



Designation: E3298 – 21

Standard Practice for Inventory by Exception (IBE)¹

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INTRODUCTION

Physical inventory verification is the process of comparing an entity's official list of assets to the actual assets. This requires planning and execution that can incur a significant dedication of resources. Inventory verification is used to verify or assess if controls are working. Controls are used to verify the existence, condition, and location of an asset. Traditional inventory verification is conducted by directly touching assets by means of a *sight-touch* method during a scheduled inventory period.

The verification that assets exist can also be performed indirectly using IBE. IBE counts assets that have been *touched* physically or electronically during the inventory cycle as already inventoried. IBE includes actions or transactions where assets are *touched* by independent systems or disinterested parties throughout the inventory cycle. Documentation supporting the transaction should be included as part of the accountable record.

When implementing this type of inventory, it is extremely important to define what constitutes a touch. A *touch* in this context verifies asset existence.

1. Scope

1.1 This practice describes the method used to verify the existence of items on record using IBE. It does not provide a method for verification of completeness of records.

1.2 In accordance with the provisions of Practice E2132, this practice clarifies the implementation of IBE as an effective and efficient inventory practice.

1.3 This practice does not override or increase requirements specific to governmental authorities. To the greatest extent practicable, the guidance in this practice should be considered by these entities where efficiencies can be gained.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

¹ This practice is under the jurisdiction of ASTM Committee E53 on Asset Management and is the direct responsibility of Subcommittee E53.01 on Process Management.

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2. Referenced Documents

2.1 ASTM Standards:²

E2132 Practice for Inventory Verification: Electronic and Physical Inventory of Assets

E2135 Terminology for Property and Asset Management

E2495 Practice for Prioritizing Asset Resources in Acquisition, Utilization, and Disposition

E2608 Practice for Equipment Control Matrix (ECM)

3. Terminology

3.1 *Definitions*—For definitions related to property and asset management, refer to Terminology E2135.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *disinterested parties*—persons without stewardship, pecuniary, fiduciary, or other responsibilities or interest.

3.2.1.1 *Discussion*—Disinterested parties in the context of this practice are those entity and contracted personnel who are required to perform activities outlined in 6.2 who do not have asset ownership or custodial responsibility outside of the specific action being performed in relation to those outlined in 6.2. Any party who has a segregated duty in the asset addition, deletion, or edit process is inherently NOT a disinterested party.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

3.2.2 *electronic asset verification (EAV)*—electronically confirming the existence, location, and status of an asset or group of assets.

3.2.3 *existence*—a tangible asset exists and is properly accounted for at a certain time.

3.2.4 *inventory by exception (IBE)*—actions or transactions where assets are *touched* by independent systems or disinterested parties throughout the inventory cycle with supporting documentation directly associated with an accountable asset.

3.2.4.1 *Discussion—Touch* includes verification by transactions or records, that is, receiving documents, calibration or maintenance logs, intra-entity transfers, location changes, network log-in, shipping documents, network pings, etc.

3.2.5 *inventory cycle*—the inventory cycle is determined by the frequency of the inventory.

3.2.5.1 *Discussion*—The ideal goal would be to count accountable assets annually; however, an entity may determine the frequency of the count based on monetary, criticality, sensitivity, asset priority index (API) as described in Practice E2495, or on equipment control class (ECC) as described in Practice E2608.

3.2.6 *inventory period*—the time frame from initiating, conducting, reconciling, and certifying an inventory.

3.2.7 *inventory verification*—the process of comparing an entity’s official list of assets to the actual assets.

3.2.8 *network discovery tool*—a software program that performs searches to determine a touch; sometimes called a *ping*.

3.2.9 *ping*—a computer network administration software utility used to test the presence of electronically connected assets of a host on an internet protocol (IP) network.

3.2.10 *touch*—a physical, electronic, or documentary verification of the existence of an asset. Touches should update the asset record with the date of the touch, location, and other available data.

4. Summary of Practice

4.1 IBE increases the efficiency of conducting physical inventories by verifying the existence of assets by means of an independent *touch* during the inventory cycle.

4.2 Entities should realize resource savings and increased inventory accuracy using IBE as an inventory method.

4.3 This practice works in tandem with Practice E2132. Practice E2132 contains the guidance for written procedures for planning the inventory verification method.

5. Significance and Use

5.1 Asset verification is conducted to assess the accuracy of asset records and verify information regarding the asset.

5.2 Before considering a physical inventory method, take into account the current policies and procedures of your entity. Questions such as what items must be inventoried, how often inventories need to occur, and why are we conducting an inventory are important to support these policies.

5.3 IBE decreases the time required to conduct an inventory, especially as operational and asset management systems achieve a greater level of integration.

5.4 The procedures and plans for an IBE must be documented and approved in accordance with Practice E2132.

5.5 IBE allows the physical inventory process to only focus on locating assets that were not touched or physically inventoried.

5.6 IBE decreases the number of assets requiring an inventory reconciliation during a specific cycle. This can greatly increase the productivity of staff who are tasked with performing a physical inventory.

6. Inventory Touch Points

6.1 IBE can be performed when a person touches an asset, thereby verifying its existence. Inventory touch points contain information that is collected and documented on an asset during a specific point in time by someone with no vested interest in inventory results.

6.2 Below are some activities that may qualify as a *touch point*:

6.2.1 Receipt,

6.2.2 Location change,

6.2.3 Maintenance,

6.2.4 Flight plans,

6.2.5 Usage,

6.2.6 Calibration,

6.2.7 Property/asset pass,

6.2.8 Shipping,

6.2.9 Barcode label or number of the asset is updated, and

6.2.10 Quantity adjustment.

7. Electronic Asset Verification (EAV)

7.1 IBE performed electronically by a system is oftentimes referred to as EAV using a network discovery tool.

7.2 Electronic forms of verification primarily affect assets that are connected to an entity’s information technology (IT) infrastructure, such as computers, printers, and servers.

7.3 Routine processes that monitor network usage can be used to document the existence of a particular asset through the use of network discovery tools.

7.4 IT assets connected to a network can be *electronically touched* by means of a *ping* to verify the existence and location of an asset.

7.5 These types of inventories must be documented as part of the inventory plan and may be subject to documented internal control procedures used to ensure the validity of the asset record.

7.6 When the organization intends to use EAV, the asset record must include an electronic identifier, such as a media access control (MAC) address or similar identifier, that can be used to link and compare the pinged electronic item information to the asset record.