



# Field Artillery Intelligence Support – Saber Junction 25

## Integrating Intelligence and Targeting Tools during a JMRC Rotation

By CPT Sterlin Baychoo

**T**his article outlines how the Field Artillery Squadron (FAS) S2 integrated Gaia Maven, Sheets Maven, Q50/Q53 radar acquisitions and the Counter Fires (CF) chat to improve targeting accuracy and speed during Saber Junction 2025 (SJ25). The FAS S2 team developed a method for converting radar-derived data into visualized, targetable intelligence using only Controlled Unclassified Information (CUI) systems, reducing target time decay and demonstrating predictive analysis of enemy (ENY) artillery locations.

### Introduction

The intended audience of this article is Military Intelligence (MI) professionals, Field Artillery (FA) teams and leaders preparing for Combat Training Center (CTC) rotations. It first outlines the operational workflow, then presents a case study from SJ25, observations during the CTC and finally offers recommendations. The goal is to demonstrate a repeatable method to produce accurate, time-sensitive intelligence using non-SIPR systems to support fires and targeting.

### Background

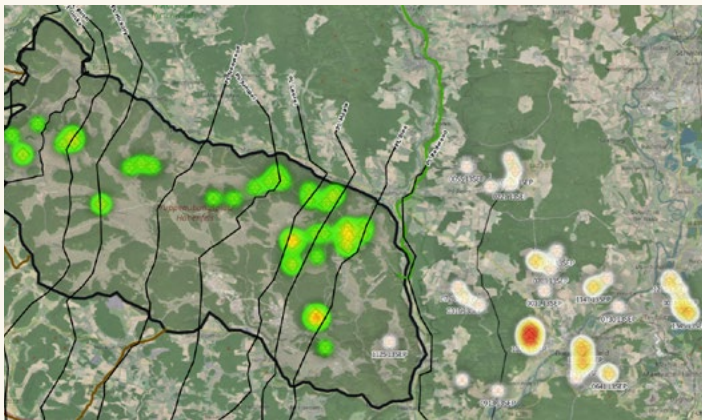
In September 2025, the 2d Cavalry Regiment (2CR) conducted SJ25, a Joint Multinational Readiness Center (JMRC) rotation. During SJ25, the Field Artillery Squadron (FAS) Intelligence Team developed a NIPR-based workflow to generate targetable intelligence using only CUI systems. This eliminated delays caused by SECRET-level dissemination processes.

The enemy order of battle (ORBAT) included mechanized infantry, armor, self-propelled artillery, multiple rocket launchers, special purpose forces and air defense/counter-battery systems (reference: Odin WEG > CTC > JMRC > ORBAT > 6CAA). This article, written from the FAS S2 perspective, captures the methods that were most effective during the rotation.

### Operational Workflow

Successful integration began with personnel and proximity. The FAS S2 team was physically collocated with the Counter Fires (CF) team and actively engaged in the CF chat. This allowed face-to-face coordination and immediate data sharing.

*U.S. Soldiers assigned to the 101st Airborne Division conduct cold load training during Combined Resolve 26-1 at the Hohenfels Training Area, Joint Multinational Training Center (JMRC), Germany, Oct. 10, 2025. JMRC's Combat Training Center rotations like Combined Resolve drive unrivaled innovation in the U.S. Army Europe and Africa area of operations. (U.S. Army photo by Sgt. Christian Aquino)*



In time-sensitive environments, even seconds matter. This proximity enabled real-time decision making and minimized delay between radar acquisition and fire-mission generation. During SJ25, this setup consistently produced actionable intelligence within the target engagement window.

### Data Input and Organization

Sheets Maven served as the central tool for organizing and analyzing radar-derived data. Due to current system limitations, data entry was manual. The FAS S2 created daily Point of Origin (POO) and Point of Impact (POI) sheets, segmented by 0001–2359 time blocks. Each row began with a timestamp, followed by the assessed equipment (ENY icon), MGRS grid and supporting fields. Note: Gaia Maven will not display entries without both MGRS grid and ENY icon input. To streamline workflow, column formats were standardized between POO and POI sheets, enabling rapid copy-paste between datasets.

### Visualization and Analysis Using Gaia Maven

Once entered into Sheets Maven, POO and POI data populated on Gaia Maven. Time, date and equipment icons were visually on display. Furthermore, when users clicked on equipment icons, associated metadata (rounds, volley, grid, equipment name) appeared in the right panel.

