

Case study

United States Navy

Navy GPETE Group:
Labeled for Success



At a glance

Industry: Government

Application: Inventory Management

More than \$500K in taxpayer savings expected in the first year of implementation

When our nation's Navy gets the call to deploy, all hands must be ready to ship out at a moment's notice and all test equipment onboard must be calibrated for optimum performance, ready for action. To ensure optimum fire control, navigation and communications systems operation, the Navy charters the General Purpose Electrical/Electronic Test Equipment (GPETE) program to procure test equipment for performing corrective and preventative maintenance.

Old Systems, Accuracy Problems

As part of that mission, the GPETE team is charged with keeping track of the hundreds of thousands of pieces of test equipment located onboard naval vessels and at shore support facilities, including calibration facilities and repair depots. The team was using a cumbersome, labor intensive process in which a GPETE team member accessed a central database for a list of equipment to inventory. The team member then went to the warehouse, looked for the items, located their serial numbers and hand wrote them on a piece of paper.

Once the serial numbers of one hundred pieces of equipment had been collected, the team member returned to a central office where the numbers were typed into a desktop computer. These numbers were then matched with coordinating numbers

in the central database, the item was identified and any necessary corrections to the database were entered. GPETE ran into problems when an item was inventoried again but not identified in the same way or when the data was entered in a different way than during previous inventories.

"With our old, handwritten system it was just so easy to identify inventory incorrectly," said Kathy Saunders, deputy program manager for Naval Sea Systems Command's Test, Measurement and Diagnostic Equipment program. "Numbers were transposed during handwriting or were typed incorrectly, or a team member might use the wrong identification altogether. With so many opportunities to make identification errors, we were spending a lot of our resources on redundant tasks and even the most conscientious team members made mistakes."

New Mandate, New Savings

When the Department of Defense mandated the unique identification (UID) of all serially tracked materials, GPETE management took the opportunity to incorporate standardized identification detail into its labels, stipulating that all its equipment UID labels include the equipment's manufacturer number, serial number and cage number. Commander Tad Teichert, US Navy AIT, serial



number tracking program manager at Naval Supply Systems Command, comments on GPETE's approach to the UID initiative.

"With the old, manual processes, we've had difficulty keeping accurate inventory of the Navy's test equipment," said Teichert. "With UID, everything is marked with a common identification system, and the long term goal is to have a central information source that all users can go to for an accurate accounting of what we have, who made it and where it is kept.

"UID allows all our data – from workload analyses, end-of-period reliability analyses, reliability and maintainability indices, overall inventory and configuration data improvement – to be more accurate and more complete. In the past we've had people spending untold hours just correcting data. Now we can focus on analysis rather than cleanup. And, from a dollars perspective, an accurate inventory means we are less likely to misplace equipment and have to re-purchase."

Intermec Accepts the Mission

The GPETE group enlisted Intermec to revamp its current labeling system, bring them to compliance with the DOD's mandate, and to ensure efficient and accurate marking of legacy test equipment. Intermec provided 15 CK31G handheld devices equipped with barcode scanners and 13 mobile printers, and sourced laptop computers loaded with MSS EPRINT mobile printing software for the GPETE group as well. Intermec won the business with a combination of knowledge and experience.

"We have relied on Intermec's expertise throughout this process," said Ms. Saunders. "Intermec is very familiar with government and Navy requirements, and already worked within the Automated Information

Technology (AIT) effort. Also, Intermec hardware does everything we need to do and more – we will not need to replace it next year. Although the initial savings appear modest, the Navy is counting on these devices to provide long-term benefits and to leverage them for quite some time. Deployment into other maintenance documentation processes is anticipated to greatly increase savings.

"With this project, GPETE predicts an ongoing annual AIT labor savings of \$190,000, realized from improved data accuracy and consistency," said Ms. Saunders.

"Additionally, considering the 152,000+ items that pass through our various test equipment processes, we expect the reduction in data errors to result in a savings of \$341,250 in the first year of implementation alone."

Asset Visibility, Realized

With the new system, Intermec equipment is used to barcode test instruments as they are brought into a Navy regional calibration lab for servicing, then the central database is updated to correctly identify the item. Future process improvements will include entering the equipment's date of service into the database as well, so a schedule for future maintenance can be planned.

"These pieces of test equipment are complex instruments used in wartime, so they must be calibrated to operate correctly on demand," said Ms. Saunders. "With the previous manual item tracking process and a subsequently flawed database, it was difficult to know whether the equipment was where it needed to be to support the mission."

"Now units are either marked as they come in for calibration or during onboard test equipment assessments. Additionally,

inventory and configuration databases are corrected in real time. With this, the Navy begins to have total asset visibility of all its test equipment and knows when each piece is due for calibration."

Harboring Accuracy

The new system soon will allow the GPETE group to coordinate efforts with Navy test equipment assessment teams as well. Prior to boarding, personnel whose job is to take inventory when ships come into maintenance availability will be armed with Intermec handheld devices that are loaded with the expected inventory list, including test equipment.

The inventory team member will board the ship, pull up the equipment database on the handheld device, scan equipment on board for old barcodes and input any serial numbers on the equipment into the Intermec keypad. A custom barcode label will be printed out on an Intermec mobile printer and applied to the piece of equipment, right then, right there.

Inventory information is collected throughout the day, then the device is docked and the day's information is uploaded to the central inventory database, which is updated. For GPETE's purposes, any information that was collected on test equipment that day is transmitted to the group's test equipment database.

"The capabilities of the Intermec hardware will allow my group to leverage the work of the inventory team, greatly expanding the GPETE labor pool," said Ms. Saunders. "Together we will all get the marking done much more quickly than if each piece had to come into the lab for barcoding."

Saunders envisions benefits in using the Intermec devices far beyond the immediate future. "The initial benefit of using the Intermec devices to barcode our equipment is that it allows consistent identification of instruments throughout many of the Navy processes," Ms. Saunders concluded. "Downstream we will continue to see benefits when our ongoing readiness assessment teams use the devices and barcodes wherever consistent, accurate identification of test equipment is needed."

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