

# The S303 Enemy Observation Report

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## Introduction

In July 2018, the 25<sup>th</sup> Infantry Division (25<sup>th</sup> ID) executed Exercise Lightning Forge 18-03 (LF 18-03). The event was a brigade-level decisive action training exercise to prepare the unit for combat, to exercise mission command, and to evaluate operational readiness prior to a Joint Readiness Training Center rotation. During the exercise, the intelligence warfighting function within the 2<sup>nd</sup> Infantry Brigade Combat Team (2IBCT) and the 25<sup>th</sup> ID simulated operations in a degraded, intermittent, and limited communication environment while maintaining mission command and intelligence sharing between echelons.

The exercise simulated two aspects of human intelligence (HUMINT) operations:

- ◆ **Interrogation of enemy prisoners of war.** The prisoner role players were nested with opposing force elements and captured by battalions on the battlefield, forcing the brigade combat team (BCT) to exercise detainee operations.

- ◆ **The incorporation of adjacent and higher unit HUMINT reporting.** The division G-2X disseminated reports obtained from other subordinate BCTs that pertained to the 2IBCT's area of operation to stimulate reactions against pre-established master scenario events list activities.

## The Current Human Intelligence Reporting System

The Army HUMINT enterprise currently reports intelligence using the intelligence information report (IIR) and its associated Defense Intelligence Agency (DIA)-mandated architecture. The report is an unstructured format that does not feed Army mission command systems and resides in DIA's databases. This HUMINT reporting architecture requires analysts to generate entities in the database manually, hindering timely situational awareness in a decisive action environment.

Other single-source intelligence disciplines, such as signals intelligence and geospatial intelligence, maintain systems



Photo by U.S. Army 1LT Ryan DeBooy

U.S. Army Soldiers assigned to 1<sup>st</sup> Battalion, 27<sup>th</sup> Infantry Regiment "Wolfhounds," 2<sup>nd</sup> Infantry Brigade Combat Team, 25<sup>th</sup> Infantry Division, provide fire suppression after the breach at a local support-by-fire position during a combined arms live-fire exercise at Schofield Barracks, Hawaii, August 3, 2018.

that use United States message text format (USMTF) reports and are interoperable with Distributed Common Ground System-Army (DCGS-A) and mission command systems. This allows these intelligence disciplines to immediately action and cross-queue intelligence information, using automated systems and tools within DCGS-A. HUMINT has never had the capability to rapidly send information to mission command systems, such as the Advanced Field Artillery Tactical Data System and Command Post of the Future, without manual entity generation. For this reason, 2IBCT S-2X and 25<sup>th</sup> ID G-2X used the S303 Enemy Observation Report (EOBSREP)<sup>1</sup> for HUMINT dissemination during LF 18-03 to address these deficiencies.

### **S303 Enemy Observation Report—A Different Form of Intelligence Reporting**

For the first time, the 25<sup>th</sup> ID HUMINT enterprise experimented with a different form of intelligence reporting in place of the IIR. The division G-2X and BCT S-2X replaced the IIR with a USMTF report—the S303 EOBSREP—to disseminate HUMINT information. The 25<sup>th</sup> ID HUMINT enterprise had determined that the S303 EOBSREP better met the needs of the division’s intelligence warfighting function while operating at the speed of the decisive action environment. None of the current capabilities within the DCGS-A enterprise allow for the rapid, organized, object-based production of an unstructured HUMINT IIR. During LF 18-03, the S303 report provided an innovative tactical solution for HUMINT dissemination in a decisive action training environment never before attempted.

