Supplier Counterfeit Awareness Training

Government Communications Systems
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Introduction

• Counterfeiting has been an issue for years and continues to grow at an exponential rate with products being counterfeited, industries being affected, and consequences caused by counterfeits.

• Attention to the Counterfeit issue and threat requires everyone in the Industry and Supply Chain to support in combating and preventing.

• If not adequately addressed, counterfeit product carry a high risk and potential to seriously compromise the safety, operational effectiveness, and integrity of our products. Plus significant cost risk to GCS (and you as a supplier to GCS) for replacement of counterfeit parts and retesting.

• Counterfeit parts can cause personal injury, mission failure, reduce the reliability of products, potential loss of contracts/business, shutdown our manufacturing lines/cells, negative cost/schedule impacts, penalties/fines at the company/individual level, and damage to our Corporate name/image.

• Raising awareness through training of our Suppliers/Partners is critical to mitigating the risks and impacts of counterfeit parts infiltrating the Supply Chain.

Supplier Awareness through Training is Imperative!
Purpose

• Provide Harris-GCS Suppliers with Counterfeit Parts Prevention Awareness through….
  – Defining Suspect and Counterfeit Parts and Fraudulent Product Transaction
  – What is Counterfeit to Harris-GCS and Is It Real?
  – Sources of Counterfeit Parts
  – Impacts of Counterfeit Parts in the Supply Chain
  – Identifying Sources of Counterfeit Parts
  – What is Different Today?
  – **Why** Do We Need Counterfeit Risk Mitigation and **What** Are We Doing?
  – Strategies to Eliminate Counterfeit Parts
    - Avoidance
    - Detection
    - Mitigation
    - Disposition
    - Communication
  – Counterfeit Parts Prevention

*Supplier Awareness and Communication are Key*
Definitions

**Suspect Part / Assembly**
A part in which there is an indication by visual inspection, testing, or other information that it may have been misrepresented by the supplier or manufacturer and may meet the definition of counterfeit part.

**Counterfeit Part / Assembly**
A part that is a copy or substitute without legal right or authority to do so or one whose material, performance, or characteristics are knowingly misrepresented by a supplier in the supply chain.

**Fraudulent Product/Transaction**
Items that are deliberately altered in such a way as to misrepresent the actual quality of the item with intent to defraud or deceive the purchaser. Any information omitted or means taken to mislead the purchaser to believe that such items are authentic or lawful.
Examples of Counterfeit Part / Assembly

Examples for counterfeit parts may include, but are not limited to:

• Parts which do not contain the proper internal construction (die, manufacturer, wire bonding, etc.) consistent with the ordered part.
• Parts which have been used, refurbished or reclaimed, but represented as new product.
• Parts which have different package style or surface plating/finish than the ordered parts.
• Parts which have not successfully completed the Original Equipment Manufacturer’s (OEM’s) full production and test flow, but are represented as completed product.
• Parts sold as upscreened parts, which have not successfully completed upscreening.
• Parts sold with modified labeling or markings intended to misrepresent the parts form, fit, function, or grade.
What Is Counterfeit Prevention to Harris?

Harris-GCS Procurement Quality Requirements (Q-Clauses) on Purchase Orders/Contracts utilize the term “Fraudulent, Suspect Counterfeit, or Counterfeit Work”....

• Q-1; Section K – Counterfeit Parts Prevention (applicable to suppliers and their sub-tiers)
  – Harris Suppliers at a minimum shall have a counterfeit parts prevention plan
  – Supplier and it’s sub-tier suppliers, shall ensure that only non-counterfeit parts and products are delivered to Harris-GCS (Buyer).
  – Further prevention of inadvertent use of counterfeit parts, Suppliers shall only procure directly from the OEM, Original Component Manufacturer (OCM), or through OEM/OCM authorized distribution chain unless first approved in writing by Buyer through the submission and approval of an electronic Supplier Support Request (SSR)
  – Supplier must obtain written approval (SSR) to use Non-Franchised Distributors/Brokers and must present complete and compelling support of all actions to ensure parts procured are legitimate, authentic, non-counterfeit parts.

