Implementation of AS5553A and how AS6081 can help

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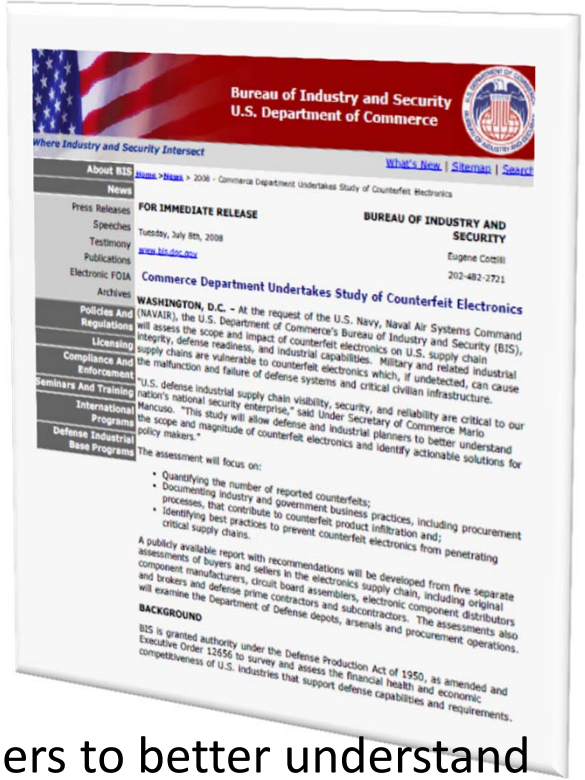
Agenda

- Context of the counterfeit parts issue
- AS5553 and AS6081 Synergy
  - Side-by-side comparison
  - Discuss why some AS6081 requirements are challenging to Open Market Distributors
- Flow down AS5553 requirements or specify compliance to AS6081?

Commerce Department Undertakes Study of Counterfeit Electronics

- July 2008, U.S. Department of Navy, Naval Air Systems Command (NAVAIR) asked Bureau of Industry and Security's (BIS) Office of Technology Evaluation (OTE) to conduct a defense industrial base assessment of counterfeit electronics
- NAVAIR experiencing increasing number of counterfeit/defective electronics infiltrating Navy systems, which in some cases caused cancellation of missions and grounding of fielded weapon systems
- "This study will allow defense and industrial planners to better understand the scope and magnitude of counterfeit electronics and identify actionable solutions for policy makers," said Under Secretary of Commerce Mario Mancuso


Bureau of Industry and Security
U.S. Department of Commerce
Where Industry and Security Intersect

FOR IMMEDIATE RELEASE
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BUREAU OF INDUSTRY AND SECURITY
Eugene Cottilli
202-482-2721

Commerce Department Undertakes Study of Counterfeit Electronics

WASHINGTON, D.C. – At the request of the U.S. Navy, Naval Air Systems Command (NAVAIR), the U.S. Department of Commerce's Bureau of Industry and Security (BIS), will assess the scope and impact of counterfeit electronics on U.S. supply chain integrity, defense readiness, and industrial capabilities. Military and related industrial supply chains are vulnerable to counterfeit electronics which, if undetected, can cause the malfunction and failure of defense systems and critical civilian infrastructure.

"U.S. defense industrial supply chain visibility, security, and reliability are critical to our nation's national security enterprise," said Under Secretary of Commerce Mario Mancuso. "This study will allow defense and industrial planners to better understand the scope and magnitude of counterfeit electronics and identify actionable solutions for policy makers."

The assessment will focus on:

- Quantifying the number of reported counterfeits;
- Documenting industry and government business practices, including procurement processes, that contribute to counterfeit product infiltration and;
- Identifying best practices to prevent counterfeit electronics from penetrating critical supply chains.

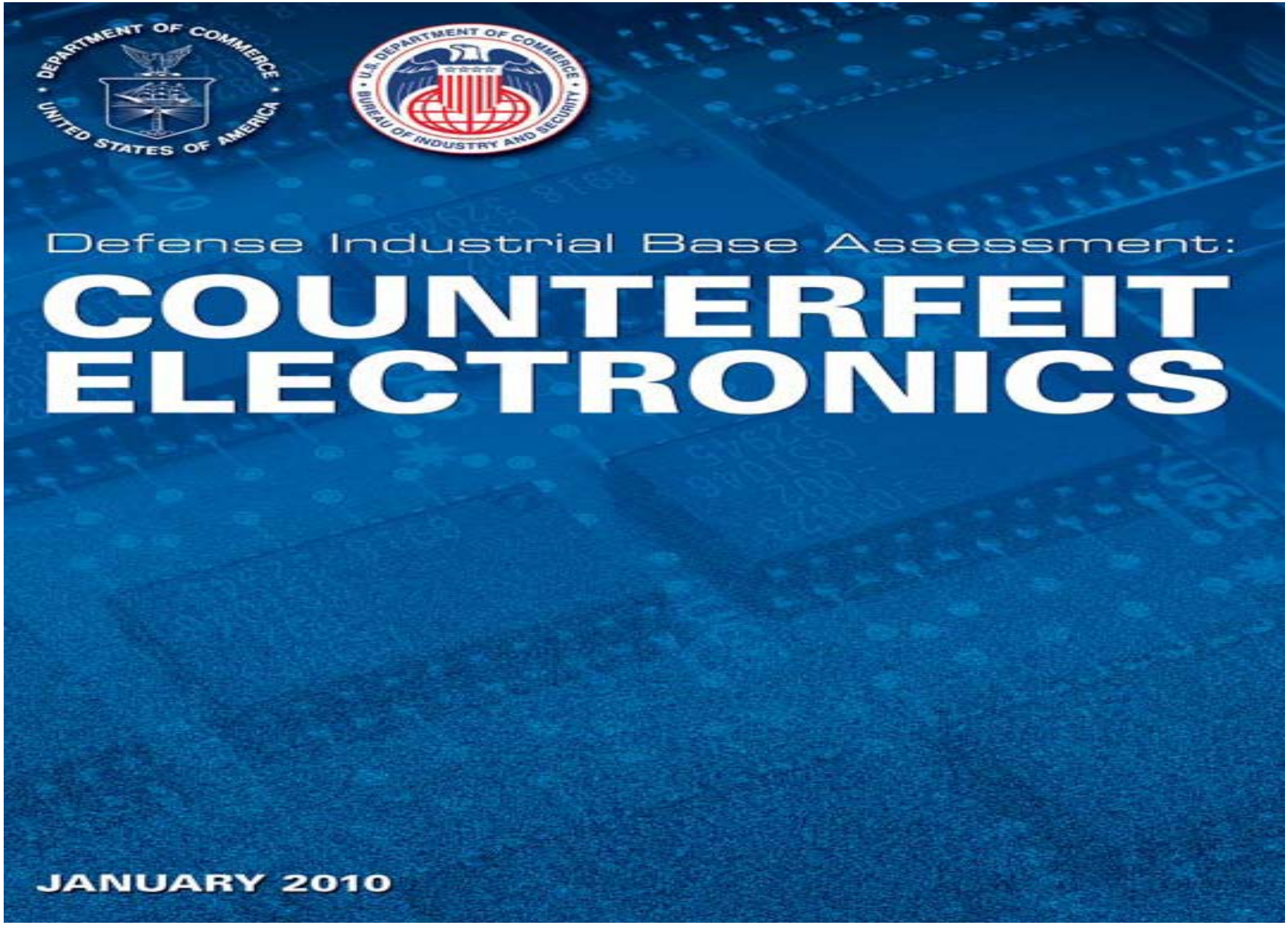
A publicly available report with recommendations will be developed from five separate assessments of buyers and sellers in the electronics supply chain, including original component manufacturers, circuit board assemblers, electronic component distributors and brokers and defense prime contractors and subcontractors. The assessments also will examine the Department of Defense depots, arsenals and procurement operations.

BACKGROUND

BIS is granted authority under the Defense Production Act of 1950, as amended and Executive Order 12656 to survey and assess the financial health and economic competitiveness of U.S. industries that support defense capabilities and requirements.

http://www.bis.doc.gov/news/2008/bis_press07082008.htm

http://www.bis.doc.gov/defenseindustrialbaseprograms/osies/defmarketresearchrpts/final_counterfeit_electronics_report.pdf



OTE General Findings

Most DoD organizations do not have policies in place to prevent counterfeit parts from infiltrating their supply chain

- DOD organizations tend to rely solely on the Defense Federal Acquisition Regulations (DFARs) to guide their procurement practices
- At the time the survey was conducted, few had developed additional procurement and testing protocols to address the problems caused by counterfeit parts

OTE General Findings

There is an insufficient chain of accountability within organizations

- Few survey participants identified a designated person or office responsible for either addressing the risks posed by counterfeit parts or handling identified counterfeit parts. This can lead to a lack of centralized data within an organization and inconsistent counterfeit avoidance practices

OTE General Findings

No one is aware of legal requirements and liabilities regarding counterfeits.

- The majority of survey participants were not aware of any legal requirements or liabilities related to the management, distribution, storage, and disposal of counterfeit parts
- OTE analysts were not able to identify any specific guidance on this issue

OTE General Findings

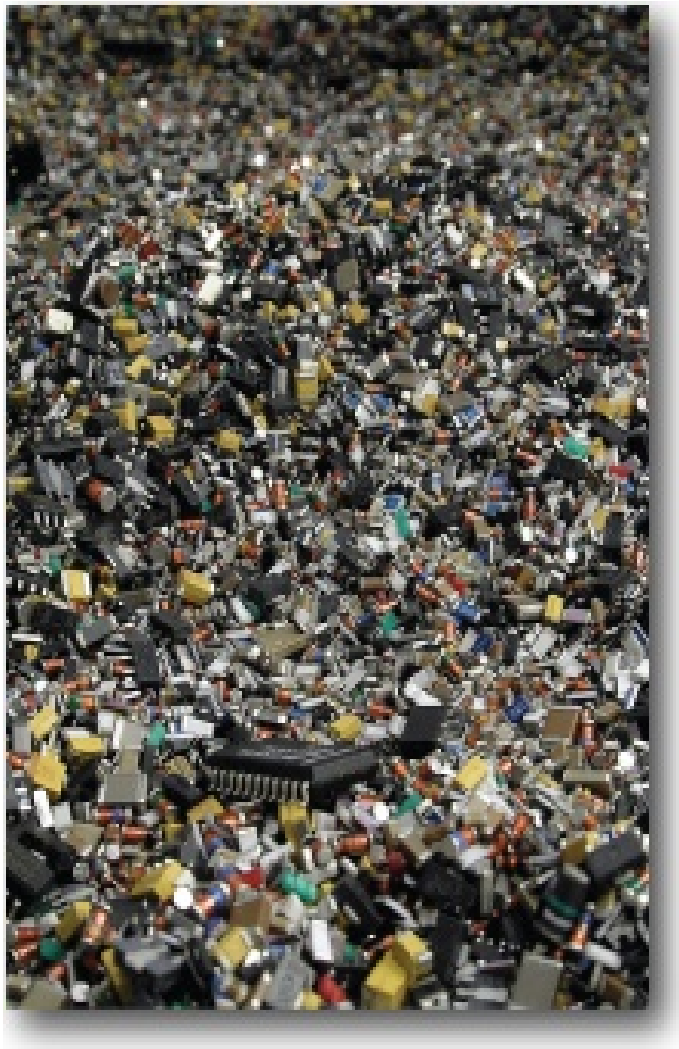
There is a lack of dialogue between all organizations in U.S. supply chain

- Survey data from the five sectors shows that organizations generally only discuss counterfeit part issues within their individual organizations and, to a lesser extent, with their customers and immediate suppliers
- This leads to a lack of information sharing throughout the supply chain which could be used to mitigate the risk of counterfeits

OTE General Findings

All elements of the supply chain have been directly impacted by counterfeit electronics