#### **Object-Based Production**

According to DIA, “Object-based production [OBP] is a concept being implemented as a whole-of-community initiative that fundamentally changes the way the [intelligence community] IC organizes information and intelligence. Reduced to its simplest terms, OBP creates a conceptual “object” for people, places, and things and then uses that object as a “bucket” to store all information and intelligence produced about those people, places, and things.”<sup>2</sup>

To create the report, the 2IBCT S-2X, the operational management team, and the HUMINT collection teams used the Common Message Processor, a message creation tool found within the baseline version of the Portable Multi-Function Workstation (P-MFWS). The Counterintelligence and HUMINT Automated Reporting and Collection System, the Army’s HUMINT program of record for HUMINT information, does not currently have the Common Message Processor on the image baseline. To bridge this gap, the 25<sup>th</sup> ID command, control, communications, computers, and in-

telligence (C4I) technician, in collaboration with the 25<sup>th</sup> ID G-2X HUMINT analysis cell officer in charge, developed a Java application called Sync, Modify, Transfer (SMT), which is capable of simultaneously generating and disseminating an S303 message and an IIR, allowing for the use of both reports. The Java application enables 25<sup>th</sup> ID HUMINT Soldiers and managers to disseminate S303 reports quickly to the unit’s Tactical Entity Database.

### **Using the S303 Report for LF 18-03**

During LF 18-03, the HUMINT collection teams reported all information using the S303 report to the operational management team. Once the team received the S303 report and reviewed it, the team populated the brigade’s Tactical Entity Database with the S303 message, generated a HUMINT source entity,<sup>3</sup> and associated the S303-generated entities with the source. This allowed the brigade intelligence support element fusion cell to visualize all HUMINT reporting on their Tactical Entity Database and on two-dimensional maps in near real time simultaneously with intelligence information populated from other intelligence disciplines. The HUMINT collection teams and operational management team used the Common Message Processor on a P-MFWS. The 25<sup>th</sup> ID HUMINT analysis cell injected S303 reports from adjacent and higher using the SMT software application. The 2IBCT S-2X and the 25<sup>th</sup> ID G-2X used the upper-tactical internet and lower-tactical internet as a means to transport the S303 report to each echelon.

During LF 18-03, the division G-2X simultaneously tested and validated SMT by creating and disseminating S303 EOBSREP messages directly to the 2IBCT S-2X and division G-2 Intelligence Fusion Server (IFS). The intent of testing both routes of creating S303 EOBSREP messages was to identify which method better enabled HUMINT collectors to rapidly learn and employ the message creation software in a decisive action training environment using upper-tactical internet and lower-tactical internet primary, alternate, contingency, and emergency (PACE) plans. In the end, the Common Message Processor software seemed to best fit the tactical needs of the HUMINT collection teams and operational management team, while the SMT better suited the division-level management needs for rapid dissemination across the battlefield.

The S303 report format allowed all echelons to have direct input into their respective IFS and Tactical Entity Database. The division G-2X used this validating event to better understand how publication authority would work if the S303 report were used in an actual decisive action fight. To achieve this, the division G-2X coordinated with the 25<sup>th</sup> ID C4I technician and the lead technology integrator for the U.S. Army