Complete Contractual Compliance to Quality Clause Flowdown Requirements
Is The Threat of Counterfeit Parts Real?

• Counterfeit parts often have the appearance of being authentic and genuine but can later be discovered that they were not:
  – Manufactured by the original component or material manufacturer
  – Built to the same level of quality standards or tested as strictly as an authentic/genuine

• Many types of counterfeits are difficult to detect visually and can be made such that they seem to be authentic, functional, and can even pass early levels of testing

Yes; Counterfeiting is Real with Increasing Trends
Sources of Counterfeit Parts

Counterfeit Parts Can Come from Many Different Sources
Counterfeiting is a Complex Criminal Enterprise

Counterfeit Parts Can Come from Many Different Sources

* China photos courtesy of Tom Sharpe & SMT Corporation
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What Is Different Today?

- Industry Engagement to Combat Counterfeiters
- AS5553 Industry Standard for Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition
- Defense Federal Acquisition Regulation Supplement (DFARS) Requirements and Increased Flow Downs
- Increased Flow Down of Counterfeit Avoidance Requirements
- Increasing Capabilities of Counterfeiters – Harder to Detect

Government Involvement, Industry Standards, and Customer Flow Down Requirements
**Why Do We Need Counterfeit Risk Mitigation and What Are We Doing?**

**Why.....**

- Increased Flow Down of Counterfeit Avoidance Requirements
- DFARS 252.246-7007 Implementation; May 6, 2014 (When CAS is applicable/NA to Small Business)
  - DFARS Imposed Criteria for Counterfeit Detection and Avoidance System and Purchasing System Approval
- AS5553 Industry Standard for Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition
- Increasing Capabilities of Counterfeiters – Harder to Detect

**What.....**

- Preventing the Introduction of Counterfeit Parts into the Supply Chain....
- Complying with the DFARS Requirements
- Complying with Industry Standards (AS5553) through Implementation of our Counterfeit Control Plan
- Implemented a Program to Enhance the Detection and Avoidance of Counterfeit Electronic Parts
  - Established Policy’s and Procedures to Eliminate Counterfeit Parts from the Defense Supply Chain
- Putting Processes in Place to Respond to the Increased Proliferation of Counterfeit Products in the Supply Chain

**Counterfeit Part Risk Mitigation and Prevention is Key to...**

**Protecting our Internal/External Customers and Supply Chain!!**
Strategies to Eliminate Counterfeit

Avoidance – Detection – Mitigation – Disposition……and Communication!!

Avoidance
Procuring from Authorized Sources

Detection
Making Sure Counterfeits are Stopped prior to integration in higher level assembly

Mitigation
Minimizing Risk and Damage to our Programs & Reputation

Disposition
Decide on Proper Action and Resolution through Disposition

Communication…..open and continuous communication between Suppliers and Harris
The risk chart shown below is a useful reference and guide for understanding the counterfeit risk hierarchy from a procurement sourcing point of view.

- Procuring/sourcing directly from the Original Equipment or Component Mfg (OEM/OCM) results in the lowest risk of counterfeit.
- OEM/OCM Authorized Franchised Distributors have documented agreements with a manufacturer to sell their products.
- OEM/OCM Authorized Aftermarket Manufacturer are the next lowest risk and have documented agreements with the manufacturer to resell or mfg discontinued product.
- Harris-GCS purchase orders require that suppliers and sub-tier suppliers use OEM/OCM or their authorized sources for products supplied and delivered to Harris-GCS unless prior authorization and approval is granted through our SSR (Supplier Support Request) process.

The risk chart shows the following hierarchy:

- **Lowest Counterfeit Risk**
  - Original Equipment Mfg / Original Component Mfg
  - OEM/OCM Authorized Franchised Distributor
  - OEM/OCM Authorized Aftermarket Manufacturer
  - Independent Distributor / Broker

- **Highest Counterfeit Risk**
  - Unknown Source

- **Highest Confidence in Authenticity**
- **Lowest Confidence in Authenticity**
Avoidance Strategies

Counterfeit Avoidance Strategies include:

- **Procurement Processes** requiring exclusive utilization of OEMs/OCMs or their authorized distributors
- **Chain of Custody** requires a documented and unbroken chain of custody from the original source of manufacturer for all electronic components provided to Harris-GCS either directly or indirectly and parts included in assemblies delivered to Harris-GCS
  - Purchase order requirements in Procurement Quality Clause Q1; Section K requires that suppliers obtain prior written approval (SSR) and provide traceability back to the OEM/OCM if not procuring directly from these sources.
- **Supply Chain Management** includes the flowdown of counterfeit avoidance Procurement Quality Clauses, including requirements to use OEM/OCM authorized sources throughout the supply chain.
- **Obsolescence Management** includes processes of determining obsolescence issues in time to initiate actions such as lifetime buys or redesign efforts.
- **Counterfeit Awareness Training** which involves internal Harris-GCS and Supplier training efforts.

Counterfeit Avoidance Requirements are Contained in Harris Government Communication System Procurement Quality Requirements (Q-Clauses; H-1999Q)

Refer to your Specific Harris-GCS Purchase Order for all Requirements
• Making sure Suppliers detect and preclude shipment of counterfeit parts to Harris
• Making sure that any supplier undetected Counterfeit parts are detected prior to integration into higher level assemblies
• Illustration below shows that the more time, effort, and expenditure put forth on validating parts/components increases the level of confidence gained that the parts/components are authentic

Detection

Cost and Schedule

Confidence

Probability and Reliability of Detection

C of C Only

Material Checks, Seal Test, Radiographic or Basic Electrical Testing

Full Ambient Electrical Tests

Full Electrical Tests Over Temperature

Post Burn-In Full Electrical Tests Over Temperature

Burn-In

QCI and Other Lot Acceptance Testing

DPA = Destructive Physical Analysis

C of C = Certificate of Conformance

QCI = Quality Conformance Inspection
Detection Strategies

• Look for “warning flags” that could indicate to either your sourcing, receiving, inspection, and testing teams that there could be a counterfeit issue.

• Review the warning flags listed below as well as the inclusive list found in SAE Standards AS5553 or AS6174.

  Warning Flags
  - Price is low or significantly different than price history
  - Obsolete part
  - Part/component coming from source other than the OEM/OCM or authorized sources; suspect locations such as China
  - Unknown supplier
  - Unable to identify the chain of ownership
  - No certificate of conformance
  - Scarce items suddenly become available
  - Item marking issues such as lot/date code issue, quality differences, alterations/resurfacing, wrong size/location
  - Packaging issues such as poor quality, evidence of repair/rework, resurfacing, size/shape/color/finish of materials
Mitigation Strategies

- Minimizing risk and damage to our programs and reputation.

- When traceability to the OEM/OCM cannot be established, it is imperative that mitigation strategies are in place to mitigate the risk of counterfeit parts.

- To further prevent inadvertent use of counterfeit parts
  - The Supplier and its sub-tier suppliers, shall ensure that only new materials are used in products required to be delivered to Harris.
  - The Supplier may only purchase electronic components and parts procured directly from the OEM/OCM, or through the OEM/OCM authorized distribution chain unless first approved in writing by Harris through the submission and approval of an electronic Supplier Support Request (SSR).
  - Any use of Non-Franchised Distributors/Brokers or other non-authorized sources is not authorized, unless first approved in writing by Harris through the submission and approval of an electronic Supplier Support Request (SSR) and provision of traceability to OEM/OCM.

- Ensure processes are in place to quarantine suspect parts that require testing and verification until they are determined to be no risk. Best practice is to treat components from other than OEM/OCM and their authorized sources as high risk.

- Mitigation strategies and Authenticity testing are in place using a risk-based approach.
  - Vetting Non-Franchised Distributors/Brokers and part numbers against GIDEP and/or ERAI can be beneficial when evaluating the risk that a given part or supplier may be a high risk for counterfeit infiltration into the supply chain.
If you suspect that a counterfeit part may have infiltrated your supply chain, the following items must be addressed immediately as an effort to minimize the impact.

• Immediately notify your Harris Buyer with all applicable details.

• Quarantine affected parts and clearly identify/mark as nonconforming
  – This includes all parts in stock and on assemblies.
  – Identify any suspect parts that may have already left your facility.