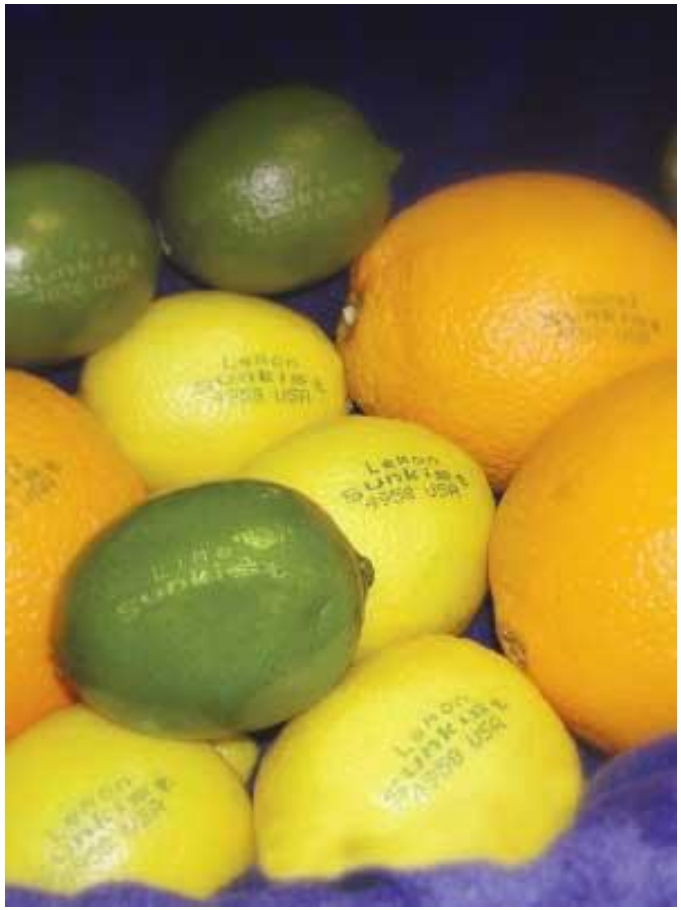
- Survey data shows that even the most reliable of parts sources have discovered counterfeit parts within their inventories



OTE General Findings

Lack of traceability in the supply chain is commonplace

- Procurement organizations at times cannot trace purchased parts back to their points of origin with any degree of certainty
- This is further compounded by the fact that many components are provided by offshore suppliers, making verification more difficult



OTE General Findings

Companies and organizations assume that others in the supply chain are testing parts

- Organizations within every sector rely on others in the supply chain to test and verify the authenticity of parts, and therefore conduct little testing themselves
- Based on survey data, this confidence in the testing behaviors of the supply chain is unfounded

OTE General Findings

Stricter testing protocols and quality control practices for inventories are required

- There are wide differences in the levels and quality of testing undertaken by organizations purchasing and receiving parts
- There are no existing standards for third-party testing facilities. While there are industry standards addressing testing and quality control issues, they have not been systematically embraced or enforced by the supply chain

OTE General Findings

Recordkeeping on counterfeit incidents by organizations is very limited

- According to survey data, most organizations do not keep records of counterfeit incidents. Those that do keep records track limited data points
- This can lead to a lack of institutionalized knowledge about an organization's encounters and problems with counterfeits

OTE General Findings

Most organizations do not know who to contact in U.S. Government regarding counterfeit parts

- The majority of survey participants reported having no knowledge of the federal authorities responsible for investigating counterfeit incidents, either defense- or industry-related, or where to submit reports
- OTE analysts were able to pinpoint the Defense Criminal Investigative Services (DCIS) and the Federal Aviation Administration (FAA) as the federal authorities responsible for counterfeits related to defense and commercial aviation, respectively
- OTE analysts were not able to identify the distinct federal authority responsible for counterfeits related to commercial products, including parts supporting critical infrastructure, or pinpoint legal requirements resulting from counterfeits in the supply chain

OTE General Findings

Ultimately, every element of supply chain must work together to solve problem of counterfeit parts

- All sectors of the U.S. electronics supply chain need to be more open to dialogue and cooperation in order to address the issue of counterfeit parts
- There needs to be better interaction between federal authorities and the supply chain in order to determine legal requirements and effective counterfeit avoidance activities

Agenda

- Context of the counterfeit parts issue
- AS5553 and AS6081 Synergy
  - Side-by-side comparison
  - Discuss why some AS6081 requirements are challenging to Open Market Distributors
- Flow down AS5553 requirements or specify compliance to AS6081?

G-19 Documents and their Applications

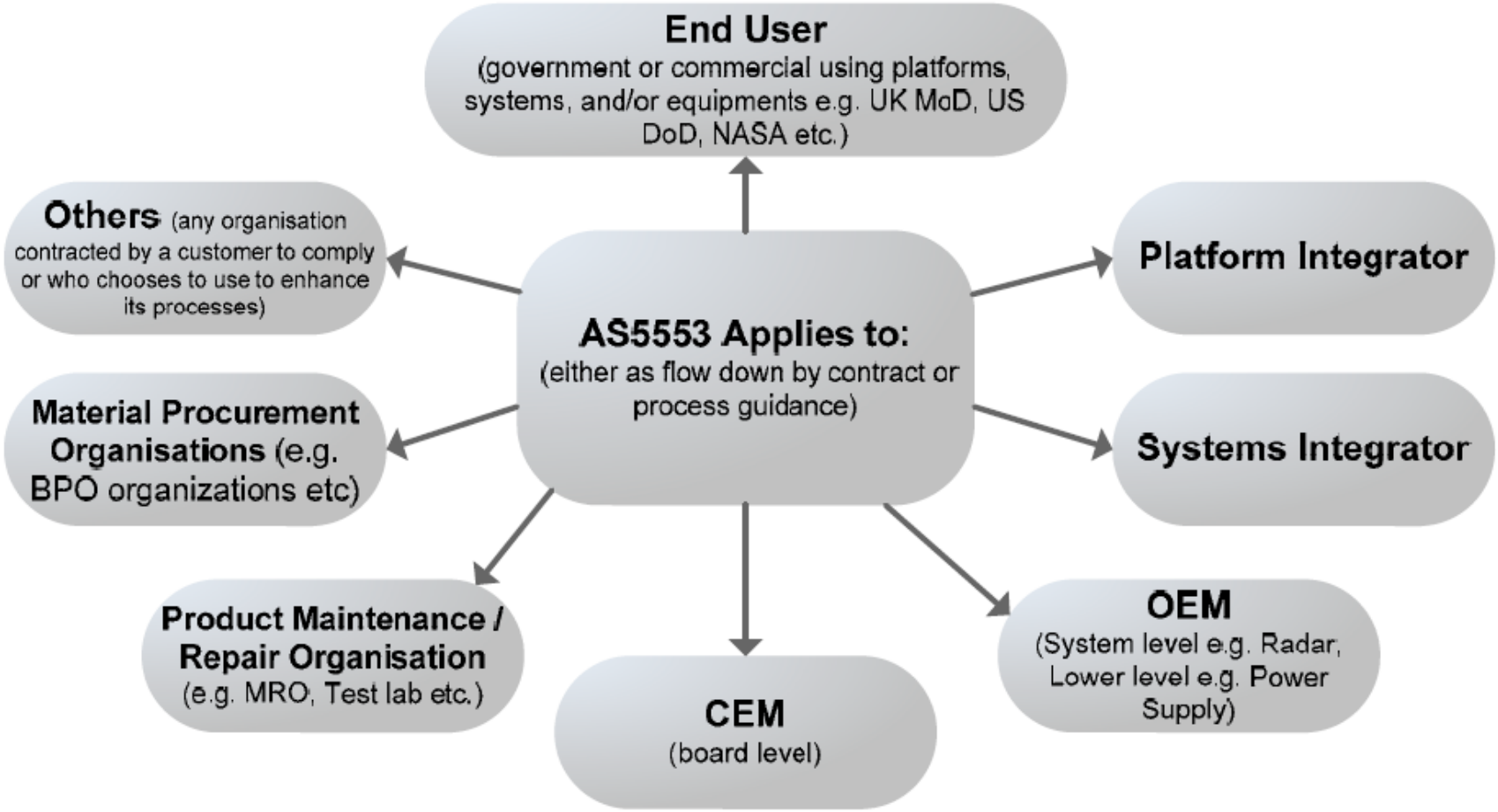
DISTRIBUTOR	USER	TEST PROVIDER
AIR6273: Terms and Definitions - Fraudulent/Counterfeit Electronic Parts (draft phase)		
ARP6178: Fraudulent/Counterfeit Electronic Parts; Tool for Risk Assessment of Distributors (released)		
AS7777 (tentative): Fraudulent/Counterfeit Electronic Parts; Avoidance Protocol, Authorized/Franchised Distribution (draft phase)	**AS6081: Fraudulent/Counterfeit Electronic Parts; Avoidance Protocol, Distributors** (released)	**AS5553: Fraudulent/Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition** (revision A released)	**AS6171: Test Methods Standard; General Requirements, Suspect/Counterfeit Electrical, Electronic, and Electromechanical Parts** (ballot phase)

Underlying Supply Chain Objective in G-19 Documents

Extra diligence must be given to the management of parts, identification, tracking and inspection throughout supply chain to ensure that authenticity and performance of critical parts and materials is not compromised.

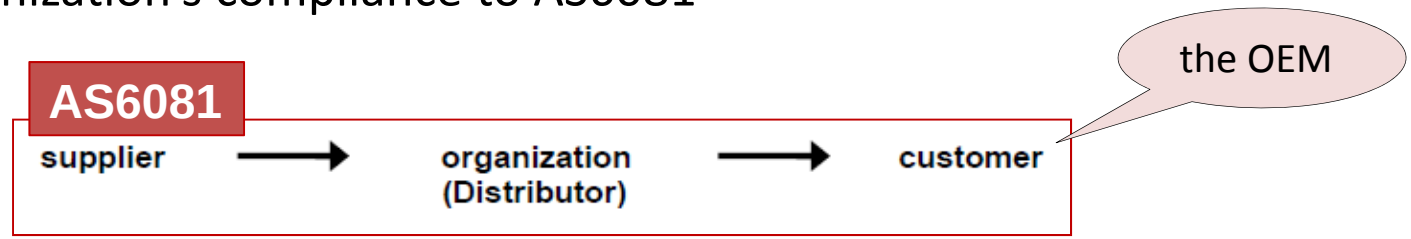
- This management requires a new partnership and understanding of programmatic and technical risks between all levels of the supply chain.

AS5553 developed for these organizations:



AS6081 Highlights

- Similar to AS5553, but contains prescriptive counterfeit parts avoidance requirements intended for distributors that purchase from the open market
- Requires specific minimum set of Verification of Purchased Product (inspection and test) methods
- AS6081 is NOT intended to “qualify” or “certify” the electronic parts
- OEMs can specify their suppliers comply or be certified to AS6081 and meet selected flow-down requirements of AS5553
- AS6081 requirements are intended to be applied/flowed down to Organization’s (Distributor’s) suppliers
- Independent, third-party certification bodies (CBs) will verify and certify Organization’s compliance to AS6081



Scope

AS5553A

Standardizes practices to:

- **maximize availability of authentic parts,**
- procure parts from reliable sources,
- assure authenticity and conformance of procured parts,
- control suspect or confirmed fraudulent/counterfeit parts,
- and report suspect or confirmed fraudulent/counterfeit EEE parts to other potential users and Authority Having Jurisdiction,

AS6081

Standardizes practices to:

- identify reliable sources to procure parts,
- assess and mitigate risk of distributing fraudulent/counterfeit parts,
- control suspect or confirmed fraudulent/counterfeit parts,
- and report suspect and confirmed fraudulent/counterfeit parts to other potential users and Authority Having Jurisdiction.

Application

AS5553A

- **For use by organizations that procure electronic parts and/or assemblies containing such items**
- Requirements are generic and intended to be applied/flowed down through the supply chain
- Mitigation of fraudulent/counterfeit EEE parts is risk-based and will vary depending on the desired performance or reliability of the equipment/hardware

AS6081

- **For use by distributors of EEE parts purchased and sold from the Open Market, including purchased excess and purchased returns**
- **Does not apply to Authorized (Franchised) Distributors and Aftermarket Manufacturers when supplying parts obtained directly from the OCM or the OCM Authorized (Franchised) Distributor for whom they are authorized**
- Requirements are generic and intended to be applied and flowed down through the supply chain
- Invoked in accordance with contractual language established between the Customer and the Organization
- Can be used by Certification Bodies accredited by an IAF-MLA Signatory Accreditation Body, to assess the Organization's abilities
- This standard does not "qualify" or "certify" the electronic parts.
- Appendices are provided as guidance and invoked in whole or in part, by the policies, requirements or procedures of the Organization

Terms & Definitions

SUSPECT PART:
A part in which there is an indication that it may have been misrepresented by the supplier or manufacturer and may meet the definition of fraudulent part or counterfeit part provided below.

FRAUDULENT PART:

Any suspect part intentionally* misrepresented to the Customer as meeting the Customer's requirements.

COUNTERFEIT PART:

A fraudulent part that has been confirmed to be a copy, imitation, or substitute that has been represented, identified, or marked as genuine, and/or altered by a source without legal right with intent to mislead, deceive, or defraud.

