting standard operating procedure for all subordinate and enabling elements published the name of the chat group. The cell also coordinated directly with the tactical air control party (TACP) to receive BDA reporting from all close air support (CAS), strike coordination and reconnaissance, and air interdiction missions. This led to some double reporting, as a ground unit would report a target destroyed by CAS, just to have the TACP report the same target later in their 24-hour rollup.

While the primary method of reporting was the observer or the shooter (as long as it was an observed or direct fire mission), the G-2 collection management and dissemination cell also provided reports. This called for specific information requirements aimed at identifying damaged or destroyed enemy targets on the battlefield. Even though collection management and dissemination reporting was generally the secondary method, it often confirmed prior reporting and occasionally provided BDA that had not been previously reported.

Reporting criteria will vary by mission type and echelon, but the standard operating procedure must publish this information. In early exercises, the G-2 targeting cell failed to develop criteria and was overwhelmed with reports of destroyed motorcycles, jeeps, and even individual rifles. While these are important at the platoon or company level, the division and corps are generally more concerned with tanks, air defense radars, and artillery systems. As a result, the cell developed reporting criteria that limited reporting to weapon systems annotated on the official BDA tracker and dictated a size, activity, location, and time format. If in doubt, subordinate elements should report any BDA not on the tracker and let the targeting cell make the decision whether to report it higher. This significantly reduced the "noise" in the reporting, allowing the cell to focus on what was important, but did not completely shut out the opportunity for judgment calls from subordinate elements.

The check on the reporting was in the daily intelligence synchronization meetings. The targeting cell would brief the latest BDA and always asked for feedback from participants. This allowed them to raise concerns, and at least once, this resulted in identifying an error in the targeting cell's analysis. This method ensured that all stakeholders had the opportunity to review the BDA before it was briefed to the commander and that every unit had a common understanding of the enemy's current strength.

Key Recommendations for Receiving Reports:

✦ Publish the standard operating procedure, as well as the PACE plan and reporting criteria, to subordinate units.

✦ Include BDA-specific information requirements in collection plans.

✦ Coordinate with the TACP for regular reporting from CAS, strike coordination and reconnaissance, and air interdiction missions.

✦ Include BDA feedback in regular intelligence synchronization meetings.

Analysis

Analysis is the step that transforms data from reports into information, and eventually intelligence. This is the key to enabling the staff planning and the commander's decision making, rather than reporting raw numbers that, alone, are meaningless. Using a detailed knowledge of the battlefield and both quantitative and qualitative assessments, analysts can provide the "so what" behind the reports they have collected from all sources.

The process begins by determining the accuracy of the report. This requires analysts who understand the battlefield. It is extremely important to have analysts with a well-developed situational understanding that allows them to make an accurate assessment of the report's veracity. For example, if a brigade combat team destroys five tanks with CAS, the brigade combat team will likely report the damage. However, the TACP will also likely make the same report in the next 24-hour rollup. A high-quality analyst can review the reports, including information on the time and location of the strike, and recognize the duplicate reporting. After making the decision to use a report, the analyst enters the information into the BDA tracking spreadsheet.

The spreadsheet does much of the quantitative analysis. For example, when the analyst updates the number in the Destroyed column (of a given vehicle), the spreadsheet automatically produces a combat effectiveness percentage for the unit and the zone. The analyst can conclude, "27 artillery tubes remain in the battle zone, leaving them at 31% strength on artillery pieces." This is a simple method to quantitatively describe the effects on the battlefield.

Putting these details into more qualitative terms requires a deeper understanding of the enemy equipment and its use. Analysts must be intimately familiar with enemy equipment

capabilities and the ways they affect the battlefield. One technique is to maintain a "smart book" that includes the Worldwide Equipment Guide pages for every high-value target as well as current versions of the BDA tracker and other targeting products, as required. This gives the analysts a quick reference to provide information on the impact and significance of the BDA. Most of the time this will not take much explanation because commanders inherently understand what enemy equipment is important and why, but sometimes it helps to clarify the importance of certain items.

