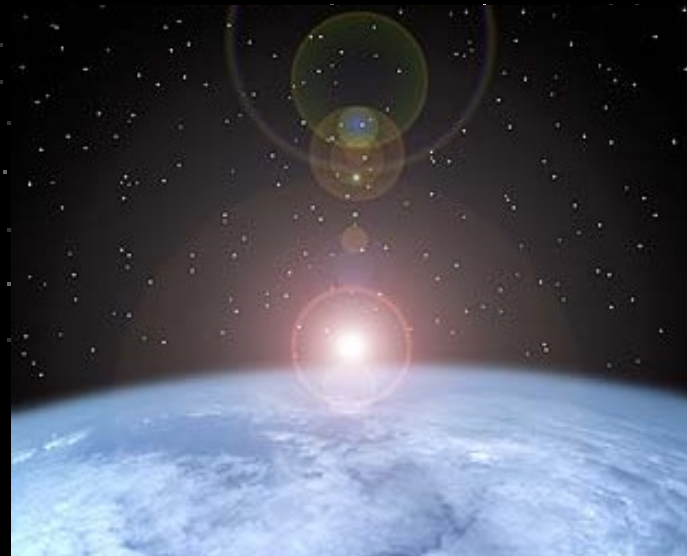




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# **Safe Source Seal Aerospace Sourcing Assurance Program**

**NASA QLF – March 19, 2009**

**Matthew Heaphy III, President**

**Ken Rogers, Military Solution Provider**

# Electronic Supply Chain Solutions Company Overview



A franchised and independent inventory stocking distributor of military, aerospace & industrial electronic components & hardware



Aerospace certified – AS9120-2002 & ISO9001-2000



Support leading prime contractors and their sub-contractors



Maintain direct manufacturer relationships and a quality controlled supplier base to provide solutions for factory allocations, pull-in deliveries, repair & overhaul and obsolete part sourcing



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# Electronic Supply Chain Solutions

## COTSS – Component Off The Shelf Services



### PROCUREMENT SERVICES

- End of life inventory management
- Work from source control drawings
- Part number investigation for dual-marked parts
- Kitting of connectors



### PRODUCT PREPARATION 3<sup>rd</sup> PARTY SERVICES

- Testing for authenticity & functionality
- Lead forming & tinning
- Dry packing
- Bar coding
- Tape & reeling



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# Electronic Supply Chain Solutions

## Web Services Provided



### INDUSTRY LEADING BUYER PORTAL

- [www.ESCS9120.com](http://www.ESCS9120.com)
- Information needed to make sound business decisions
  - “CLICK-n-GO” Launch Pad
    - Showcase only those MFG who address a particular commodity
  - ICPHOTOSYNTH – ESCS exclusive photographic parts inventory for sale, linked to Datasheets4U
  - RoHS Forum – links to 100’s of MFG’s lead-free initiatives
  - DSCC Dashboard – quickly surf government site
  - COTTS – Component Off The Shelf Services
  - Combat Counterfeits - an industry resource to mitigate risks
  - TEMO – hyperlinks to over 3000 manufacturers’ websites
  - ESCSINFO.com – News & Information Source



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# ESCS Industry Advocacy

## What led to development of Safe Source Seal

-  Founding member of the US Chamber of Commerce's Coalition Against Counterfeiting & Piracy (CACP)
-  Sponsor web site [www.CombatCounterfeits.com](http://www.CombatCounterfeits.com)  
Extensive electronic industry resource center
-  Member of ERAI & GIDEP – counterfeit information sources
-  Published best practices component inspection protocol
-  Keynote speaker – 2008 Future Aerospace Congress  
“Best Practices in Supply Chain Sourcing to Combat Counterfeits”
-  Published 2008 Industry Assessment – Counterfeit Electronic Components
-  Advocating “Six Minimum Independent Distributor Quality Criteria”
-  Pioneered “Safe Source Seal” Aerospace Sourcing Assurance Program



# The Need to Combat Counterfeits

## Overview of the Problem

Each year, America loses over \$250 BILLION to counterfeiters, seriously damaging our economy and intellectual property rights.