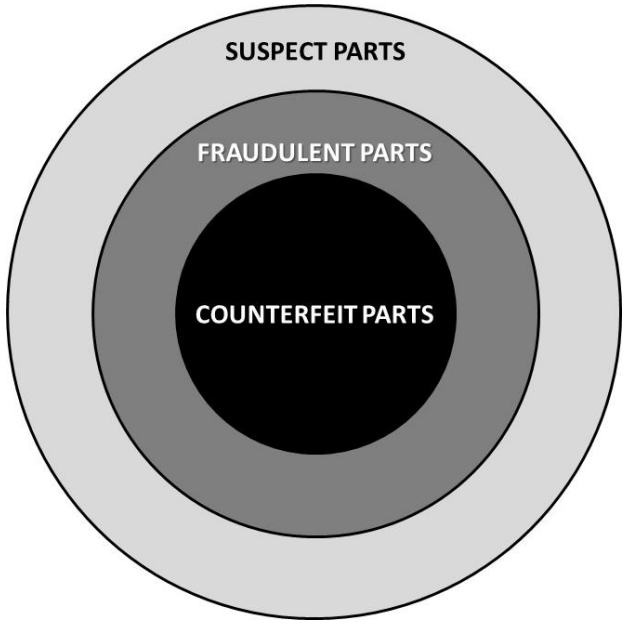
* Pending. Note that some of the following AS6081 material is also pending as part of revision A development.

Terms & Definitions

COUNTERFEIT PART (continued):

NOTE: The following diagram depicts the above interrelationship between Suspect, Fraudulent and Counterfeit Parts. A Suspect Part may be determined to be, fraudulent or counterfeit through further evaluation and testing. All counterfeit parts are fraudulent, but not all fraudulent parts are counterfeit.

Interrelationship between Suspect, Fraudulent and Counterfeit Parts



Comparison of Requirements

AS5553

- Fraudulent/Counterfeit Electronic Parts Control Plan
- Personnel Training*
- Parts Availability
- Purchasing Process
- Purchasing Information
- Verification of Purchased/Returned Parts
- In-Process Investigation
- Failure Analysis*
- Material Control
- Reporting
- Post Delivery Support*

* New revision A sections

AS6081

- Quality Management System
- Fraudulent/Counterfeit Electronic Parts Control Plan
- Customer Related Contract Review, Agreement, and Execution
- Supplier Approval and Source Selection
- Purchase Order Requirements
- Supply Chain Traceability
- Preservation of Product
- Verification of Purchased Product
- Control of Nonconforming Product
- Material Control
- Reporting
- Personnel Training
- Internal Audit

Plans, Quality Management and Policies

AS5553

Applicable Documents

The requirements of this document are intended to supplement the requirements of a higher level quality standard (e.g., AS9100) and other quality management system documents. They are not intended to stand alone, supersede, or cancel requirements found in other … unless an authorized exemption/variance has been obtained.

Fraudulent/Counterfeit EEE Parts Control Plan

The organization shall develop and implement a fraudulent/counterfeit EEE parts control plan that documents its processes used for risk mitigation, disposition, and reporting of suspect or confirmed fraudulent/counterfeit EEE parts and or assemblies containing such parts. The control plan shall include the processes described in 4.1.1 through 4.1.10.

AS6081

Quality Management System

The Organization shall be certified to a quality management system standard, ISO 9001, SAE AS9120 or equivalent by a Certification Body accredited for the specific standard by …

Suspect Counterfeit, Fraudulent and Counterfeit Parts Mitigation Policy

The Organization's executive management shall define and document its policy to prevent the purchase, acceptance, and distribution of suspect counterfeit, fraudulent and counterfeit parts… shall also state its policy regarding the disposition and reporting of parts … shall ensure that its policy is communicated, understood, implemented, and maintained at all levels of the Organization and accessible with a written request by the customer.

Fraudulent/Counterfeit Electronic Parts Control Plan

The Organization shall develop and implement a fraudulent/counterfeit electronic parts control plan … shall specify flow down of applicable requirements of this document ... shall be applied to all purchases or purchased returns of electronic parts and shall include the minimum processes described in paragraphs 4.2.1 through 4.2.12.

Personnel Training

AS5553

Relevant personnel, including management of programs, projects, procurement, quality assurance, inspection, receiving, manufacturing and engineering activities shall be trained as appropriate to their function, in the awareness, avoidance, detection, mitigation and disposition of suspect/fraudulent/counterfeit EEE parts.

AS6081

- All Personnel performing work affecting product quality shall be competent on the basis of appropriate education, training, skills and experience.
- Relevant personnel, including management of programs, projects, procurement, quality assurance, inspection, receiving, manufacturing and engineering activities shall be trained as appropriate to their function, in the avoidance, detection, mitigation and disposition of suspect/fraudulent/counterfeit EEE parts. Examples of training are included in Appendix E Personnel Training Programs.
- Personnel involved with direct handling (e.g., inspectors, assemblers, test technicians) of electronic parts shall be trained in techniques …
- Personnel with responsibility for the detection of suspect/fraudulent/counterfeit indicators through use of specialized technologies, methods such as Acoustic Microscopy and/or other equipment used in counterfeit detection, shall be trained to ensure competence in their use in accordance with the “5.2 Personnel” requirements of ISO/IEC 17025…
- Personnel with responsibility for the detection of suspect/fraudulent/counterfeit indicators through use of Radiographic Inspection only (e.g., X-ray and XRF) shall be trained and certified to either NAS-410 … or equivalent or shall be trained to ensure competence in their use in accordance with the “5.2 Personnel” requirements of ISO/IEC 17025…

Personnel Training Considerations

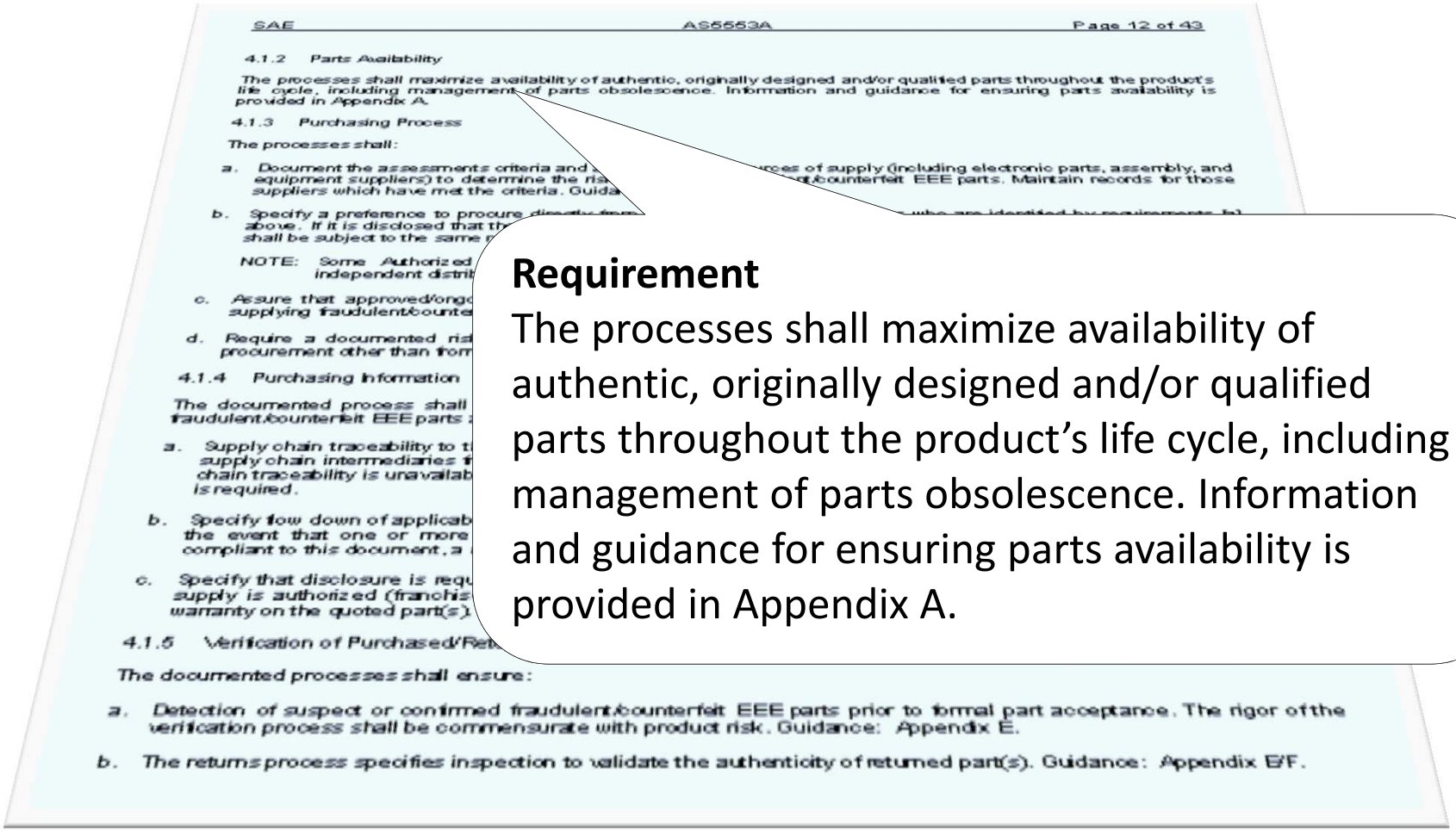
Company Training

- Do you train employees to your policy requirements?
- Are management personnel trained on the counterfeit issues, terms and definitions?
- Are receiving, production, test and engineering personnel trained in identifying suspect fraudulent/counterfeit parts?

Supplier Training

- Preference to purchase from OCM and/or their Authorized/Franchised Distributors
- Maintaining OCM/Authorized/Franchised supply chain traceability
- Not procure from non-authorized (Independent Distributors) without prior approval
- Reporting suspect counterfeit parts
- Identify and communicate knowledge of obsolete parts
- Awareness training at all organization levels and suspect counterfeit identification training for operators

AS5553 - Circuit Designs must Consider Parts Availability



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4.1.2 Parts Availability

The processes shall maximize availability of authentic, originally designed and/or qualified parts throughout the product's life cycle, including management of parts obsolescence. Information and guidance for ensuring parts availability is provided in Appendix A.

4.1.3 Purchasing Process

The processes shall:

a. Document the assessments criteria and ... of supply (including electronic parts, assembly, and equipment suppliers) to determine the ris... counterfeit EEE parts. Maintain records for those suppliers which have met the criteria. Guida...

b. Specify a preference to procure directly from ... who are identified by requirements b) above. If it is disclosed that th... shall be subject to the same ...

NOTE: Some Authorized ... independent distri...

c. Assure that approved/ongo... supplying fraudulent/counte...

d. Require a documented ris... procurement other than from ...

4.1.4 Purchasing Information

The documented process shall ... fraudulent/counterfeit EEE parts ...

a. Supply chain traceability to t... supply chain intermediaries ... chain traceability is unavailab... is required.

b. Specify flow down of applicab... the event that one or more ... compliant to this document, a ...

c. Specify that disclosure is requ... supply is authorized (franchis... warranty on the quoted part(s).

4.1.5 Verification of Purchased/Ret...

The documented processes shall ensure:

a. Detection of suspect or confirmed fraudulent/counterfeit EEE parts prior to formal part acceptance. The rigor of the verification process shall be commensurate with product risk. Guidance: Appendix E.

b. The returns process specifies inspection to validate the authenticity of returned part(s). Guidance: Appendix E/F.

Requirement

The processes shall maximize availability of authentic, originally designed and/or qualified parts throughout the product's life cycle, including management of parts obsolescence. Information and guidance for ensuring parts availability is provided in Appendix A.

