

# Counterfeit Avoidance Management

## A Supply Chain Perspective

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# IPC - Association Connecting Electronics Industries

- A global trade association dedicated to furthering the competitive excellence and financial success of its members, who are participants in the electronics industry.
- Focused on
  - Management improvement
  - Technology enhancement programs
  - Creation of relevant standards
  - Protection of the environment, and pertinent government relations.

# Why the Concern

- Parts don't work – Random, intermittent or not at all
- Parts don't last – Reliability issue
- Physical size is different - Won't mount and difficult to remove or replace
- Plating is poor – Lack of solderability
- Parts contain restricted substances
- Result:
  - Product repair and return costs
  - Customer loss of confidence – brand damage
  - Possible legal action

# Whose at Risk?

- Distributors – OCM producer change
- EMS suppliers – assembly/test problem
- Component brokers – customer loss
- Purchasing agents – someone to blame
- Process engineers – determination
- End item user – field failures
- Outsourcing personnel – whom to inform

# You Get What You Deserve

- Poor purchasing practices
- Improper part specification
- Incorrect definition of alternatives
- No preferred Supplier mechanism
- Lack of process control & corrective action
- Inappropriate component audits
- Disorganized MRP system
- Poor inventory procedures - FIFO

# So What are the Solutions?

- Develop an industry procedure
- Good specification control system
- Establish a preferred supplier method
- Create a part/product tracking method
- Avoid last minute procurement
- Stay away from black market purchases
- Build on the material declaration system
- Require adherence to industry methods

# Best Practices

Development of an industry procedure that outlines the do's and don'ts of procurement practices and reference as a requirement in the Purchase Order



## IPC-17XX

### Requirements for Best Practices Procurement Procedures (Counterfeit Avoidance)

Proposed Standard

February, 2009

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IPC-17XX  
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# Include in the Standard

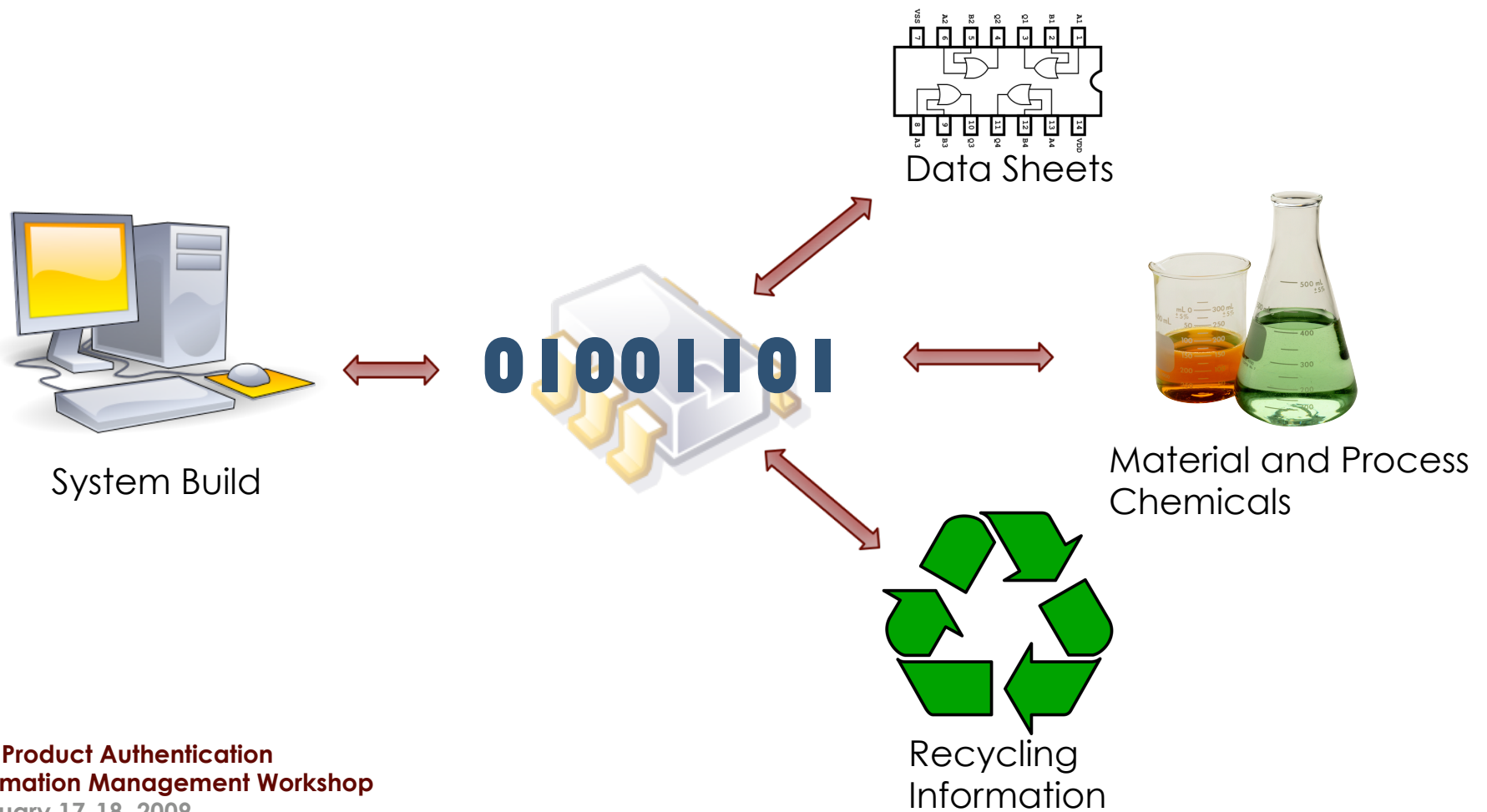
- References to existing process control
- Implement requirements of 175X
- Use automated tools to capture data
- Allow suppliers to distribute compliance
- Set up data base capture process
- Require Digital signature for C of C
- Make a Standard not a Guideline
- Legally binding when using **SHALL**