The next level of analysis comes from understanding how the equipment fits into the target system—for example, disabling an entire integrated air defense system by hitting a key command and control node or radar. That requires a target system analysis, which is a part of mission analysis and is used in developing the HVTL. Target system analysis is critical to both BDA and the broader targeting process but is beyond the scope of this article.

Key Recommendations for Analysis:

✦ Assign an analyst with an in-depth understanding of the battlefield and a keen situational awareness to track BDA.

✦ Use automated tools (spreadsheets) to perform quantitative analysis.

✦ Maintain references and conduct a thorough target system analysis and mission analysis to enable a qualitative analysis.

✦ Always focus on the "so what," rather than briefing simple numbers or percentages, to enable the commander's decision making.

Dissemination

Having all this data and analysis does no good if the information stays in the ACE, or worse, within the targeting cell. Dissemination is the critical step to getting the information into the hands of those who need to know—the broader targeting team, the plans section, the operations section, and the commander.

Ultimately, how the ACE distributes BDA will depend on the unit's standard operating procedures and battle rhythm. At a minimum, BDA must be included in the daily graphic intelligence summary (GRINTSUM), the intelligence synchronization, and the slide decks for the targeting working group and targeting decision board. It can also feed the assessments working group, and if the commander has a daily "fighting product" or "placemat," it should be in the intelligence section of that product.

Determining exactly what information and how much of it to display will also depend on the unit and the audience. Some will want a PowerPoint slide with enemy icons. Others may want the entire spreadsheet. At the 1st Infantry Division, the commander was happy with a summary page of the spreadsheet, which displayed enemy strengths and the combat effectiveness percentage by battalion-sized element and specialized equipment, and total numbers by zone (Figure 2).

The ACE published this product in the GRINTSUM and the commander's daily placemat. The ACE also published it in slide decks for the targeting working group, the targeting decision board, and the intelligence synchronization. At the targeting working group and targeting decision board, it was an important input to the meetings because it assessed the effectiveness of the previous day's shaping operations and it focused planners' and decision makers' efforts on the most significant units remaining.

BATTLE ZONE						
UNIT	LOCATION	INF BNs	AR BNs	FIRES SYSTEMS	AD SYSTEMS	CE%
862 MECH BDE	PL Betty	2	1	8	8	50%
844 REC BDE	PL Annie	2	1	9	9	50%
865 FA BDE	PL Betty	0	0	36	0	50%
384 FA BDE	PL Annie	0	0	36	0	50%
382 FA BDE	PL Betty	0	0	38	0	55%
802 MECH BDE	N of OBJ Denver	2	1	10	9	60%
803 MECH BDE	PL Annie	2	1	8	9	60%
804 AR BDE	PL Betty	1	2	12	5	65%

Graphic adapted from original provided by author

Figure 2. BDA rollup for the battle zones

Key Recommendations for Dissemination:

✦ Determine what battle rhythm events and products require BDA and the best way to present the information.

✦ Present enough information to enable decisions, without overwhelming the audience with data.

✦ Ensure that assessments, including BDA, are driving the targeting process.

Conclusion

As the Center for Army Lessons Learned identified in its FY20 report, tracking BDA requires a well-thought-out plan. There must be a tracking method, effective analysis, and an effective means of disseminating the critical information. All of these capabilities exist organically within an ACE and a targeting cell. The FY20 report's observation about collecting and evaluating BDA concluded that—

This is a training issue. The Mission Command Training Program (MCTP) can provide training on ways to collect, report, and track BDA geospatially using analog and digital products.[3]

This article attempts to remedy that training issue. While describing one of many effective techniques, and every situation will require nuanced methods, this proven methodology offers a baseline from which units can build their standard operating procedures. If they do that, they will be well on their way to providing information that the commander needs to effectively shape the battlefield and win our Nation's wars.✳

Endnotes

1. Department of the Army, *FY20 Mission Command Training in Large-Scale Combat Operations Mission Command Training Program (MCTP) Key Observations* (Fort Leavenworth, KS: Center for Army Lessons Learned, October 2020), 16.

2. Ibid.

3. Ibid.

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