

## Applying “Inventory by Exception” to Information Technology

Physical Inventory is commonly thought of as scheduled, routine, and deliberate actions whose sole purpose is to touch, validate, and record information on groups of assets. This kind of perception is valid, but there is much more to ‘physical inventory’ than this perception implies. The validation that assets exist can also be done in an indirect manner and in a way that supports our existing business processes. This indirect method is called inventory by exception.

For the DoD, equipment accountability policy is established in DoD Instruction 5000.64, “Accountability and Management of DoD Equipment and Other Accountable Property,” May 19, 2011. As part of the 2011 update to the policy, inventory by exception is introduced as an acceptable form of collecting existence and completeness information. The paragraph describing inventory by exception is as follows:

“Inventory by exception may be authorized by the DoD Component APO. This type of inventory uses actions or transactions, (e.g., move orders, maintenance actions, calibration checks, usage logs (or flight logs)) where the items are “touched” by disinterested parties (i.e., persons without stewardship responsibilities), with supporting documentation directly associated with an accountable asset. Toward the end of the inventory cycle, an inventory is then performed on items not already inventoried by an action or transaction during the inventory period. If applicable, these types of inventories must be documented as part of the inventory plan and are subject to documented internal control procedures to ensure the validity of accountable property records.” (Enclosure 3, Section 11. a. (6))

The policy is written in a broad fashion to allow the Components of DoD to apply this method of inventory in ways that leverage their business practices. This inventory method is a common commercial practice for IT equipment, and is formally recognized as a standard practice by ASTM International (see ASTM E2132-11, “Standard Practice for Inventory Verification: Electronic and Physical Inventory of Assets”).

IT equipment has the benefit of network connections that can enable an “electronic touch” to each machine. Many routine business processes that monitor network usage can be used to document the existence of a particular asset. User logs can show the proper person was logging on to his or her assigned machine. Network servers can record the activity of pieces of equipment in the daily activity logs. Electronic “pings” can be sent to groups of computers to validate the P.C. to the MAC address. These actions are routine in nature and can provide the confirmation that assets exist and are functioning properly.

There are benefits to using routine business processes as inventory by exception. One of the first benefits is the ability to maintain separation of duty requirements. A network log is impartial, as is a usage log. The logs simply record events and are part of routine network operations. The person with custodial duties over the IT equipment would not necessarily be the person monitoring the network logs. The person monitoring the network logs has independence from responsibility for the equipment, and independence is a basic tenet of appropriate physical inventory procedures.

Another benefit is the constant stream of information delivered in a non-disruptive fashion. When inventory by exception is implemented, setting a beginning and ending throughout the year is important. As each inventory period is closed, information can be copied or analyzed to show those particular assets exist. Without an “end” date, the information would continue to flow but those responsible for inventory actions must know when to look for assets that did *not* register in the logs or network pings. The inventory people can then focus on a small number of exceptions that were not used instead of the entire population of assets they are responsible for inventorying.

A third benefit to using networks as tools to inventory assets is the advancements in software which allow specific data to be returned on each item. These enhanced network pings can provide the additional information required to ensure each accountable property record has the appropriate information recorded. Normal business processes include teleworking with virtual private networks (VPN), so it is important to recognize whether the network ping extends to machines on the VPN. This is an important distinction to note so personnel may react appropriately.

As with any traditional inventory, the procedures and plans for an inventory by exception must be documented and approved by each Component. The quality of information provided by the above mentioned techniques is only as good as our ability to apply the information toward other purposes. All personnel involved must understand how this impacts their duties, know what to do when each inventory period closes, know how to handle discrepancies, and be able to repeat these actions as part of the inventory routine.

The final benefit comes from savings in manpower. The more that readily available information is capitalized upon, the less time and energy is required to achieve the same results. The same normal business process that alerts personnel to malfunctioning equipment can also alert the property custodian to a change in equipment status (e.g. active to inactive). The normal process that registers a machine missing from the network can also alert personnel to a potential theft. Utilizing the data resources to the fullest will only enhance the inventory process, make the use of manpower more efficient, and ensure our responsibilities as stewards for the Government is met in its fullest capacity.

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