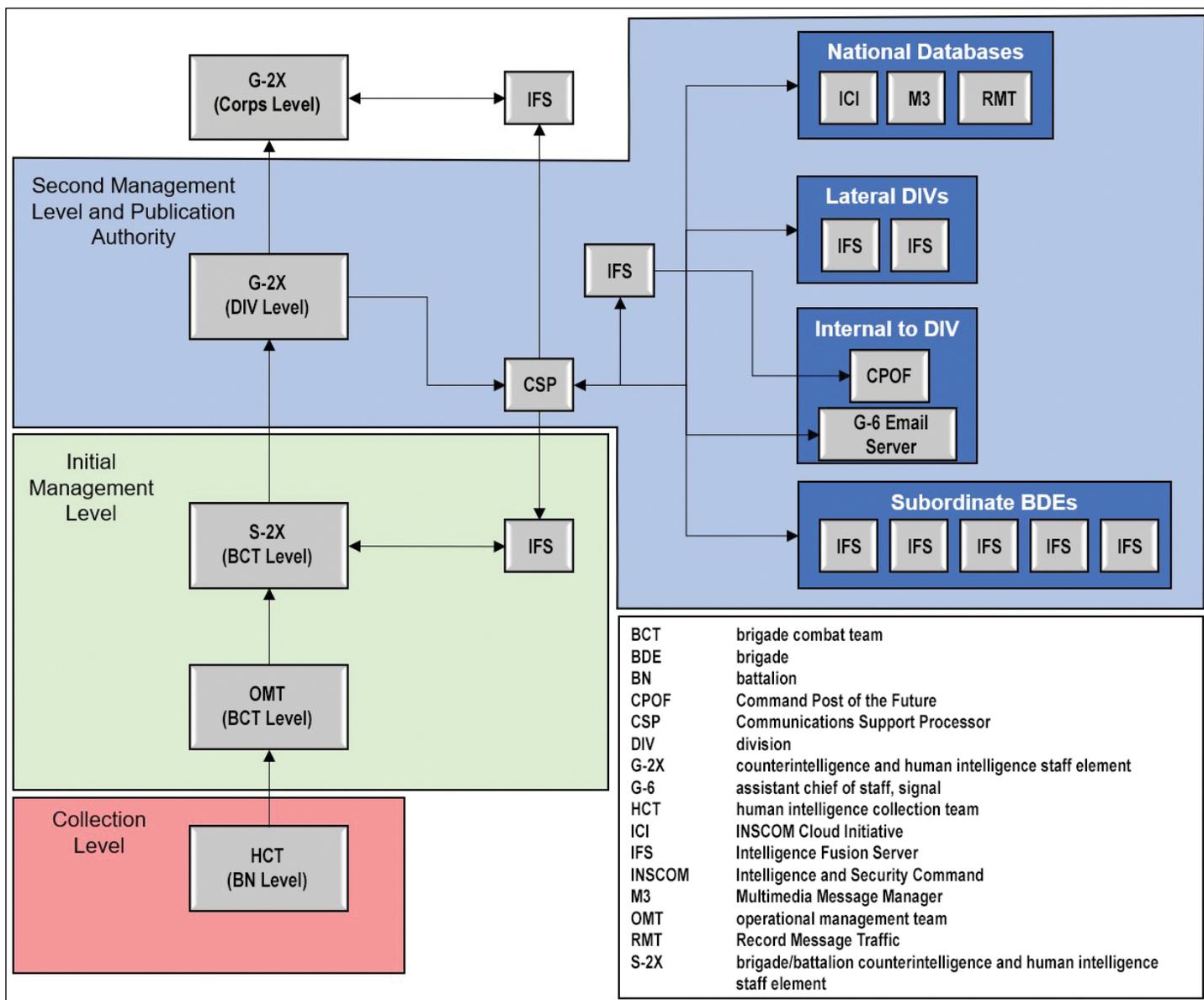


Figure 1. HUMINT S303 Report Flow

Intelligence and Security Command (INSCOM) to employ a “one-button push solution” to disseminate EOBSREPs at the division G-2X level. They considered two key factors as the intelligence architecture was built to support the EOBSREP dissemination. The first was that the reports must be discoverable by the greater intelligence community on the SECRET Internet Protocol Router (SIPR) and the Joint Worldwide Intelligence Communications System (JWICS). The second was that attachments must be transmitted with reports if reporting was related to captured enemy media or documents. Figure 1 shows the report flow, from the collection level to the publication authority.

Of note, all outlined solutions use current programs of record capabilities to facilitate EOBSREP dissemination. The 25<sup>th</sup> ID G-2X can now press one button to disseminate the EOBSREP to—

- ◆ All subordinate BCT IFSs.
- ◆ Division IFS.
- ◆ I Corps’ IFS.
- ◆ Multimedia Message Manager on SIPR and JWICS.
- ◆ Record Message Traffic on JWICS.
- ◆ INSCOM Cloud Initiative (ICI).
- ◆ 25<sup>th</sup> ID Tactical Exchange Server for a mass email to key leadership.

