Spc. Tiffany Challies and Sgt. Terrlyah Jackson from the 470th Military Intelligence Brigade conduct preventive maintenance checks and services on an intelligence communication system called TROJAN SPIRIT in the new brigade motor pool.

Maintenance Management in a Military Intelligence Brigade

Enhancing maintenance management, aligning maintainers to the mission, and obtaining an adequate maintenance facility allowed the 470th Military Intelligence Brigade to conduct its mission with minimal contractor support and reduce pass-back maintenance.

■ By Maj. Joseph C. Zabaldano and Chief Warrant Officer 4 Louis Watkins

Enhancing the Army's intelligence, surveillance, and reconnaissance (ISR) capability has been a strategic priority for the past decade. However, the traditional acquisition model is not agile enough to field technologically relevant ISR equipment. This has led to the procurement of nonstandard ISR equipment, much of which has been maintained with contractor support.

The 2014 Army Strategic Planning Guidance lists a modern, ready Army as a priority. Leaders at all levels must assist in validating nonstandard equipment as programs of record, providing sustainment plans that are auditable and less risk averse in a fiscally constrained environment.

The 470th Military Intelligence (MI) Brigade followed this guidance by enhancing maintenance management, having mission-aligned unit maintainers, and procuring a maintenance fa-

cility that significantly improved unit readiness and reduced "passback" maintenance requirements.

Enhanced Maintenance Management

The first step in addressing the complex maintenance environment found in the MI community was to improve maintenance management. The fundamental tools at the brigade level to establish effective maintenance management were the Standard Army Maintenance System–Enhanced (SAMS–E) logistics information system (LIS) and a holistic command maintenance discipline program (CMDP).

The 470th MI Brigade reviewed its SAMS–E data files and loaded all modified table of organization and equipment (MTOE) items that had equipment readiness codes A or P and all special purpose commercial off-the-shelf equipment into SAMS–1E. This established visibility of all line item numbers of ISR equipment, including the Distributed Common Ground System–Army (DCGS–A), giving maintenance managers a single database for managing system maintenance as opposed to the contractor reports that were previously used.

To reinforce this effort, the 470th MI Brigade became the first unit in the Intelligence and Security Command to establish a SAMS–2E site, removing it from its previous LIS hierarchy within U.S. Army South. Managing a SAMS–2E site enabled the brigade maintenance officer to maintain quality control of SAMS–1E reporting throughout the brigade. [SAMS–2E transmits data from SAMS–1E systems to a central database at the Logistics Support Activity, from which the data can be viewed by any unit or command Armywide.]

Effects of Using SAMS–E for ISR

Loading ISR equipment data in SAMS–1E allowed the brigade to shift the focus of their maintenance meetings from traditional ground equipment, which is underused in an MI brigade, to ISR equipment readiness.

The unit now could centrally record the total cost of ISR equipment ownership through man-hour reporting. Data collection allowed the unit to justify contractor support or force structure modification to reduce sustainment risk. This shift in maintenance focus invigorated the unit CMDP. It became about more than passing a semiannual inspection or winning an Army Award for Maintenance Excellence.

Entering all ISR systems into SAMS–1E had the added advantage of improving the 470th MI Brigade's posture to conduct its GCSS–Army Wave II fielding. GCSS–Army Wave II fielding is scheduled between 2015 and 2017 for units across the Army and will consolidate the functions of SAMS–E and the Property Book Unit Supply Enhanced (PBUSE).

Logisticians have the challenge of consolidating nonstandard equipment into standardized national stock numbers and validating that all PBUSE data matches SAMS–E data files. Entering nonstandard ISR items into SAMS–1E positions the 470th MI Brigade to convert to GCSS–Army with minimal disruption and effort.