• Collect all traceability documentation, chain of custody information, and authenticity testing records associated with the suspect part.
  – This may include the Purchase Order, Certificate of Conformance, Inspection Records, and Test Data

• Verify that the part is or is not suspect counterfeit by conducting additional testing
  – This may include engaging the manufacturer of the part for their assistance and technical expertise.

• Remedy / Corrective Actions (for Suspect Counterfeit Parts)
  – If applicable, plan for rework/replacement/repair and testing of fielded part shall be coordinated with the Harris Buyer. Generally these costs are the responsibility of the Supplier!!

**Always Test if you Cannot Provide Solid Traceability**
Disposition

- Decide on proper actions and resolution to reduce the risk

- Proper dispositioning protects the supply chain, ourselves, and customers

- Counterfeiting customarily involves fraud which can be an upstream supplier that can be several tiers removed, therefore it is important to coordinate with appropriate officials prior to making any disposition of counterfeit parts.

What are "Best Practices" that should be taken if suspect parts are contained in your facility?

- Maintain suspect counterfeit parts in a segregated quarantine area separate from non-conforming product; clearly identify as non-conforming/counterfeit product that is pending review by your organizations management and legal team.

- Counterfeit parts must not be returned to the supplier to avoid being reintroduced into the supply chain to thus be sold to another victim.

- Legal authorities may be contacted to initiate an investigation into counterfeiting activities; thus parts may be required as evidence and should not be returned to the supplier.

Keep Parts – Do Not Throw Away – Investigation May be Required
Protect - Do Not Return or Put Back Into the Supply Chain
Communication and Reporting

• Supplier shall provide timely (within 14 days) notification to Harris with the pertinent facts if Supplier becomes aware of, or that it has delivered suspect counterfeit or counterfeit work.

• Ensure that communication and reporting of counterfeit issues is timely and effective.

• Communication may include internally within your organization, customers, criminal investigators, Government reports (GIDEP), and Industry programs (ERAI).

• Suppliers are required to report to agencies such as GIDEP (www.GIDEP.org)

Reference AS5553; Appendix G for Additional Information and Guidelines on Reporting
Conclusion / Summary

• Counterfeiting of electronic parts is a serious threat and can compromise the integrity of the highly visible and important products we provide in the industry.

• Using OEMs/OCMs (Original Equipment and Component Manufacturers) and their Authorized/Franchised sources will result in the least amount of risk for introducing counterfeit parts into our products.

• If unable to obtain parts from OEM/OCM and their authorized Distributors in order to meet the requirements of the Harris-GCS purchase order, immediately notify your Harris Buyer in writing through the submission and approval of an electronic Supplier Support Request (SSR).
  – Parts must be authenticated in accordance with Harris Government Communication System Procurement Quality Requirements (Q-Clauses; H-1999Q) as flowed down on your Harris-GCS Purchase Order.

• Counterfeit Risk must be controlled throughout the entire Supply Chain by all to ensure counterfeit components do not infiltrate our supply chains.

• Your continued efforts as a Supplier/Partner will ensure a secure supply chain free of counterfeit parts or products.

Thank-You!
Appendix - References

- Harris Gov’t Communications Systems Procurement Quality Req’s (Q-Clauses); H-1999Q
- Independent Distributors of Electronics Association (IDEA)
- AS5553 - Counterfeit Electronic Parts
  - [http://www.sae.org/technical/standards/AS5553](http://www.sae.org/technical/standards/AS5553)
- AS6081 - Fraudulent/Counterfeit Electronic Parts: Avoidance, Detection, Mitigation, and Disposition – Distributors Counterfeit Electronic Parts; Avoidance Protocol, Distributors
  - [http://standards.sae.org/as6081/](http://standards.sae.org/as6081/)
- GIDEP – Government Industry Data Exchange Program
  - [www.GIDEP.org](http://www.GIDEP.org)
  - GIDEP Help Desk: 951-898-3207
- DFARS 252.246-7007 – Contractor Counterfeit Electronic Part Detection and Avoidance System

Providing Tools to Reduce Industry Risks & Costs