# Confidence Through Identification

- Use ID to trace product through supply chain
- Know where product came from
- Makes it difficult to insert counterfeit products
- Use SEMI T20 + IPC 175x
- Additional Benefit: associate other information with product
  - Material information
  - System build
  - Recycling
  - Lifecycle analysis

# Product Information



# Confidence Through Supplier Assessment

- **Internal assessment** consists of periodic supplier verification of data contained in the Quality Profile section of the self declaration. (IPC-1710)
- **User assessment** generally consists of on site verification of data contained in the quality profile section of the self declaration.
  - The coordination of individual audits and audit data between several users permits a thorough review, maximizing user and supplier resources by **sharing of audit philosophies and expertise**.
- **Independent assessment** performed by a third party assessor which is generally procedural in nature. Examples of third party assessors are ISO Registrars, Government Agencies, Malcolm Baldrige, U.L., C.S.A., IECQ, etc.

# Confidence Through Testing

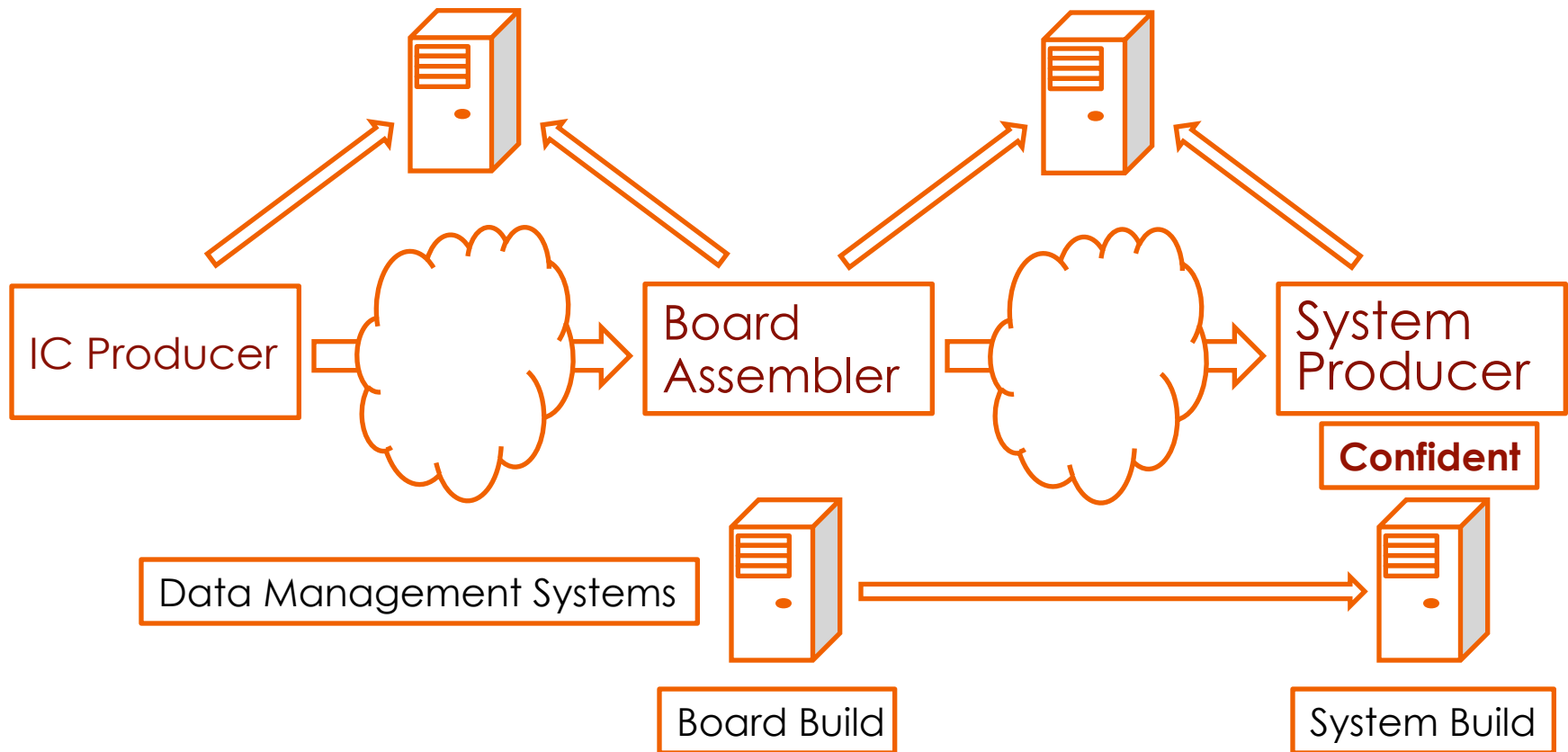
- **Production Data**

- The results of measurements, inspections, and tests on printed boards or conformance coupons used to verify compliance to the parameters of the applicable performance specification. This data may also be in the form of statistical methods to reduce variation.

- **User Correlation**

- Verification of product characteristic compliance may be demonstrated through statistically significant correlation between supplier and user inspection and test results.

# Information Flow



# Conclusions

- Not possible to stop them counterfeiting parts
- Develop industry “best procedures”
- Use trusted suppliers
- Establish automated techniques for managing procurement issues
  - Information needs to flow through the supply chain
- **Get industry behind the effort and publish a STANDARD that can be enforced**