Mission-Aligned Unit Maintainers

After gaining control of all its maintenance data, the brigade identified a second problem. The unit maintainers were not structured to support maintenance requirements. To address this problem, the 470th MI Brigade aligned its military occupational specialty (MOS) 35T (military intelligence systems maintainer/integrator) Soldiers to support its ISR equipment in two phases.

In phase one, the brigade deputy commanding officer consolidated its MOS 35Ts by geographic

A Management Technique for a Help Desk Random Access Memory Update

A Distributed Common Ground System–Army (DCGS–A) operator requests diagnostic support from the 470th Military Intelligence Brigade help desk for an underperforming workstation. The person running the help desk generates a trouble ticket in Altiris.

In response, the MOS 35T determines if the system has hardware or software faults and provides an initial estimate of time or parts needed to restore the system to a fully mission capable condition. If the trouble ticket assessment indicates a need for a labor-intensive hardware repair, the 35T conducts full preventive maintenance checks and services and annotates equipment deficiencies on the posted 5988–E, Equipment Inspection and Maintenance Worksheet, at the workstation.

If the listed deficiencies note a need for RAM, the part is ordered through SAMS–1E to the Army Supply System or it is purchased locally. The help desk ensures that SAMS–1E captures the demand for both requisition methods. Once the RAM is procured and installed and the workstation is functioning properly, the trouble ticket in Altiris and the SAMS–1E work order are closed.

Thus, this new hybrid maintenance management process establishes accountability of the RAM in case the unit is audited, captures demand history for shop stock in SAMS–1E, and records total cost of ownership through man-hour reporting (direct and indirect labor).

location under the intelligence/electronic warfare equipment technician warrant officer (MOS 353T) to establish an intelligence systems support section (IS3). As officer-in-charge of the IS3, the 353T warrant officer counseled and encouraged all 35Ts to complete DCGS–A mobile field service engineer training and gain the information assurance technology level II certification. This certification enabled the 35Ts to perform network support, client support, and associated maintenance tasks.

Hybrid Maintenance Management

In phase two, the IS3 section identified the need to establish a DCGS–A help desk and implement a hybrid maintenance management technique to effectively execute its mission. SAMS–1E cannot effectively manage information technology (IT) trouble tickets, and Altiris integrated IT life cycle management solutions software does not have the data collection capabilities of SAMS–E. Therefore, the help desk must use SAMS–1E and Altiris software in tandem for tracking work orders in a new hybrid maintenance management concept.

Client support that does not require hardware repair or replacement, such as unlocking an account, updating software, or connecting peripherals, only generates an Altiris trouble ticket from the help desk. Maintenance work orders are generated from SAMS–1E for equipment upgrades and fielding, equipment modification work orders, warranty work, quality deficiency reports, and reports of discrepancies.

DCGS–A is a primary ISR system. The 470th MI Brigade has one of the Army's five DCGS–A fixed sites, and the system is the center of gravity for the unit. Establishing the DCGS–A help desk and the IS3 shop reduced the unit's reliance on contractor support. Forecasting and conducting the required information assurance certification training to work on the DCGS–A system prevented mission disruption when the unit

Recommendations for Improving Maintenance Management in a Military Intelligence Brigade

The S–4 staff of the 470th Military Intelligence Brigade identified the following recommendations based on the lessons they learned when taking steps to improve the brigade's maintenance operations.

Logistics Contract Management

Consider adding these concepts to sustainment contracts:

☐ The effectiveness of contractors recording man-hours (direct and indirect) into LIS systems.
☐ The effectiveness of contractors using Army LIS systems for maintenance management.
☐ The effectiveness of contractors incorporating contractor-provided equipment into the Army supply system.

Program Managers

Program managers should avoid proprietary acquisitions that do not allow qualified sustainers to maintain Army equipment, especially if the equipment does not have a life cycle replacement before the warranty expiration.

Better management for ISR equipment sustainment contractors is needed in the field. Contractor support in today's fiscal environment has been greatly reduced, but mission requirements have not decreased.