To enable attachments to the EOBSREP, the 25<sup>th</sup> ID G-2X created an account to upload to the 25<sup>th</sup> ID and 500<sup>th</sup> Military Intelligence Brigade-Theater (MIB-T) DCGS Integration Backbones (DIBs). Once these accounts are created, one can simply upload any type of file related to pocket litter, for example, or any other report attachment directly to the DCGS-A DIB. Intelligence community members will find an

attachment link in the EOBSREP that points them to the DIB website where they may download the associated attachment. When operating in a degraded, intermittent, and limited communication environment, the SIPR intranet established within the tactical operations center allowed the division to upload attachments locally to the 25<sup>th</sup> ID DIB. Once the upper-tactical internet was established, the 25<sup>th</sup> ID DIB federated with the 500<sup>th</sup> MIB-T DIB, ensuring that the information was readily available for all outside consumers.

The division G-2X also identified several key uses of the P-MFWS software to manage and distribute HUMINT information rapidly. Since the EOBSREP automatically extracted entities into the Tactical Entity Database, once they entered that database, division G-2X managers were able to set up filters in the Journal Message Entry viewer to filter all HUMINT reports that the IFS received. This allowed a manager to conduct a quick visualization of only HUMINT re-

porting to identify trends in reporting and facilitate collection management needs for the development of priority intelligence requirements. The division G-2X manager was also able to set up alerts to notify the managers when new HUMINT EOBSREPs entered the IFS. As these messages enter the IFS, HUMINT managers across echelons can automatically send the generated enemy entities directly to mission command

systems, such as the Advanced Field Artillery Tactical Data System and Command Post of the Future, for action by maneuver and fires elements when warranted.

Many believe that HUMINT has no part in the fires process or integration with the Advanced Field Artillery Tactical Data System because of information validation concerns; however, after using the S303 report during LF 18-03, 25<sup>th</sup> ID realized a significant potential to increase the overall effectiveness of HUMINT reporting. According to ATP 3-60, *Targeting*, "Target selection standards are criteria applied to enemy activity (acquisitions and battlefield information) and used in deciding whether the activity is a target. Target selection standards put nominations into two categories: targets and suspected targets. Targets meet accuracy and timeliness requirements for engagement. Suspected targets must be confirmed before any engagement."<sup>4</sup>

During exercise LF 18-03, 2IBCT successfully identified how to use a HUMINT S303 report to relay HUMINT information

to the brigade fires section through the DCGS-A infrastructure. The targeting process showed HUMINT S303-derived targets as suspected targets until a confirmation of the target location error and dwell time could be established.<sup>5</sup> Field artillery intelligence officers at the division and corps level or the BCT targeting officer at the BCT level must verify accurate information from a reliable source before declaring it a target if the elapsed time exceeds dwell time. The dwell time of the target determines whether to engage based on the likelihood of the target moving.<sup>6</sup>

Over the course of the exercise, the 2IBCT S-2X and operational management team assisted in the execution of approximately four lethal fire missions as a direct result of HUMINT S303s. Figure 2 shows the data that typically feeds into the fire mission execution function. During each fire mission, the 2IBCT S-2X was able to send the entities derived from the HUMINT S303 report directly to the

fires section. Immediately upon receipt, the fires section began an assessment of the suspected target. To confirm targets derived from HUMINT reporting, the fires section cross-queued geospatial intelligence and full motion video platforms, almost instantaneous to the receipt of the HUMINT S303 report to verify the targets at the reported locations. Once the 2IBCT S-2X had received the report, the process of disseminating the HUMINT S303 information to execution of fire mission was 4 minutes. The overall process from point of collection to execution of fire mission was 15 minutes.