Risks to the Aerospace Industry are substantial. Beyond damage to manufacturers' reputations, project delays and lost profits, counterfeit parts subject your customers to potential field failures, in many cases with life-threatening consequences.

It is a rapidly growing global problem, with increasingly sophisticated counterfeiter strategies. Fear of association prevents full disclosure... we see only the "tip of the iceberg".

Counterfeits creep into the supply chain through ever more clever means – it is not a problem limited to independent distributors... lax scrapping policies and franchise co-mingled surplus returns are also possible sources.



# The Need to Combat Counterfeits Even NASA is not immune...

Excerpt from Houston Chronicle article, Friday, March 5, 2009

WASHINGTON – The acting administrator of NASA told Congress Thursday that some of the cost overruns besetting the space agency stem from counterfeit parts inadvertently installed on space craft.

“We find out late they are counterfeit parts,” Christopher Scolese, the space agency’s acting administrator told a House Science & Technology subcommittee. “We find out about it while sitting atop a rocket, or worse, find out about it in space.”

**There is no “silver bullet”... but there ARE some basic steps ALL aerospace and military manufacturers can take TODAY.**



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# The Need to Combat Counterfeits

## ESCS Industry Assessment



### PURPOSE

- Assess current industry awareness and perspective
- Learn how prevalent the problem is – incidence of problems
- Gain perspective on any initiatives to address the issue
- Learn what specific distributor quality criteria are being applied



### STUDY SCOPE & METHODOLOGY

- Informal survey of over 90 QA and Procurement professionals
- Cross-section of GIDEP member prime contractors & subs
- Focus on qualitative perspective – not quantitative statistics



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# The Need to Combat Counterfeits

## ESCS Industry Assessment



### OBSERVATIONS

- Over ½ of all facilities admitted to having received counterfeits.
- All prime contractors are at least aware of the issue, while some sub-contractors had little or no real awareness.
- Within the primes, only two appeared to have implemented company-wide policies to specifically address the problem.
- Vendor reduction is widely understood to reduce risk.
- Most prime contractors are moving to centralized vendor management.
- None of the companies having distributors handle testing required them to use 3<sup>rd</sup> party test houses or conform to inspection standards such as the IDEA 1010-A.
- Many require distributors to be ISO9001; but few required AS9120.
- A few companies now have a strict prohibition against sourcing electronic components from independent distributors.



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# The Need to Combat Counterfeits

## ESCS Industry Assessment



### CONCLUSIONS

- Prime contractors are generally addressing the issue with focused organizational strategies – but most are still in an evaluation phase.
- The wide range of awareness levels and implemented policies suggests the industry has not yet evolved to accepted best practices.
- Strict, prohibitive sourcing standards limit flexibility and may jeopardize project timelines, costs and profitability.
- Only a limited number of independent distributors supporting prime contractors are AS9120 certified, and the primes are not pressing it.
- Current industry efforts need to be further coordinated to promote increased information sharing and development of best practices.



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# The Need to Combat Counterfeits

## ESCS Industry Assessment



### RECOMMENDATIONS

- Clearly define company-wide counterfeit risk mitigation policies.
- Promote greater awareness of the problem and company policies.
- Centralize supplier evaluation & approval.
- Develop specific, measurable quality criteria for distributors.
- Track supplier quality and periodically report that back to suppliers.
- Clearly define GIDEP representative responsibilities for dissemination of counterfeit alert information.
- Actively manage product design to minimize use of end-of-life parts.
- Get involved in industry efforts to share info & evolve best practices.
- Remember this is not a static problem, or one limited to independent distributors. Remain vigilant!



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# Safe Source Seal<sup>TM</sup> Aerospace Sourcing Assurance



IN 2008 ESCS INTRODUCED THIS GROUND-BREAKING PROGRAM

Until now, sourcing electronic components through the open market gave you little assurance of the product's source.