- POO analysis used quick visual grouping of ENY locations relative to time, aiding in assessments of ENY movement and loiter patterns.
- POI analysis revealed how the ENY wanted to shape the battlefield through area denial, fire support coordination and/or precision targeting of key friendly assets.
- By comparing POO and POI entries, this provided insights into ENY tactics, techniques and procedures (TTPs).

### Case Study: Determining ENY Weapon Systems

Scenario: Radar acquisitions showed 60 rounds of 152 mm fired in six volleys. Using the assumption of 1 round per gun per volley, this suggests a 10-gun element. Note: the number of rounds and volleys aren't always precise. The FAS intel team uses multiple reads throughout the day to determine the ENY equipment size.

Assessment: Based on ENY ORBAT, this was likely a 2S19 battery. The assessed range between POO and POI was

approximately 24 km—consistent with the 2S19's max effective range. The 2S35 has a significantly longer range (~70 km) and is higher in the ENY commander's HPTL. Given the risk of counterfire, it is unlikely the ENY would unmask 2S35s for this mission set.

### Time Analysis/Pattern of Life

Over a four-hour period, the ENY fired three times without displacing from the same PAA. Over three days, this same battery fired four times before displacing. This indicates a stable pattern of life, allowing predictive analysis and targeting based on previous behavior. Using that information, a 500-meter radius was drawn around the last known locations to cue Unmanned Aerial System (UAS) collection or Ground Moving Target Indicator (GMTI) tracking.

### Quick Turn Analysis

Often the FAS S2 team would draw a radius around the last known grouped ENY locations to assess potential emplacement and-or displacement patterns by time. The radius was determined by where the last PAAs were acquired by the CF team; if the analyst determined a reasonable radius, such as a 500-meter or smaller zone, this assessment cued or requested a UAS asset to determine the ENY grid. This analysis enabled rapid targeting data or cues an Intelligence Collection (IC) asset.

### ENY Battlefield Shaping Insights

The POI analysis revealed how the ENY shaping efforts such as targeting key assets, creating chokepoints and-or area denial were implemented by the ENY Commander. This information informed friendly force maneuver and counter-fire strategies. Further refinement looked at the POO analysis highlights on how the ENY emplaced and displaced PAAs, providing insights into their preferred methods of survivability. This data created predictive analysis of future ENY actions such as where we assessed the ENY would be next.

### Observations and Lessons Learned

From the early stages of the engagement against the ENY, the 2CR Fires Intelligence team assessed the ENY was committing to area denial of Key Terrain and Avenues of Approach IVO PL Ironwood using their fires assets. This tactic later evolved into the ENY shaping 2CR on the North and South of the 2CR AO in an attempt to funnel Friendly Forces into the central corridor of the ENY's choosing. The ENY Fires went unchallenged for a majority of the CTC; this was in part due to the ENY assets being out of range of 2CR organic fires and targets nominated to Division by the Counter Fire cell not being actioned in a timely manner (target decay) or at all. When there were opportunities in range of 2CR organic fires, the hurdles were a lack of organic Medium Range Reconnaissance (MRR) assets to cue. Additionally, requesting dynamic re-tasking of SUAS ran into the challenges of time decay for the potential target, range and durability of organic SUAS and maneuver squadrons competing priorities.

## Recommendations

- **FAS S2:** Standardize Sheets Maven column headers for POO/POI and data input formats. Build out the templates pre-exercise.
- **Regimental S2:** Host quarterly training on Gaia/Sheets integration. Include IC asset cueing drills and alternate plans for collection to support targeting.
- **Counterfire Cell:** Request Geospatial Analyst (35G) tasking for direct GMTI analysis and support. 35G can follow ENY displacement using GMTI to determine the next ENY PAA for accurate counterfires.
- **Innovation 2CR:** Prioritize the development or purchase of fixed-wing MRR concept to resolve range inhibited collection.

## Conclusion

The integration of Gaia Maven, Sheets Maven and counterfire data enhances the ability to analyze and visualize critical data. A commander can look at the heatmap and visualize how the ENY wants to shape the battlefield; the intelligence analyst can look at the hard data on Sheets in conjunction with the Gaia layer and create predictive analysis. This NIPR-based process eliminated classification delays and enabled collaboration with the CF team in real-time. These methods are scalable, repeatable and should be trained across the intelligence community. By adopting the recommendations outlined in this article, Field Artillery units can achieve greater operational effectiveness and maintain a decisive advantage on the battlefield.

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