Lastly, the division G-2X established a data pipe directly to the ICI for EOBSREP analytic efforts. The ICI allowed the EOBSREP to pass through text analytic software and be correlated against multiple other intelligence reports. This also allowed the greater intelligence community to visualize in real time the 25<sup>th</sup> ID HUMINT common operational picture and common intelligence picture. This validation proved that personnel across the intelligence community would have access to the reporting that the HUMINT S303 report provided, in raw report format and in extracted entity format. After pushing the HUMINT S303 entities to the ICI, HUMINT managers within the division G-2X could use the Unified Video Dissemination System overlay on the ICI to watch real-time geospatial intelligence full motion video feeds of the constructed and virtual environment within the



Figure 2. Fire Mission Execution<sup>7</sup>

Lower-Tactical Internet Plan					
	P	A	C	E1	E2
	JCR	Point 2 Point FM	ANW2	TACSAT - Data	TACSAT - Voice
P	SMDL S303	PDA-184 S303 file transmit	CMP on P-MFWS	PDA-184 S303 file transmit	Voice S303
A	Free message S303	PDA-184 S303 chat transmit	CMP/SMT on CHARCS	PDA-184 S303 chat transmit	
C	Chat S303	Voice S303 relay	CHARCS free text message	Voice S303 relay	
E			Sharedrive		

Upper-Tactical Internet Plan				
	P	A	C	E
	JNN	TDN-1	TDN-3	TDN-2
P	Direct CSP/IFS SMTP MSG	CHARCS GENADMIN	Direct CSP SMTP MSG	Direct CSP SMTP MSG
A	Exchange email	Direct IFS SMTP MSG	Sharepoint	Sharepoint
C	Jabber/Transverse file transfer	Sharepoint	Sharedrive	Sharedrive
E	Sharedrive	Sharedrive		

ANW2	adaptive networking wideband waveform	JNN	joint network node
CHARCS	Counterintelligence and Human Intelligence Automated Reporting and Collection System	MSG	message
CMP	Common Message Processor	P-MFWS	Portable Multi-Function Workstation
CSP	Communications Support Processor	SMDL	semantic model definition language
FM	frequency modulation	SMT	Sync, Modify, Transfer
GENADMIN	general administration (message)	SMTP	Simple Mail Transfer Protocol
IFS	Intelligence Fusion Server	TACSAT	tactical satellite
JCR	Joint Capabilities Release	TDN	Tactical Data Network

Figure 3. Lower- and Upper-Tactical Internet HUMINT PACE Plan

scenario. This allowed the division G-2X to quickly attempt to validate HUMINT reporting as it came in against what was being pushed via the ICI.

**The Importance of a Well-Developed PACE Plan**

To ensure successful dissemination of the S303, 25<sup>th</sup> ID needed a well-developed PACE plan. During LF 18-03, the G-2X and S-2X employed a diversified lower-tactical internet and upper-tactical internet PACE plan to disseminate the S303 EBSREP. Figure 3 provides a snapshot of the designed and implemented PACE plan used during LF 18-03.

The PACE plan ensured the G-2X and S-2X remained synchronized on all S303 messages, but more importantly, it allowed the analysis and control element and the brigade intelligence support element to communicate while in degraded, intermittent, and limited communication environments.

During LF 18-03, 25<sup>th</sup> ID successfully used the S303 report as the HUMINT solution to assist in providing object-based

production to the 25<sup>th</sup> ID’s all-source analysts operating in a decisive action training environment. This, combined with the capability to integrate other intelligence disciplines’ object-based production, allowed 2IBCT to initiate fire missions based on initial HUMINT reporting. The reporting had to be vetted, cross-queued, and verified before it could be actioned; however, because of the 2IBCT HUMINT’s ability to execute object-based production for its analysts, the HUMINT section was capable of increasing overall HUMINT effectiveness in a decisive action environment.

The use of the P-MFWS for HUMINT operations greatly increased throughout the duration of LF 18-03. The G-2X and S-2X identified the following key capabilities that DCGS-A can offer HUMINT operations if implemented in conjunction with a well-thought-out PACE plan and use of the S303 report in a decisive action environment:

- ◆ HUMINT teams employing a DCGS-A Multi-Function Workstation are able to visualize the current common

operational picture and common intelligence picture in real time.