Issue - Component Obsolescence

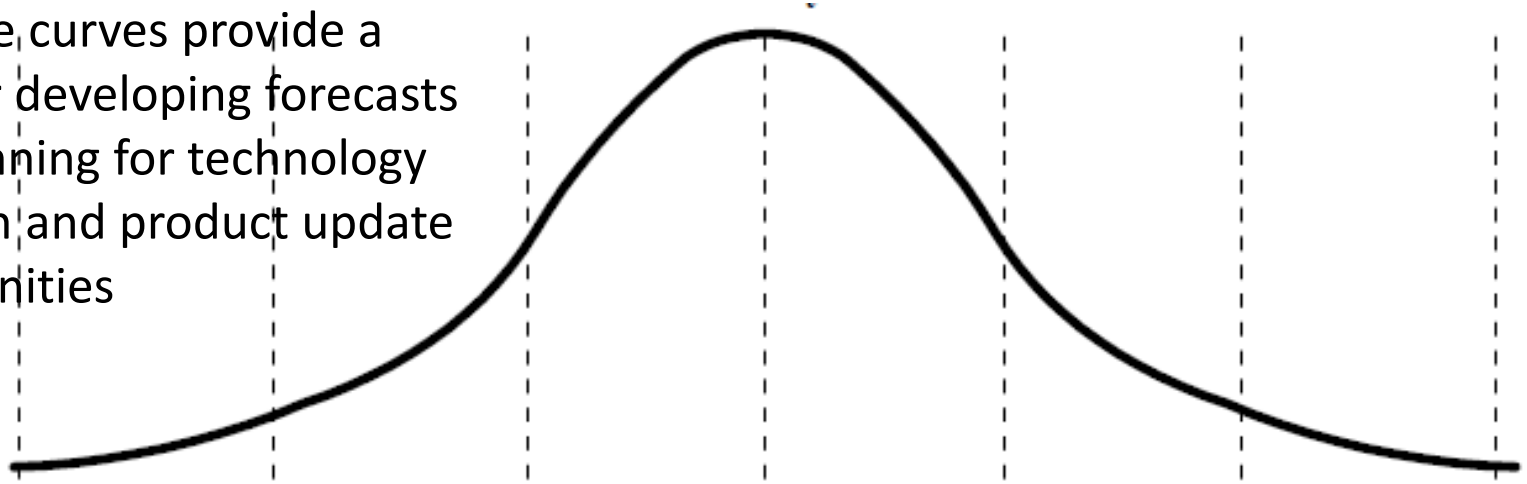
- Avoiding counterfeit parts and materials is challenging when defense contractors and government are obliged to purchase both electronic and non-electronic parts and materials to support fielded and new systems from independent distributors/brokers
- Defense and aerospace products are particularly vulnerable to counterfeit components due to component obsolescence
  - Semiconductor products, in particular, have life cycles far shorter than the defense/aerospace products that use them
  - When obsolete parts are not eliminated from product designs, companies procure from independent distributors to obtain components that are no longer in production

Issue - Component Obsolescence

- While changes to procurement practices will reduce the number of purchases from higher risk suppliers, the prominence of through-life support contracts will make component obsolescence a larger challenge and counterfeits a possibly bigger problem
- To reduce likelihood of purchasing parts through higher risk suppliers, electronics producers (particularly defense and aerospace) and their customers recognize need to proactively manage life cycle of electronic products versus life cycles of parts used within them
- Customers are constrained regarding their ability to support and fund approaches to eliminate use of obsolete components

Product Life Cycle Model

Life cycle curves provide a basis for developing forecasts and planning for technology insertion and product update opportunities



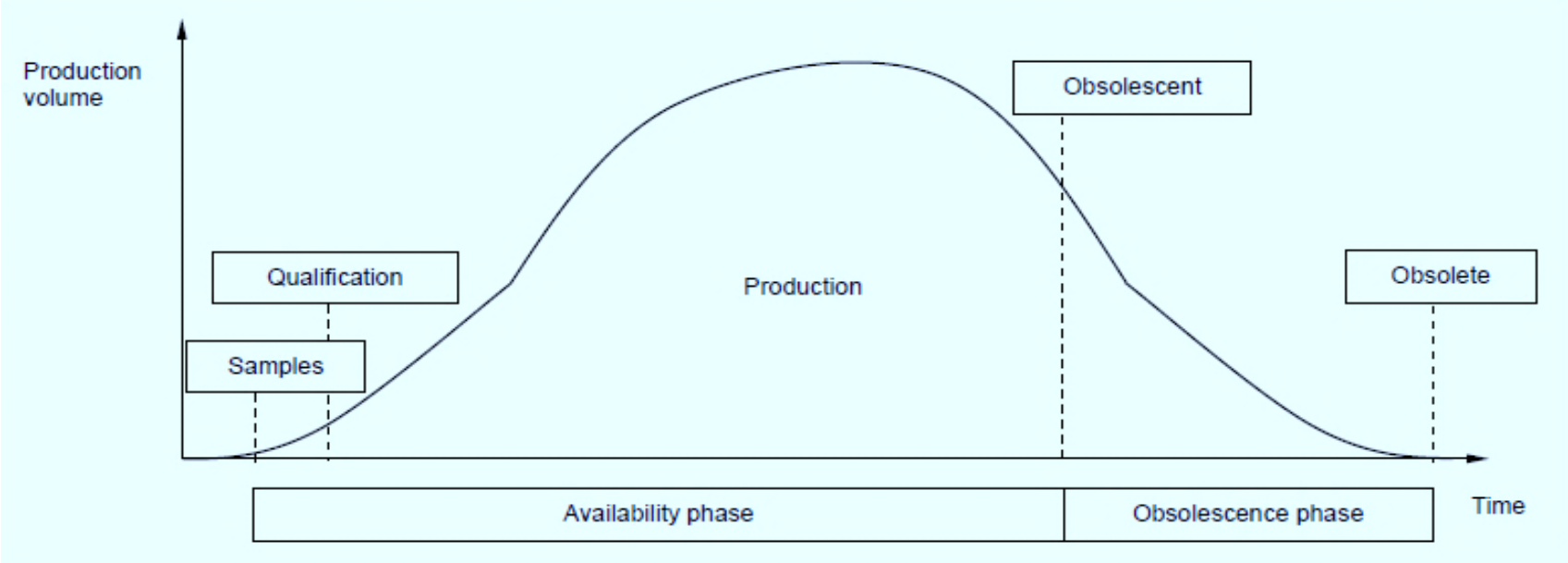
	Stage 1 Introduction	Stage 2 Growth	Stage 3 Maturity	Stage 4 Saturation	Stage 5 Decline	Stage 6 Phase-Out
Sales	Slow increase	Increasing rapidly	Stable	Leveling out	Decreasing	Lifetime buys offered
Price	Highest	Declining	Stable	Stable	Rising	High
Usage	Low	Increasing	Stable	Stable	Decreasing	Decreasing
Part Modification	Frequent	Major	Periodic changes	Few	Few or none	None
Competitors	Few	High	Stable number	Decline begins	Declining	Declining
Manufacturer Profit	Low	Increasing	Stable	Stable	Reasonable for survivors	Reasonable for survivors (aftermarket)

When does obsolescence begin?

Source: * Onkvisit, S.; Shaw, J. "Product Life Cycles and Product Management," Quorum Books, New York, New York, 1989

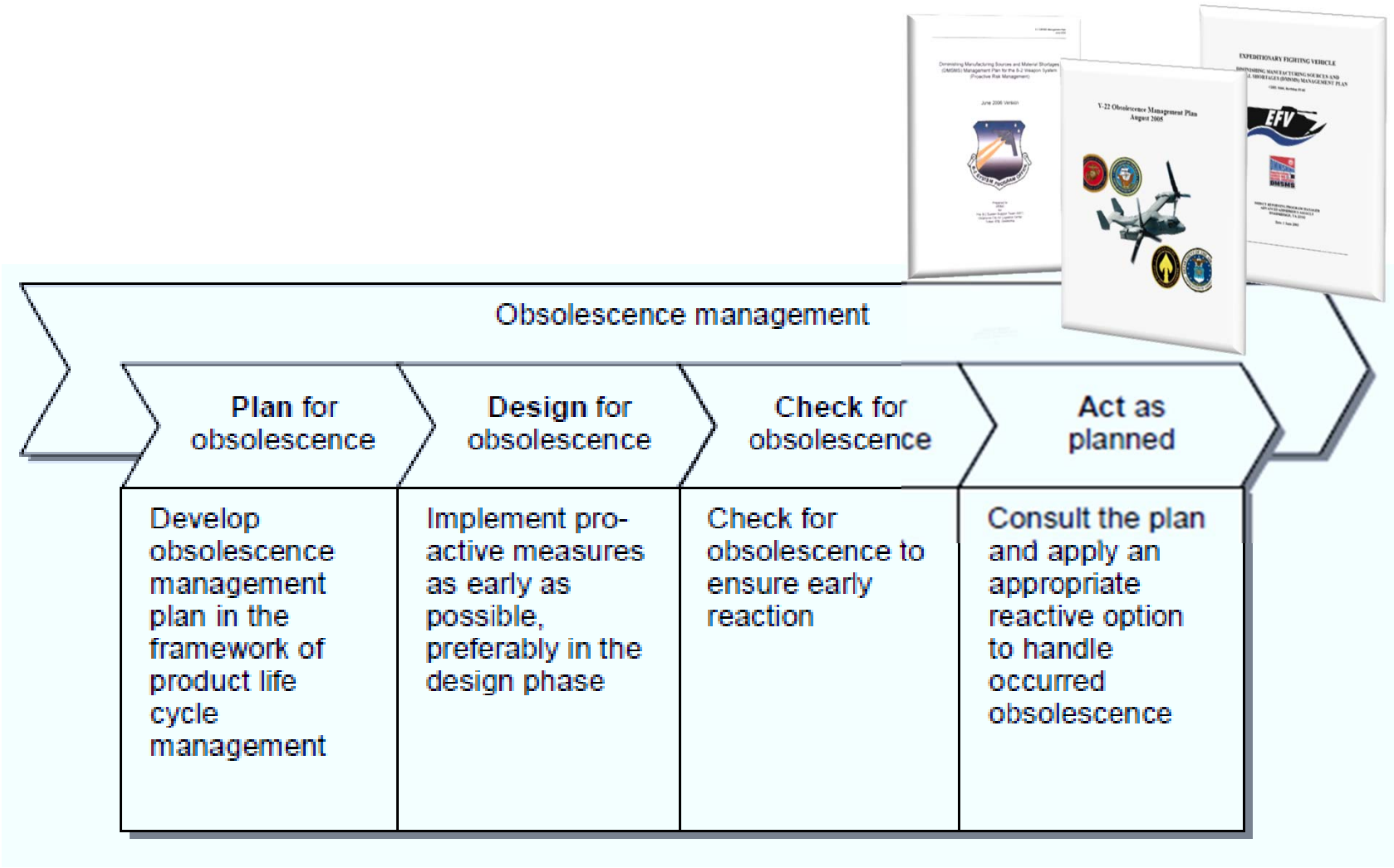
Obsolescence Indicators

- Obsolescence phase begins immediately after information about discontinuance is issued and product is considered obsolescent
- Information at obsolescent phase change is a product discontinuance notice (PDN), end-of-life (EOL) notification or lifetime buy (LTB) notification. A product change notice (PCN) may also cause a product to enter obsolescence phase for certain manufacturers (OCM)
- Product may be considered obsolete once it is no longer available from OCM, even though some product is still in supply chain



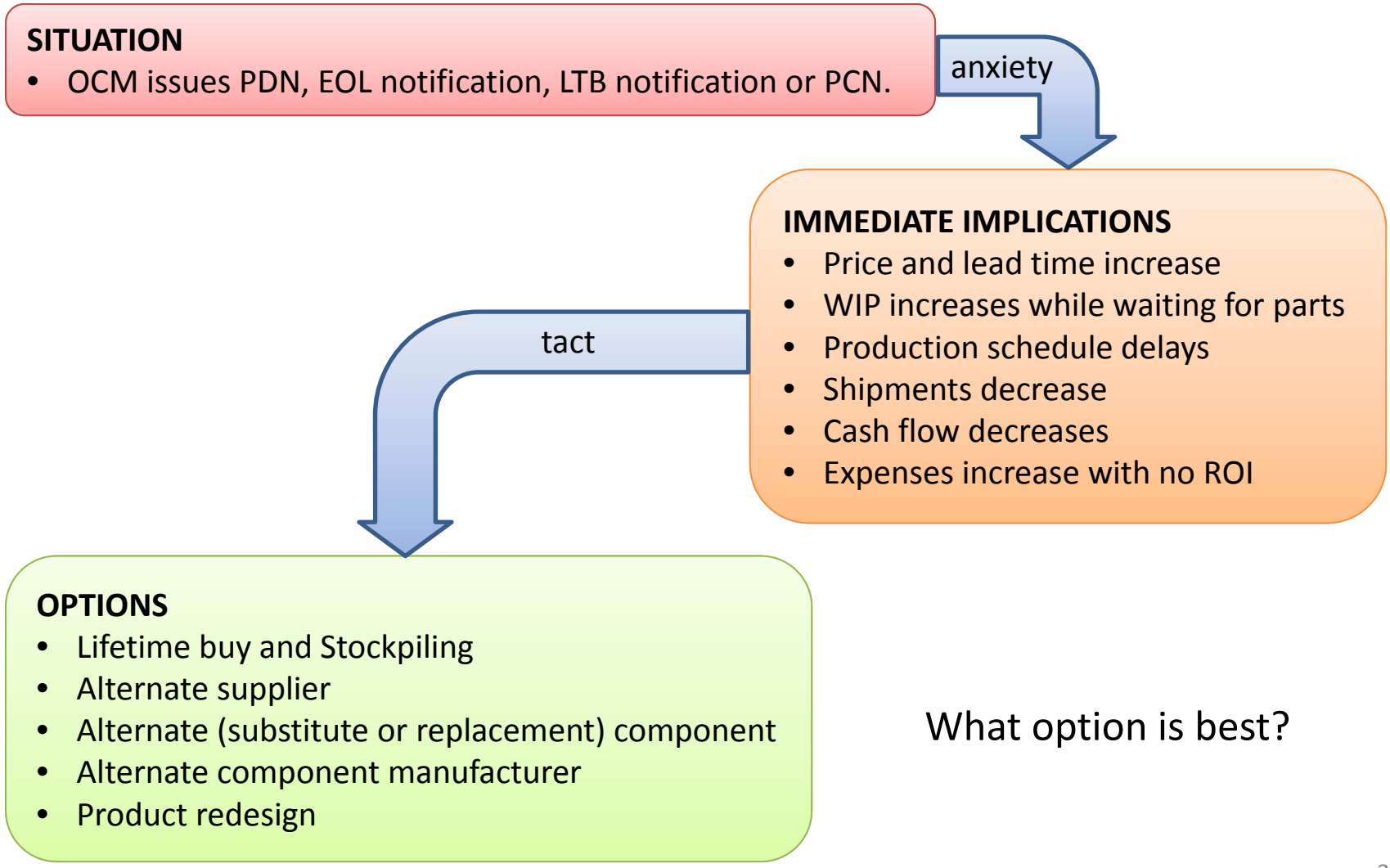
Source: IEC CEI 62402, First edition 2007-06, "Obsolescence management – Application guide"