The "Safe Source Seal" program provides an audited solution.

# Safe Source Seal The Two Prerequisites



**Minimum Distributor  
Quality Requirements**

**Component Inspection  
Standard**



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# Distributor Quality Standards

## Recommended Minimum Requirements



### #1 – Aerospace 9120 certification

If your company is AS9100 certified, shouldn't your distributors meet the same flow-down requirements for inventory control and lot traceability?  
(Isn't anything less a major disconnect for the industry?)



### #2 – GIDEP Membership

An important resource for information on suspect electronic components



### #3 – ERAI Membership

Must remain in good standing, and provides access to their counterfeit component database.



### #4 – Validated component testing

Distributors should use qualified 3<sup>rd</sup> party labs for testing of authenticity and functionality. In-house testing is biased by nature, and does not provide the same assurance.



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# Distributor Quality Standards Recommended Minimum Requirements



## #5 – Vendor management system

Confirm distributors' QMS requires tracking of their suppliers' quality and delivery compliance, and includes standards for retention in their AVL.



## #6 – Agreement to on-site audits

Insist your distributors allow on-site customer audits with minimal notice. May identify issues with any unaudited processes such as inspection and testing.

*ESCS considers the above to be MINIMUM standards.*

At ESCS, we exceed these standards and are committed to developing and promoting best practices.



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# Component Inspection

## The Current Industry Challenge



### An Important Line of Defense

All independent distributors should be required to maintain a comprehensive component inspection protocol.

The inspection process should be based on evidence-based protocols & procedures as defined in the ERAI's "checklist", the new AS5553 standard, ESCS's Inspection Protocol, or the IDEA's 1010-A standard.



### Need for an Audited Inspection Standard

At present, there is no audited certification for inspection. Short of that, there is no meaningful way to measure performance against any standard being used.



### An Interim Solution...

Until there is an audited inspection standard, ESCS believes all components not sourced from the OCM or franchise distributor should be subject to objective, professional 3<sup>rd</sup> party testing.



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# Safe Source Seal™

## Aerospace Sourcing Assurance



### HIERARCHY OF COMPONENT SOURCES

Every electronic component shipped must meet one of the following assurance levels to be marked with a “Safe Source Seal”:

- Tier 1 – Sourced directly from the original manufacturer
- Tier 2 – Sourced from an authorized franchise distributor
- Tier 3 – Product has passed 3<sup>rd</sup> party testing to validate authenticity and functionality per customer’s requirements.
- Tier 4 – Product received from a non-authorized supplier but has the original mfg. CofC’s
- NA - Product that may have a CofC, but does not meet the above criteria will not receive a Safe Source Seal

# Safe Source Seal<sup>TM</sup>

## Aerospace Sourcing Assurance Program



Distributor's AS9120  
Certification #

Distributor's sSs  
Registration #

# Safe Source Seal™ Aerospace Sourcing Assurance



## MANUFACTURER'S BENEFITS

Provides AS9120 audited source assurance

Receiving inspection departments now have an informed basis to quickly determine what in-house inspection criteria or testing will be appropriate.

## VERIFIED THROUGH AS9120 QUALITY MANAGEMENT SYSTEM

A formalized Internal Procedure added to the AS9120 Quality Management System Manual mandates the annual registrar's audit to include confirmation of Safe Source Seal sourcing as indicated on packing slips.

Participants must authorize IAQG to provide open access to AS9120 audit results, available via their OASIS (Online Aerospace Supplier Information System) database, providing objective evidence of program conformance.

# Safe Source Seal™ Aerospace Sourcing Assurance



## REQUIRED AS9120 INTERNAL PROCEDURE

- Component source is documented upon receipt of the customer's RFQ.
  - Safe Source Seal Tier Level is assigned & maintained at the lot and date code level. This designation "travels" with the parts through every step of the procurement process.
- Tier designation may only be modified if received as "Tier 4" and the parts have passed 3<sup>rd</sup> party authenticity testing – revised to "Tier 3".
- All components with a Safe Source Seal designation have their Tier Level indicated on the packing slip at the line item level.
- AS9120 Registrar is required to test conformance during annual audit. Any deviation results in a finding, which will be visible on OASIS.