Units must maintain certifications of their maintainers using program manager training requirements and information management funds.

Logistics and MI Branch Proponent

Not enough automated logistical specialists are available to support the GCSS–Army transition across the Army. The 470th MI Brigade elements at Fort Sam Houston, Texas, do not have a single automated logistical specialist authorization.

All 35T personnel should have information assurance technology level II certification qualifications before they graduate from advanced individual training.

Training for military intelligence systems maintenance/integration technician warrant officers should include more maintenance management. Unit maintenance warrant officers must ensure all Army-managed equipment requiring a preventive maintenance checks and services is captured during equipment readiness reporting.

GCSS–Army Developers

Incorporating the functions of Altiris and Remedy Software capability in GCSS–Army would integrate the hybrid maintenance management technique across the Army. This would lead to better life cycle management and a source for sustainment data for IT equipment across the Army.

lost support from field service engineer contractors during the fiscal year 2013 sequestration.

The hybrid maintenance management process enhanced supervisory control of the IS3 section. The SAMS–1E work order log could be used to manage priorities of work, and it provided a troop-to-task document for 35Ts.

From February 15, 2014, to May 1, 2014, the brigade recorded in SAMS–1E more than 120 work orders that previously would not have been available for sustainment data mining. Accounting for contractor and 35T repair times in SAMS–1E provided the unit with accountability and total ownership cost of the unit's key ISR systems.

Enhanced Maintenance Facilities

To reduce pass-back maintenance, better facilities were required for the 470th MI Brigade maintainers at Joint Base San Antonio, Texas. A $30 million military construction project for a tactical equipment maintenance facility had been planned with the installation since 2009.

As of 2013, the unit had negotiated the paving of a gravel motor park and construction of warehouse space that could support most field-level maintenance tasks. Some of the warehouse space was dedicated to the IS3 section for intelligence and electronic warfare equipment maintenance; however, these facilities proved to be inadequate for the IS3 shop, primarily because of the lack of environmentally controlled work space.

The 470th MI Brigade coordinated with the 502nd Civil Engineering Squadron to obtain a tactical equipment maintenance facility to support all maintenance activities. Because of these efforts, the brigade now has the necessary work space to support the IS3 shop and ground maintainers.

The tactical equipment maintenance facility gave the unit the ability to complete all field maintenance tasks. With overhead lift capability, the unit completed a more than 100-day-old pass-back maintenance work order on its wrecker.

The environmentally controlled test measure diagnostic equipment work area in the tactical equipment maintenance facility gave the IS3 section proper workspace to maintain Trojan Special Purpose Integrated Remote Intelligence Terminals and other key ISR systems.

This new facility decreased repair and return times and increased operational readiness rates for the brigade. Adding a communications security vault and unit equipment bay space has also increased equipment storage, which was a problem that the Intelligence Security Command G–2 identified with the former warehouse space and motor park.

Enhanced maintenance management, mission-aligned maintainers, and an adequate maintenance facility better positioned the 470th MI Brigade to conduct its mission with minimal contractor support and reduced pass-back maintenance. Collecting maintenance data provides visibility of sustainment requirements, assesses risk in sustainment support with contractor reductions, and justifies MTOE force structure through man-hour reports.

The ability to collect LIS data provides program managers and the Logistics Support Activity with data mining material for ISR equipment, which leads to better allocation of sustainment dollars in the cradle-to-grave concept of ISR equipment.

Loading ISR equipment in SAMS–1E prepares the unit for Wave II of the GCSS–Army fielding. As long as proprietary equipment is fielded to support the Army's mission, contractor support will be necessary at certain levels. However, with proper

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maintenance management, units can empower their maintainers to perform some of the maintenance tasks and reduce risk in case contractor support is removed.

These 470th MI Brigade initiatives are a proven way to empower commanders with mission readiness information to sustain the force, center mission essential equipment in CMDP, and share sustainment knowledge that can modernize our force.

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