Process Steps for Managing Obsolescence



Source: IEC CEI 62402, First edition 2007-06, "Obsolescence management – Application guide"

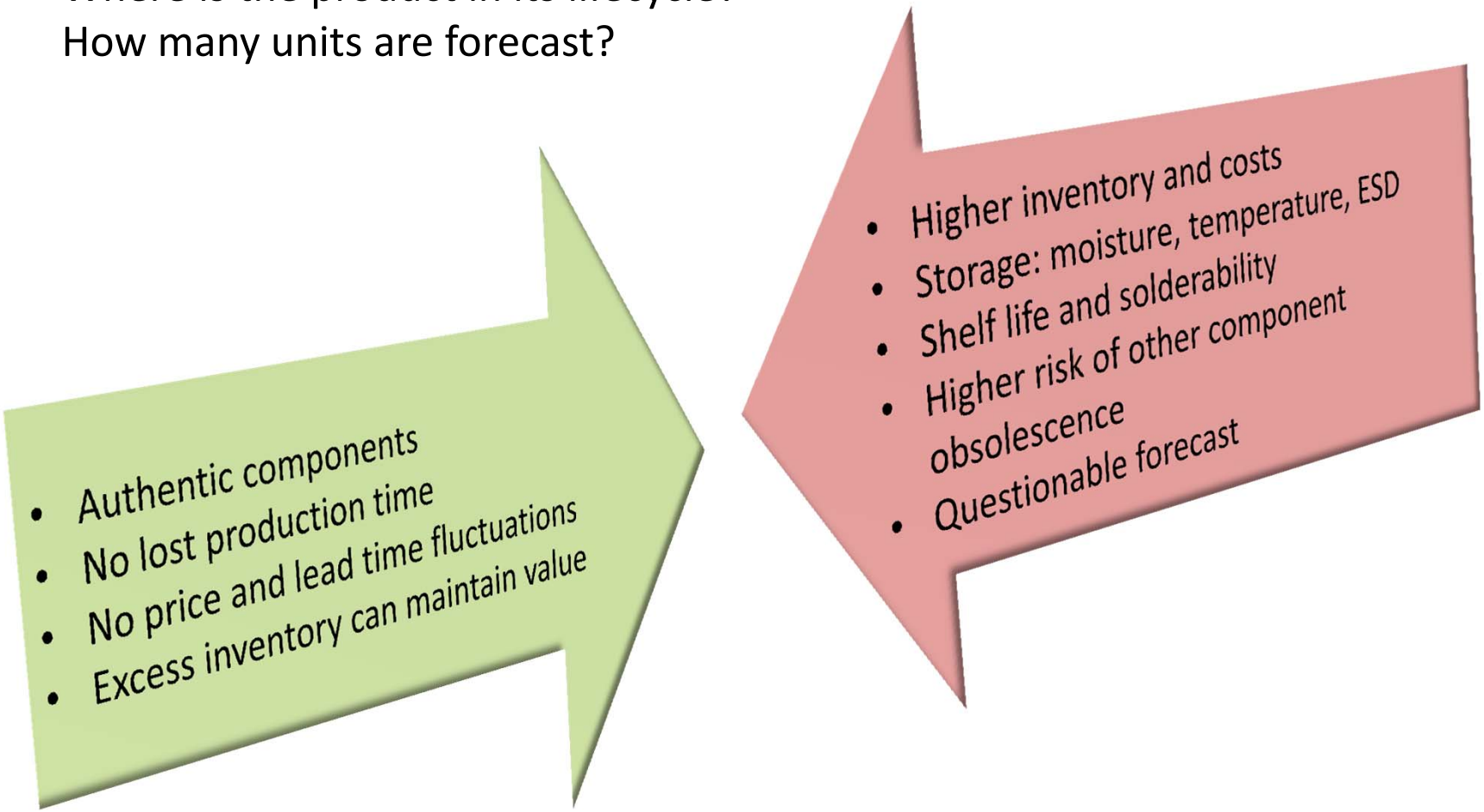
Events in the Management of Obsolescence



What option is best?

Lifetime Buy and Stockpiling

Where is the product in its lifecycle?
How many units are forecast?



Alternate Supplier

Risk of Open Market components

- Possible breaks in supply chain traceability
- Unknown handling and storage conditions
- No Manufacturer's Warranty (per JESD31)
- Additional cost and time of verification testing
- Greatest potential for introduction of counterfeits

How reliable are your Independent Distributors and their sources?

Image source: www.wordpress.com

Alternate (substitute or replacement) Component

Un-vetted definitions:

Alternate Part - a component that is a suitable replacement for another part in every assembly in which the original part occurs. Companies use alternate parts when multiple vendors can supply parts that serve the identical function and fit.

Substitute Part - a component that is a suitable replacement for another part in only one assembly in which the original part occurs.

Alternate (substitute or replacement) Component

- Designed to replace components near discontinuation (e.g., emulations, application specific integrated circuits (ASICs) and field programmable gate arrays (FPGAs)).
- Exact form, fit and function of original component
- No change to existing layout design
- May utilize multiple parts to achieve same function
- May be effective, but also time-consuming, expensive and may face their own obsolescence issues

How close to the legacy product?

Is cost justified?

Is there time to design and qualify an alternate module?

Alternate Component Manufacturer

- Manufactures similar parts not currently planned for obsolescence
- Substitute into existing product with minimal or no modification

- Re-qualification (component and product) may be required
- Documentation (design, manufacturing, inspection and test) updates

Watch out for:

- Parametric performance
- Electrical tolerances
- Speed, input/output differences

Image source: www.wordpress.com

Have you considered Aftermarket Manufacturers?

G-19 Definition:

AFTERMARKET MANUFACTURER: A manufacturer that meets one or more of the following criteria:

a. The manufacturer is authorized by the OCM to produce and sell replacement parts, usually due to an OCM decision to discontinue production of a part. Parts supplied are produced from materials that have been
   1. transferred from the OCM to the Aftermarket Manufacturer, or
   2. produced by the Aftermarket Manufacturer using OCM tooling and intellectual property (IP)

b. The manufacturer produces parts using semiconductor dice or wafers, manufactured by and traceable to an OCM, that have been properly stored until use and are subsequently assembled, tested, and qualified using processes that meet technical specifications without violating the OCM's intellectual property and intellectual property rights

c. The manufacturer produces parts through emulation, reverse-engineering, or redesign, that match the OCM's specifications and satisfy customer needs without violating the OCM's intellectual property and intellectual property rights.

In any case, the Aftermarket Manufacturer must label or otherwise identify its parts to ensure that the "as shipped" aftermarket manufactured part should not be mistaken for the part made by the OCM.

Aftermarket Manufacturer Considerations

- Are you aware they stock obsolete parts?
  - Aftermarket Manufacturers generally have significant discontinued OCM inventory with full OCM traceability
  - Aftermarket Manufacturers offer a significant supply of QML parts
- Does your Counterfeit Parts Control Plan incorporate an Aftermarket Manufacturer assessment process?
  - Audit to verify relationship with OCMs for residual inventory and IP rights
  - Provide employees with guidelines and solutions on choosing Aftermarket Manufacturers
  - Is Engineering engaged in the process?
  - Is evaluation of this option a normal process?
  - Do your procedures require documentation and rationale when Aftermarket Manufacturers are NOT used for every purchase to an Independent Distributor?

Product Redesign

Where is the product in it's lifecycle?

Are there competitive advantages?

- All components in lifecycle availability phase
- Avoids need for firmware or software updates
- Improved manufacturing efficiency
- Lower product costs with current technology
- Potential for feature enhancements

- Diversion of resources
- Functionality risk issues
- Cost and schedule impacts

Issue – Supplier Selection

- Industry and government procurement practices must apply a preference for procurement from OCMs or their authorized/franchised distributors and apply counterfeiting countermeasures when procuring from Independent Distributors
- There is general concern that government procurement activities are constrained in their ability to
  - apply a preference for procurement from OCMs or their authorized/franchised distributors and
  - apply counterfeiting countermeasures when procuring from Independent Distributors

Purchasing Process and Purchasing Information

AS5553

The processes shall:

- Require Supply chain traceability to the OCM or aftermarket manufacturer that identifies the name and location of all of the supply chain intermediaries from the part manufacturer to the direct source of the product for the seller. If this supply chain traceability is unavailable or the documentation is suspected of being falsified, a documented risk assessment is required.
- Specify flow down of applicable requirements of this document to applicable contractors and their sub-contractors.
- Specify that disclosure is required, in writing, at the time of each individual quotation whether or not the source of supply is authorized (franchised) for the part(s) being quoted and whether or not is providing full manufacturer's warranty on the quoted part(s).
- Document the assessments criteria and assess potential sources of supply…
- Specify a preference to procure directly from OCMs or authorized suppliers …
- Assure that approved/ongoing sources of supply are maintaining effective processes for mitigating the risks of supplying fraudulent/counterfeit EEE parts.
- Require a documented risk assessment and risk mitigation plan, specific to the intended application, for each procurement from other than an OCM or authorized supplier.

AS6081 major sections

- Supply Chain Traceability
- Customer Related Contract Review, Agreement, and Execution
- Supplier Approval and Source Selection
- Purchase Order Requirements

Purchasing Process and Purchasing Information

AS6081 Supply Chain Traceability

The documented processes shall require the retention of records providing supply chain traceability wherever such traceability exists.

- The records shall provide traceability to the OCM, Aftermarket Manufacturer or their Authorized Distributors that identify the name and location of all of the supply chain intermediaries for all procurement lots, and the date of all intermediate purchases, from the part manufacturer to the direct source of the product for the seller.
- Supply chain traceability records shall be provided with each shipment and shall be retained for a minimum of five (5) years or maintained in accordance with Customer statutory and regulatory requirements. If this traceability is incomplete or unavailable, Customer approval is required in advance of shipment.

Purchasing Process and Purchasing Information

AS6081 Supply Chain Traceability

- Supply Chain Traceability to the immediate source of supply is mandatory…
- This traceability requirement applies to new purchases of material, material in inventory, material returned (with material paper work and material denoting it has previously been returned) and material transferred from other businesses within the Organization.
- The Organization shall also provide, with the delivery of each consignment, copies of the original manufacturer's or their Authorized Distributor's certificate of conformity/compliance together with the test results, etc., where applicable.