# Safe Source Seal™ Aerospace Sourcing Assurance



## OASIS AUDIT VISIBILITY

As of October, 2008, OASIS allows the certificate holder to authorize OASIS to make the results of their most recent audit visible on the OASIS database. This is a requirement of the Safe Source Seal Program.

International Aerospace Quality Group  
Online Aerospace Supplier Information System

**Supplier Details**

Certificate | **Assessment Results** | Return

Selected Supplier / Site Details  
**Electronic Supply Chain Solutions, Inc.**  
(OIN: 6115537828)  
Building H-109,3023 Eastland Boulevard,Clearwater, FL 33761-4106 United States

Certificate History ⓘ

Certificate	Issue - Expire Date	Reissue Date	Status Standard	CRB	Latest
> 11634	08/01/2008 08/01/2011	-	Certified AS9120	National Quality Assurance, USA	Y
<u>11634</u>	09/14/2005 08/05/2008	-	See Latest AS9120	National Quality Assurance, USA	N

Selected Certificate Details

CRB Details	Supplier(s) On Certificate
National Quality Assurance, USA 4 Post Office Square Road Acton, MA 01720, United States	<a href="#">Electronic Supply Chain Solutions, Inc.</a> (OIN: 6115537828) Building H-109 3023 Eastland Boulevard Clearwater, FL 33761--410, United States
Sector: Americas	

Click here to view details. Any "findings" will be displayed.

This tab is not visible until the certificate holder authorizes it.

# Safe Source Seal™ Aerospace Sourcing Assurance



## OASIS ASSESSMENT REPORT SAE AS9121 Quality System Questionnaire

ASSESSMENT SCORING							
IAQG	SCORING CHART	Result					
		Major CAR or minor CAR on Key requirement		Minor CAR on <b>non</b> Key requirement		NO CAR	RESULT
		Multiple findings	Single finding	Multiple findings	Single finding		
<b>4</b>	<b>Quality management system (Max. 80)</b>						
4.1	General requirements	0	5	20	30	40	40
4.2	Documentation requirements	0	5	20	30	40	40
<b>5</b>	<b>Management responsibility (Max. 80)</b>						
5.1	Management commitment	0	5	10	15	20	20
5.2	Customer focus						

Excerpt from  
ESCS's most recent  
Assessment Report

8.2.4	Monitoring and measurement of product	0	5	15	15	20	20	
8.2.5	Evidence of conformance - Certificate of conformity	0	5	N/A	N/A	100	100	
8.3	Control of nonconforming product	0	5	20	25	30	30	
8.4	Analysis of data	0	5	10	15	20	20	
8.5	Improvement	0	5	10	15	20	20	
						TOTAL	1000	1000
						SCORE	100	/100

# Safe Source Seal™ Aerospace Sourcing Assurance



## SUMMARY OF THE PROGRAM

- Audited assurance of electronic component sourcing.
- Line item declaration of component procurement source.
- Participating distributors must have an AS9120 QMS in place.
- Just “one tool” in manufacturers’ arsenals in the battle.

**Let the buyer beware...**  
***Safe Source Seal* assures the buyer will be aware.**

Visit [www.SafeSourceSeal.com](http://www.SafeSourceSeal.com) for more information.

# Want to Know More?

If you would like any of the below information, please contact:

**Electronic Supply Chain Solutions, Inc.**

**(727) 723-8255**

**info@ESCS9120.com**



A copy of this PowerPoint Presentation



A copy of our Industry Assessment



A list of industry resources



Links to:

[CombatCounterfeits.com](http://CombatCounterfeits.com)

[SafeSourceSeal.com](http://SafeSourceSeal.com)

[ESCSinfo.com](http://ESCSinfo.com)



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