- ◆ Using historical data from the Tactical Entity Database, real-time source-directed requirement generation supports collection operations.
- ◆ Object-based production facilitates standardized reporting and visualization of intelligence across the brigade intelligence warfighting function and mission command systems.
- ◆ P–MFWS are able to visualize HUMINT source entities, which facilitates management and intuitive analyst actions in support of HUMINT operations.
- ◆ HUMINT teams can see real-time data input from the Intelligence and Electronic Warfare Tactical Proficiency Trainer and other intelligence disciplines, which facilitates the real-time generation of source-directed requirements and priority intelligence requirements.
- ◆ Management sections can execute past mission analysis against enemy prisoners of war levied against additional intelligence disciplines in real time.

### Subsequent Training Exercise

In the first quarter of fiscal year 2019, 2IBCT deployed to the Joint Readiness Training Center. During the rotation, they once again employed the S303 as the primary tool for reporting intelligence information at the tactical level. They benefited from the use of structured data tools at the training center. For example, the teams were able to report information in less than 10 minutes because the S303 could be generated quickly. In addition, the use of the P–MFWS to transmit structured data enabled small file sizes. The operational management team was also able to generate source-directed requirements easily because they had the brigade’s visualization of information via the Tactical Entity Database.

### Conclusion

During LF 18-03, the 25<sup>th</sup> ID HUMINT enterprise successfully validated the use of the S303 EOBSREP as a mecha-

nism to disseminate HUMINT information and execute object-based production at the division and brigade echelons. For the past few years, the HUMINT community has failed to adapt to the DCGS–A environment. Use of the S303 report allowed 25<sup>th</sup> ID HUMINT to better integrate into the DCGS–A infrastructure and mission command system platforms, while simultaneously using the equipment the Army provides on the modified table of organization and equipment to execute data transmission in upper-tactical internet and lower-tactical internet beyond line of sight environments. 

### Endnotes

1. The S303 Enemy Observation Report (EOBSREP) is an Army specific U.S. message text format report that can be generated within mission command systems. It is used to exchange essential elements of enemy activity. Forward observers, scouts, or other forward elements use this message to report to their higher headquarters. Department of the Army, Field Manual (FM) 3-52, *Army Airspace Command and Control in a Combat Zone* (Washington, DC: Government Publishing Office [GPO], 1 August 2002 [obsolete]), A-3.
2. Catherine Johnston, Elmo C. Wright, Jr., Jessica Bice, Jennifer Almendarez, and Linwood Creekmore, “Transforming Defense Analysis,” *Joint Force Quarterly* 79, 4<sup>th</sup> Quarter 2015 (October 2015): 13, [http://ndupress.ndu.edu/Portals/68/Documents/jfq/jfq-79/jfq-79\\_12-18\\_Johnston-et-al.pdf](http://ndupress.ndu.edu/Portals/68/Documents/jfq/jfq-79/jfq-79_12-18_Johnston-et-al.pdf).
3. The term *HUMINT source entity* refers to an object entity within the Portable Multi-Function Workstation. The workstation is not designed for, nor should it ever be used for, source management operations. This entity’s use is primarily to visualize intelligence reporting associated to the source entity for link diagram purposes.
4. Department of the Army, Army Techniques Publication (ATP) 3-60, *Targeting* (Washington, DC: U.S. GPO, 7 May 2015), 2-4.
5. Target characteristics consist of size, accuracy, and target location error requirements for each weapon systems.
6. Department of the Army, ATP 3-60, 2-8.
7. Department of the Army, FM 6-60, *Tactics, Techniques, and Procedures for the Multiple Launch Rocket System (MLRS) Operations* (Washington, DC: U.S. GPO, 23 April 1996 [obsolete]), 5-5.

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