Purchasing Process and Purchasing Information

AS6081 Customer Related Contract Review, Agreement, and Execution

- The Organization shall disclose in writing at the time of each individual quotation, the source of supply outside the Organization and their subsidiaries/affiliates (by company name and location), if the Organization is or is not authorized (franchised) for the item(s) being quoted and is or is not providing full manufacturer's warranty on the quoted material. If the Organization considers that the name of the source of supply is proprietary to the Organization, the Organization and Customer shall negotiate an appropriate non-disclosure agreement.
- The Organization shall provide a product warranty for a minimum of one (1) year, stating that the product is reliable and free from known defects and that the Organization will replace defective parts or refund original cost of product.
- The Organization shall issue a revised written quotation to the Customer, if at any time the source of supply changes (i.e., at the time of initial quote, parts were being procured from an authorized source, but said parts subsequently became unavailable and as a result, the Organization had to procure the material from an alternate source).

Purchasing Process and Purchasing Information

AS6081 Supplier Approval and Source Selection

- Assess potential sources of supply to determine the risk of receiving fraudulent/counterfeit parts. Assessment actions may include…
- Maintain a register of approved Suppliers, including the scope and criteria for the approval. Supplier approval and source selection criteria shall include…
- Preclude purchasing from sources of supply who have repeatedly failed to detect and avoid fraudulent/counterfeit parts or otherwise failed to exercise due diligence in the detection and avoidance of such parts.
- Procure only new and authentic parts directly from OCMs or Authorized Suppliers or from Suppliers who obtain such parts exclusively from the OCM or their Authorized Suppliers with Supply Chain Traceability when the parts are available from those sources and can meet Customer delivery requirements.

Purchasing Process and Purchasing Information

AS6081 Supplier Approval and Source Selection

- When the Organization has quoted parts to the Customer as having been sourced from Authorized Distribution, Organization shall require Suppliers to disclose at the time of each individual quotation, objective evidence (either proof from the OCM's website or letter from the OCM) that the Supplier is authorized (franchised) for the item(s) being quoted and is or is not providing full manufacturer's warranty on the quoted material. This disclosure shall be based on objective evidence which may include proof from the OCM's website, or letter from the OCM (on OCM letterhead), or other form of evidence acceptable to the customer.
- Require Suppliers to issue a revised written quotation and risk assessment, if at any time the source of supply changes (i.e., at the time of initial quote, parts were being procured from an authorized source, but said parts subsequently became unavailable and as a result, the Supplier had to procure the material from an alternate source).

Pending AS6081 text expanding on “intent”

Supplier Approval and Source Selection

- Preclude purchasing from sources of supply who have repeatedly failed to detect and avoid fraudulent/counterfeit parts or otherwise failed to exercise due diligence in the detection and avoidance of such parts.
- If the Organization *(Distributor)*, without first notifying the Customer and receiving Customer approval, knowingly provides electronic parts that fail to meet one or more of the requirements invoked by the Customer, this is considered an intentionally misrepresented incident, and as defined in *(Definition of Fraudulent Part)*, the parts are considered fraudulent and may also be counterfeit, unless otherwise determined to be acceptable parts in accordance with *(Product Impoundment and Financial Responsibility)* criteria.
- If the Organization *(Distributor)* procures electronic parts from a supplier, and if it is subsequently determined that the Organization’s Supplier (or any of its sub-suppliers) knowingly misrepresented the parts to its customer, the parts are considered fraudulent, and may also be counterfeit. If the Organization did not knowingly misrepresent the parts to their customer, this is considered an indication that the Organization did not pursue sufficient due diligence in adhering to the requirements of this document, then this is negligence and not fraud. The parts may still be considered fraudulent.

Purchasing Process and Purchasing Information

AS6081 Purchase Order Requirements

- The Organization shall communicate and document contract provisions that establish purchasing controls for fraudulent/counterfeit part avoidance. Requirements to manage risk shall be determined prior to entering into a contractual agreement.
- The purchase contract shall include flow-through requirements, as specified by the Customer and requirements to manage risk...
- The purchase contract shall define the product as quoted and require the Supplier to meet the requirements exactly. Changes relative to the source of supply or traceability shall be approved by the Customer and made in advance of the Supplier shipping parts. Exceptions require approval by the Customer prior to the Organization shipping the parts.

Verification of Purchased/Returned Part(s)

AS5553

The documented processes shall ensure:

- Detection of suspect or confirmed fraudulent/counterfeit EEE parts prior to formal part acceptance. The rigor of the verification process shall be commensurate with product risk.
- The returns process specifies inspection to validate the authenticity of returned part(s).

AS6081

- Verification of Purchased Product shall be conducted in accordance with 4.2.6.1 through 4.2.6.8. Verification tasks may be discontinued at any point where failures or indication of fraudulent/counterfeit parts are found, unless otherwise noted in the contractual agreement. However, the test results are "indicators" only and not to be construed as conclusive one way or the other. Proper parts risk mitigation by the Customer may include the full suite of required and additional tests of Table 1 and beyond, resulting in contracted test scope increase. In addition, OCM-input may be required to draw full conclusion of the test results. Product failing verification inspection/testing shall be controlled in accordance with 4.2.8 Control of Nonconforming Product.
- The OCM should be contacted to assist in authenticating product in conjunction with conducting verification testing. In many cases, the Organization may not succeed in obtaining OCM cooperation or be able to obtain “OCM-supplied data”. However, the OCM may provide insight into the authenticity of a device when provided documentation, images and other artifacts without providing the proprietary data serving as the basis for this insight. In cases where the OCM does not furnish data, but provides feedback questioning the authenticity of the device on the basis of something other than its source, the Organization should consider the product as “Suspect Part”...

Verification of Purchased/Returned Part(s)

AS6081 - 4.2.6.1 Contracted Product Verification Process

In the event the Organization sub-contracts any of the inspections and testing specified herein, or otherwise as may be specified by the customer, to an independent third party test laboratory, the Organization shall:

- if requested by the test facility, make available a copy of the summary report (requirement 4.2.6.8) of any previously completed inspections and tests.
- require the test facility to report to the Organization any discovery of a suspect/fraudulent/counterfeit part discovered in conjunction with the contracted inspections and/or tests. However, the reporting of any discovery of a suspect/fraudulent/counterfeit part detected by inspections and/or testing that was not contractually required shall be for information only, and as such, the Organization rather than the subcontract test facility, is responsible for evaluating and reporting on the information in their consolidated summary report in accordance with requirement 4.2.6.8.

Verification of Purchased/Returned Part(s)

AS6081 - 4.2.6.2 Test Level

- Acceptance and reject criteria are defined herein for all inspections and tests in Level A tests of Table 1. Results of each inspection and test performed shall be documented, retained, and traceable to product identification information (e.g., date/lot codes, applicable serial number), purchase order, invoice, and inspection and testing personnel… Documentation shall be made available to the Customer upon request. Retention of test data shall be five (5) years minimum.
- When the Customer has contractually specified an AS6081-certified supplier, the minimum level of inspection and testing for each active part or assemblies that contain active elements shall include the AS6081 Level A requirements of Table 1. For passive parts, the minimum level of inspection/testing shall include …
- The Organization, in consultation with the Customer, may impose additional inspection and testing requirements based on the perceived risk due to source prior performance, prior reported incidents, etc. The Customer may also specify additional inspection and tests prior to receipt of goods based on source information (e.g., test results) provided by the Organization or other product application risk assessment criteria. In either case, the Customer shall identify in writing, the specific additional inspections and tests via contract(s) between Customer and Organization (Distributor).

Table 1. LOT SAMPLING PLAN

Test/Inspection	Minimum Sample Size		Level
	Lot Size 200 or greater Devices	**Lot Size 1-199 Devices** (See NOTE 1)	
Minimum Required Tests			**Level A**
Documentation and Packaging			**A1**
Documentation and Packaging Inspection (4.2.6.4.1) (non-destructive)	All devices	All devices	
External Visual Inspection			**A2**
a. General (4.2.6.4.2.1) (non-destructive)	All devices	All devices	
b. Detailed (4.2.6.4.2.2) (non-destructive)	122 devices	122 or all devices, whichever is less	
Remarking & Resurfacing (destructive)	See NOTE 2	See NOTE 2	**A3**
Solvent Test for Remarking (4.2.6.4.3 A) (destructive)	3 devices	3 devices	
Solvent Test for Resurfacing (4.2.6.4.3 B) (destructive)	3 devices	3 devices	
Radiological (X-Ray) Inspection			**A4**
X-Ray Inspection (4.2.6.4.4) (non-destructive)	45 devices	45 devices or all devices, whichever is less	
Lead Finish Evaluation (XRF or EDS/EDX)	See NOTE 3	See NOTE 3	**A5**
XRF (non-destructive) or EDS/EDX (destructive) (4.2.6.4.5) (Appendix C.1)	3 devices	3 devices	
Delid/Decapsulation Internal Analysis (destructive)	See NOTE 4	See NOTE 4	**A6**
Delid/Decapsulation (4.2.6.4.6) (destructive)	3 devices	3 devices	
Additional Tests (as agreed between Customer and Organization)			
Remarking & Resurfacing (destructive)	See NOTE 2	See NOTE 2	**A3 Option**
Scanning Electron Microscope (4.2.6.4.3 C) (destructive)	3 devices	3 devices	
Quantitative Surface Analysis (4.2.6.4.3 D) (non-destructive)	5 devices	5 devices	
Thermal Testing			**Level B**
Thermal Cycling Test (Appendix C.2)	All devices	All devices	
Electrical Testing			**Level C**
Electrical Testing (Appendix C.3)	116 devices	All devices	
Burn-In			**Level D**
Burn-In (Pre & Post) (Appendix C.4)	45 Devices	45 devices or all devices, whichever is less	
Hermeticity Verification (Fine and Gross Leak)			**Level E**
Hermeticity Verification (Fine and Gross Leak) (Appendix C.5)	All devices	All devices	
Scanning Acoustic Microscopy (SAM)			**Level F**
Scanning Acoustic Microscopy (SAM) (Appendix C.6)	As specified	As specified	
Other			**Level G**
Other test/inspections	As specified	As specified	

Figure 2. SAMPLE AS6081 REQUIREMENTS PROCESS FLOW

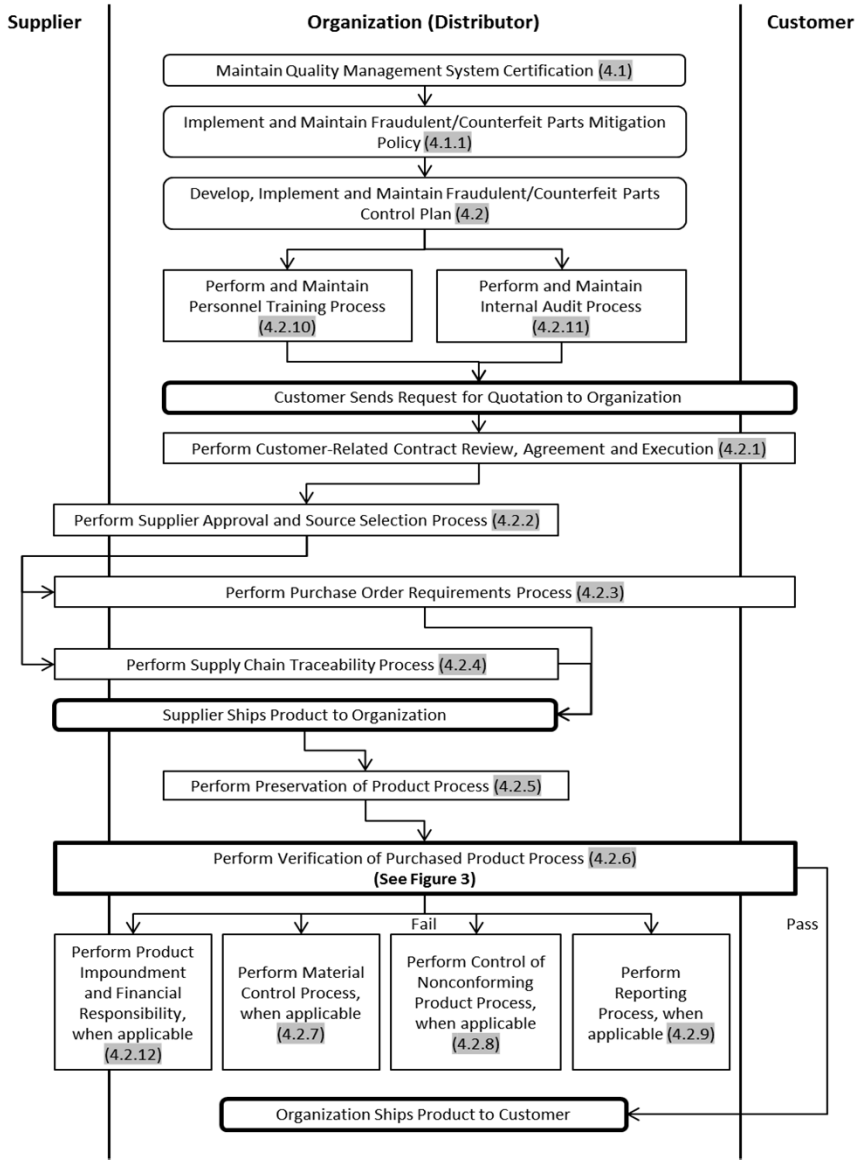
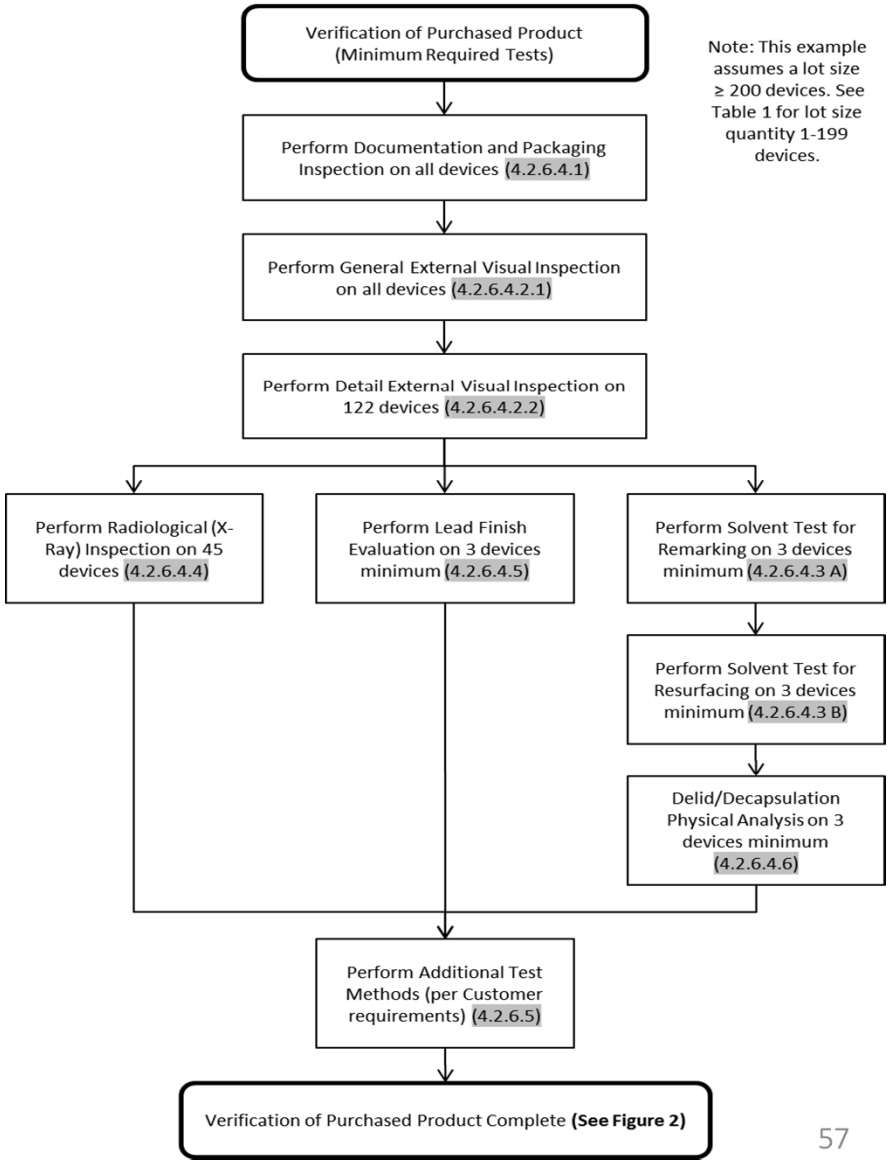


Figure 3. VERIFICATION OF PURCHASED PRODUCT



Verification of Purchased/Returned Part(s)

AS6081 - 4.2.6.3 Test/Inspection Sampling Plan

- A standard lot is a homogeneous lot (see 3. Terms and Definitions herein) and is defined in this sampling plan as the total number of devices that are received in a given shipment (procurement lot) at Incoming/Receiving Inspection and have the same lot or date code.
- A future shipment of devices of the same date code shall be considered a new lot. This should prevent a shipment of good devices being accepted and being followed by a suspect shipment of devices of the same date code being accepted without inspection.
- A lot is also a quantity of devices removed from storage and submitted for inspection. Generally, a procurement lot is of the same lot or date code, while a lot from stores may have mixed date or lot codes.
- Test samples shall be selected at random; however, for lots with mixed date codes, the devices must be separated into separate sublots (minimum sample size applies to each individual sublot). When selecting the sample, ensure that the parts are randomly selected from the total population. Parts exhibiting potential anomalies shall be included in the sampling group.
- If the parts are received in tape and reel and/or multiple packages, parts shall be randomly pulled from the entire length of the reel and from multiple reels and/or packages. The same samples can be used for multiple test steps.

Verification of Purchased/Returned Part(s)

AS6081 - 4.2.6.4 Minimum Fraudulent/Counterfeit Part Detection Methods

For cases where procurements are made from sources other than OCMs or Authorized (Franchised) Suppliers, or there is a reason to doubt a part's authenticity, tests and inspections shall be performed to detect fraudulent/counterfeit parts, regardless of whether or not purchase documentation confirms purchase from the OCM or Authorized (Franchised) Supplier. The following mitigation methods shall be performed as a minimum and in accordance with Level A, Table 1:

- Documentation and Packaging Inspection
- External Visual Inspection
- Inspection for Remarking and Resurfacing
- Radiological (X-Ray) Inspection
- Lead Finish Evaluation (X-Ray Spectroscopy - XRF or Energy Dispersive Spectroscopy - EDS/EDX)
- Delid/Decapsulation Internal Analysis

Verification of Purchased/Returned Part(s)

AS6081 - 4.2.6.6 Control of Suspect, Fraudulent, or Confirmed Counterfeit Parts

The following steps shall be implemented for suspect, fraudulent, or confirmed counterfeit parts:

- Physically identify the parts as suspect/fraudulent/counterfeit product (e.g., tag, label, mark).
- Physically segregate the parts from acceptable non-suspect parts and place in quarantine. Quarantine should consist of physical barriers and controlled access. Identify all additional suspect/fraudulent/counterfeit parts on hand or in storage. See 4.2.8 Control of Nonconforming Product and 4.2.12 Product Impoundment and Financial Responsibility.
- Notify the Supplier of findings and provide the Supplier with the opportunity to verify said findings. If the Supplier requests the parts be returned, Organization and Supplier shall establish a mutually agreeable sample of the suspect parts and send to one or more mutually agreeable independent, third party test laboratories for the purpose of evaluation and testing. In the event that a mutually agreeable sample size cannot be established, the default return sample size shall be the lesser of ten (10) parts or 50%, of each suspect lot/date code.
- The results of the evaluation may produce a variety of situations and results. The contractual agreement between the parties will dictate the outcome, however, in any case, suspect counterfeit parts shall not be returned to the Supplier for refund, credit, or replacement. Refer to Appendix B.1.6 Product Impoundment and Financial Responsibility for guidance.

Verification of Purchased/Returned Part(s)

AS6081 - 4.2.6.7 Returned Product

The following applies to product not found to be suspect counterfeit, counterfeit or fraudulent. Steps shall be taken by the Organization to ensure that product substitution has not occurred in the return process. The parts should be returned with:

- Part number to be returned
- Name of manufacturer
- Purchase order number under which parts were supplied
- Quantity to be returned
- Date/lot code of parts to be returned
- Reason for return

Returns should not be made to Suppliers without proper return material authorization. After receipt of return material authorization, the returned parts should include copies of the original paperwork.

Verification of Purchased/Returned Part(s)

AS6081 - 4.2.6.8 Records/Summary Reports of Inspection and Test Results

- The Organization shall supply a summary report of all inspection and test results for each lot (1) in advance of product shipment or (2) with each shipment of product, as specified by the customer (or Organization when testing is conducted by more than one independent, third party test laboratory)...
- Summary Report for Subcontracted Inspection and Test Results
  - In the event that the Organization subcontracted any of the inspections and testing to a third party test laboratory, the Organization shall compile all subcontracted inspection and test reports/data into a single consolidated report/data package. The consolidated report/data package shall be structured as follows…
    a. The report/data provided by the subcontractor shall be the original report/data, or a copy of the original report/data with no modification or transcribing of the inspection and test data.
    b. Include Organization's high level summary of all subcontracted inspection and test results, including an assessment of any discovery of a suspect/fraudulent/counterfeit part reported by the subcontracted test facility, regardless of whether or not the subcontracted test facility was contracted to perform the inspection and testing that detected the suspect/fraudulent/counterfeit part. The Organization shall also state if any re-inspection and/or re-test of previously performed inspection and testing is recommended, based on the information provided by the subcontracted inspection and test facility.

Post-Acceptance Processing

AS5553

In-Process Investigation

- The documented processes shall address the detection, verification, and control of in-process (post acceptance) and in-service suspect or confirmed fraudulent/counterfeit EEE parts

Failure Analysis

- When a failure analysis is conducted and the failure is isolated to a single part, the process shall determine and document whether or not a failure is due to a suspect fraudulent/counterfeit EEE part.

Post Delivery Support

- The control plan shall describe the processes used to resolve nonconformance's related to suspect counterfeit or fraudulent EEE parts that may or have been used in product delivered to a customer. This shall include the investigation and reporting process.

Material Control

AS5553

The documented processes shall specify methods to:

- Control excess and nonconforming parts to prevent them from entering the supply chain under fraudulent circumstances.
- Control suspect or confirmed fraudulent/counterfeit EEE parts to preclude their use or reentry into the supply chain by physically identifying and segregating the parts from acceptable non-suspect parts and placing in quarantine. Quarantine shall consist of controlled access areas.

AS6081

The documented processes shall:

- not alter, obliterate or redact any information from the OCM's labeling or part marking relevant to supply chain traceability. Adhesive labels may cover the OCM marking provided that the OCM marking is clearly legible after label removal.
- control excess and nonconforming parts to prevent them from entering the supply chain under fraudulent circumstances.
- control suspect or confirmed fraudulent/counterfeit parts to preclude their use or reentry into the supply chain by physically segregating the parts from acceptable non-suspect parts and placing in quarantine. Quarantine should consist of physical barriers and controlled access for a minimum of five (5) years or maintained in accordance with Customer statutory and regulatory requirements.

Control of Nonconforming Product

AS6081

- The Organization shall ensure that product which does not conform to product requirements is identified, segregated and controlled to prevent its unintended use or delivery…

  NOTE: The term "nonconforming product" includes nonconforming product returned by a customer, and fraudulent, counterfeit and/or suspect parts.
- The Organization shall act upon any reported information of nonconforming product with respect to product previously shipped, or not yet shipped… If the assessment of this information indicates that suspect, fraudulent or confirmed counterfeit product was shipped, the Organization shall report the information in accordance with 4.2.9 *(Reporting)*. Parties requiring notification of nonconforming product can include suppliers, internal organizations, customers, distributors, and regulatory authorities, by taking actions necessary to contain the effect of the nonconformity on other processes or products.
- The Organization shall deal with nonconforming product by one or more of the following ways...
- When nonconforming product (e.g., delivery of incorrect quantity versus the quantity ordered, shipping product that is not in packaging specified by the Customer, etc.) is corrected, it shall be subject to re-verification to demonstrate conformity to the requirements. Records of the nature of nonconformities and any subsequent actions taken, including concessions obtained, shall be maintained. The disposition of fraudulent product shall be governed by the requirements in 4.2.7 *(Material Control)* , while the disposition of non-conforming product, other than counterfeit or fraudulent product, shall be governed by the requirements in Section 4.2.8 *(Control of Nonconforming Product).*

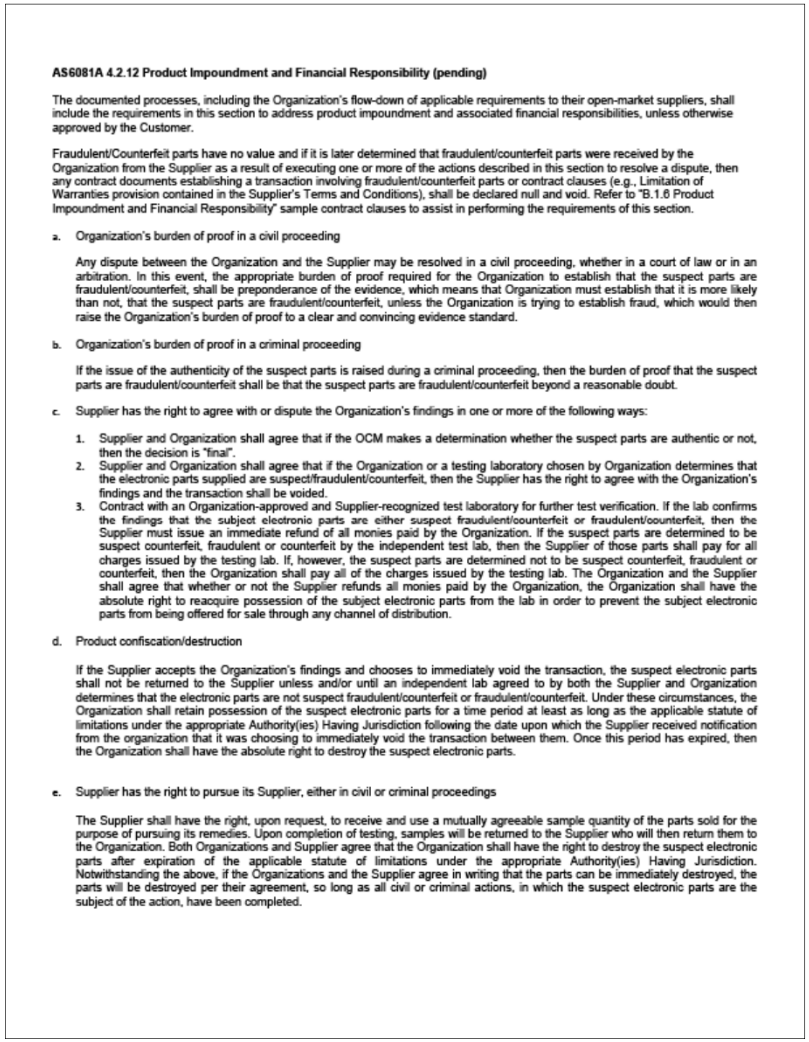
Internal Audit

AS6081

- The Organization shall conduct internal audits at planned intervals to determine whether the quality management system
  - conforms to the requirements of this standard and to the quality management system requirements established by the Organization, and
  - is effectively implemented and maintained.
- An audit program shall be planned, taking into consideration the status and importance of the processes and areas to be audited, as well as the results of previous audits. The audit criteria, scope, frequency, and methods shall be defined. The selection of auditors and conduct of audits shall ensure objectivity and impartiality of the audit process. Auditors shall not audit their own work.
- A documented procedure shall be established to define the responsibilities and requirements for planning and conducting audits, establishing records, and reporting results.
- Records of audits and their results shall be maintained.
- The management responsible for the area being audited shall ensure that any necessary corrections and corrective actions are taken without undue delay to eliminate detected nonconformities and their causes. Follow-up activities shall include the verification of the actions taken and the reporting of verification results.

Product Impoundment and Financial Responsibility

AS6081



AS6081A 4.2.12 Product Impoundment and Financial Responsibility (pending)

The documented processes, including the Organization's flow-down of applicable requirements to their open-market suppliers, shall include the requirements in this section to address product impoundment and associated financial responsibilities, unless otherwise approved by the Customer.

Fraudulent/Counterfeit parts have no value and if it is later determined that fraudulent/counterfeit parts were received by the Organization from the Supplier as a result of executing one or more of the actions described in this section to resolve a dispute, then any contract documents establishing a transaction involving fraudulent/counterfeit parts or contract clauses (e.g., Limitation of Warranties provision contained in the Supplier's Terms and Conditions), shall be declared null and void. Refer to "B.1.6 Product Impoundment and Financial Responsibility" sample contract clauses to assist in performing the requirements of this section.

a. Organization's burden of proof in a civil proceeding

Any dispute between the Organization and the Supplier may be resolved in a civil proceeding, whether in a court of law or in an arbitration. In this event, the appropriate burden of proof required for the Organization to establish that the suspect parts are fraudulent/counterfeit, shall be preponderance of the evidence, which means that Organization must establish that it is more likely than not, that the suspect parts are fraudulent/counterfeit, unless the Organization is trying to establish fraud, which would then raise the Organization's burden of proof to a clear and convincing evidence standard.

b. Organization's burden of proof in a criminal proceeding

If the issue of the authenticity of the suspect parts is raised during a criminal proceeding, then the burden of proof that the suspect parts are fraudulent/counterfeit shall be that the suspect parts are fraudulent/counterfeit beyond a reasonable doubt.

c. Supplier has the right to agree with or dispute the Organization's findings in one or more of the following ways:

1. Supplier and Organization shall agree that if the OCM makes a determination whether the suspect parts are authentic or not, then the decision is "final".
2. Supplier and Organization shall agree that if the Organization or a testing laboratory chosen by Organization determines that the electronic parts supplied are suspect/fraudulent/counterfeit, then the Supplier has the right to agree with the Organization's findings and the transaction shall be voided.
3. Contract with an Organization-approved and Supplier-recognized test laboratory for further test verification. If the lab confirms the findings that the subject electronic parts are either suspect fraudulent/counterfeit or fraudulent/counterfeit, then the Supplier must issue an immediate refund of all monies paid by the Organization. If the suspect parts are determined to be suspect counterfeit, fraudulent or counterfeit by the independent test lab, then the Supplier of those parts shall pay for all charges issued by the testing lab. If, however, the suspect parts are determined not to be suspect counterfeit, fraudulent or counterfeit, then the Organization shall pay all of the charges issued by the testing lab. The Organization and the Supplier shall agree that whether or not the Supplier refunds all monies paid by the Organization, the Organization shall have the absolute right to reacquire possession of the subject electronic parts from the lab in order to prevent the subject electronic parts from being offered for sale through any channel of distribution.

d. Product confiscation/destruction

If the Supplier accepts the Organization's findings and chooses to immediately void the transaction, the suspect electronic parts shall not be returned to the Supplier unless and/or until an independent lab agreed to by both the Supplier and Organization determines that the electronic parts are not suspect fraudulent/counterfeit or fraudulent/counterfeit. Under these circumstances, the Organization shall retain possession of the suspect electronic parts for a time period at least as long as the applicable statute of limitations under the appropriate Authority(ies) Having Jurisdiction following the date upon which the Supplier received notification from the organization that it was choosing to immediately void the transaction between them. Once this period has expired, then the Organization shall have the absolute right to destroy the suspect electronic parts.

e. Supplier has the right to pursue its Supplier, either in civil or criminal proceedings

The Supplier shall have the right, upon request, to receive and use a mutually agreeable sample quantity of the parts sold for the purpose of pursuing its remedies. Upon completion of testing, samples will be returned to the Supplier who will then return them to the Organization. Both Organizations and Supplier agree that the Organization shall have the right to destroy the suspect electronic parts after expiration of the applicable statute of limitations under the appropriate Authority(ies) Having Jurisdiction. Notwithstanding the above, if the Organizations and the Supplier agree in writing that the parts can be immediately destroyed, the parts will be destroyed per their agreement, so long as all civil or criminal actions, in which the suspect electronic parts are the subject of the action, have been completed.

Preservation of Product

AS6081

- The Organization shall preserve the product during internal processing and delivery to the intended destination in order to maintain conformity to requirements. As applicable, preservation shall include identification, handling, packaging, storage, and protection. Preservation shall also apply to the constituent parts of a product.
- Preservation of product shall also include, where applicable in accordance with product specifications and applicable statutory and regulatory requirements, provisions for:
  - cleaning,
  - prevention, detection, and removal of foreign objects,
  - marking and labeling including safety warnings,
  - shelf life control and stock rotation,
  - special handling for hazardous materials, and
  - special handling for sensitive products (e.g. electrostatic discharge, moisture and temperature controls),
    - ESD-sensitive devices shall be handled in accordance with a documented ESD control program per ANSI/ESD S20.20. If the humidity in the ESD-controlled area(s) drop to a level of 30% Relative Humidity (R,H,) or lower, verify that electrostatic discharge control is adequate.
    - If there is any reason to believe that the moisture sensitive protection was compromised, the parts are nonconforming. Moisture sensitive components shall be handled in accordance with IPC/JEDECJ-STD-033 or customer requirements. In addition, the 4.2.8 Material Control requirements regarding applicable OCM package labeling or part marking relevant to supply chain traceability, shall be retained with any repackaged parts.

Issue - Counterfeit Component Reporting

- Defense and aerospace industries and government lack consensus on whether or not to share information on component counterfeiting incidents discovered within their organizations
- Some organizations require direction and guidance concerning methodology for reporting counterfeit component incidents
- Predominant obstacles and encumbrances to information sharing:
  - Legal or liability issues (e.g., exposure to third party law suits)
  - Lack of business process to support information sharing outside of organization

Reporting

AS5553

The documented processes shall assure that all occurrences of suspect or confirmed fraudulent/counterfeit EEE parts are reported, as appropriate, to internal organizations, customers, government reporting organizations, industry supported reporting programs, and authorities having jurisdiction. Guidance: Appendix G.

AS6081

The documented processes shall require that all occurrences of suspect, fraudulent and confirmed counterfeit parts be reported, within 60 days of identification, to internal organizations, and to customers, applicable Government authorities, Government reporting organizations (e.g., GIDEP or equivalent), industry supported reporting programs (e.g., ERAI or equivalent), and Authority Having Jurisdiction. Information and guidelines for reporting fraudulent/counterfeit parts are provided in Appendix D Reporting.

Reporting Considerations

- Does your Counterfeit Electronic Parts Plan require reporting for every suspect counterfeit part?
- Who reports it and under what conditions; you (the customer) or your supplier?
- How willing are your suppliers to report to industry, government reporting or enforcement agencies?
- Do you retest parts from reported organizations?
- Do you share Lessons Learned with company personnel or your suppliers?

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Our Partner Agencies

The center employs a true task force model to optimize the roles and enforcement efforts of member agencies, while enhancing government-industry partnerships to support ongoing IPR enforcement initiatives.

The National Intellectual Property Rights Coordination Center (IPR Center) stands at the forefront of the U.S. government's response to global intellectual property (IP) theft.

As a task force, the IPR Center uses the expertise of its member agencies to share information, develop initiatives, coordinate enforcement actions, and conduct investigations related to IP theft. Through this strategic interagency partnership, the IPR Center protects the public's health and safety, the U.S. economy, and the nation's war fighters.

Intellectual property rights theft is not a victimless crime. It threatens U.S. businesses and robs hard-working Americans of their jobs, which negatively impacts the economy. It can also pose serious health and safety risks to consumers, and oftentimes, it fuels global organized crime.

Quick Links

- IP Fraud Tip Sheet
- IPR Center Threat Report and Survey.pdf
- 2011 Joint Strategic Plan on Intellectual Property Enforcement
- Register for the 2012 Symposium
- Draft 2012 Symposium Agenda
- Fact Sheets
- 2011 IPEC Annual Report
- 2011 Seizure Statistics

Digital and Online IP Theft

To learn more about digital and online IP theft click below

Videos

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Reporting to Federal Enforcement Agencies has improved significantly

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Agenda

- Context of the counterfeit parts issue
- AS5553 and AS6081 Synergy
  - Side-by-side comparison
  - Discuss why some AS6081 requirements are challenging to Open Market Distributors
- **Flow down AS5553 requirements or specify compliance to AS6081?**

AS5553 and AS6081 link to addressing DOC BIS OTE General Findings

OTE General Findings

- No policies
- Insufficient chain of accountability
- No awareness of legal requirements and liabilities
- Lack of dialogue between all organizations
- All supply chain impacted
- Lack of traceability
- Limited testing in supply chain
- Wide differences in levels and quality of testing
- Very limited recordkeeping
- No knowledge of where to report counterfeits
- Need better interaction between federal authorities and the supply chain re: legal requirements

AS5553

- Fraudulent/Counterfeit EEE Parts Control Plan
- Personnel Training
- **Parts Availability**
- Purchasing Process
- Purchasing Information
- Verification of Purchased/Returned Part(s)
- In-Process Investigation
- Failure Analysis
- Material Control
- Post Delivery Support
- Reporting

AS6081

- Quality Management System
- Fraudulent/Counterfeit Parts Mitigation Policy
- Personnel Training
- Customer Related Contract Review, Agreement, and Execution
- Supplier Approval and Source Selection
- Purchase Order Requirements
- Supply Chain Traceability
- Verification of Purchased/Returned Product
- Material Control
- Control of Nonconforming Product
- Internal Audit
- Product Impoundment and Financial Responsibility
- Preservation of Product
- Reporting

Thank you!

Questions?

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