



IPC 1752: Materials Declaration

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ASSOCIATION CONNECTING
ELECTRONICS INDUSTRIES



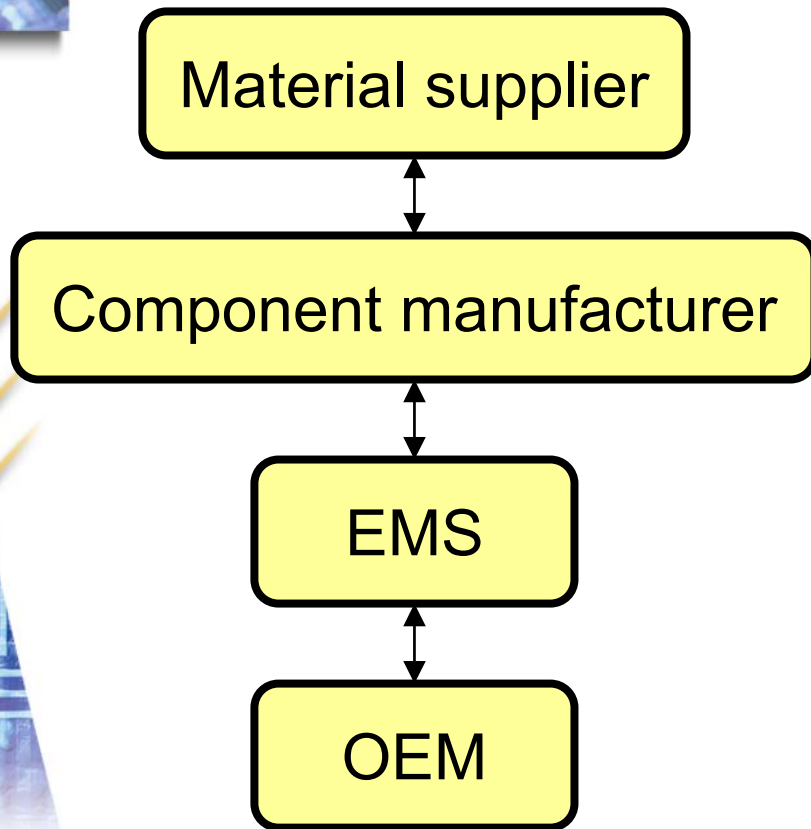
Why Materials Declaration

- What is in your product?
- Are you in control of your supply chain?
- Are there any restricted substances in your components, parts and subparts?
- Are your products compliant with the European Union's Restriction of Hazardous Substances (RoHS) Directive and other global substance restrictions?

Why Materials Declaration Standards

- End product producers are requiring that suppliers provide materials declarations
 - Indicate compliance with the requirements
 - Provide detailed materials content information
- Materials declarations formats and custom software are proliferating
- **Multiple formats increase the burden on the supply chain**

Supply Chain



- Different:
 - Material Declaration Needs
 - Data Management Tools
 - Data Exchange Requirements



Why Materials Declaration Standards

- B2B interactions are critical
- Many different data management solutions are used across the supply chain
- These data management solutions must work together

IPC Materials Declarations Standard

- Establish Standard Electronic Data Formats
 - Reduce burden on the supply chain
 - Support the exchange of Materials Declaration information between trading partners

IPC Materials Declarations Standard

- Leverage existing work
 - EIA/EICTA/JGPSSI Joint Industry Guide (JIG) –materials and substances to be disclosed by suppliers
 - Rosettanet - Partner Interface Processes (PIPs) for Partner-to-Partner electronic exchange
 - iNEMI Data exchange format and process



IPC Materials Declarations Standard

- Defined using a UML data model
- Underlying XML schema
- Provide a pdf-based form version for human input
 - Conform to the XML schema
 - Support for automated data extraction
- Be aligned and consistent with the data models for Rosetta Net PIPs
 - 2A10 and 2A13
 - New 2A15 under development

Why UML->XML->PDF?

- UML (Unified Modeling Language) describes the data that needs to be captured
- UML tools can automate the creation of:
 - Relational Databases
 - Necessary Computer Programs
 - XML Schema which defines the 175x XML format

Why UML->XML->PDF?

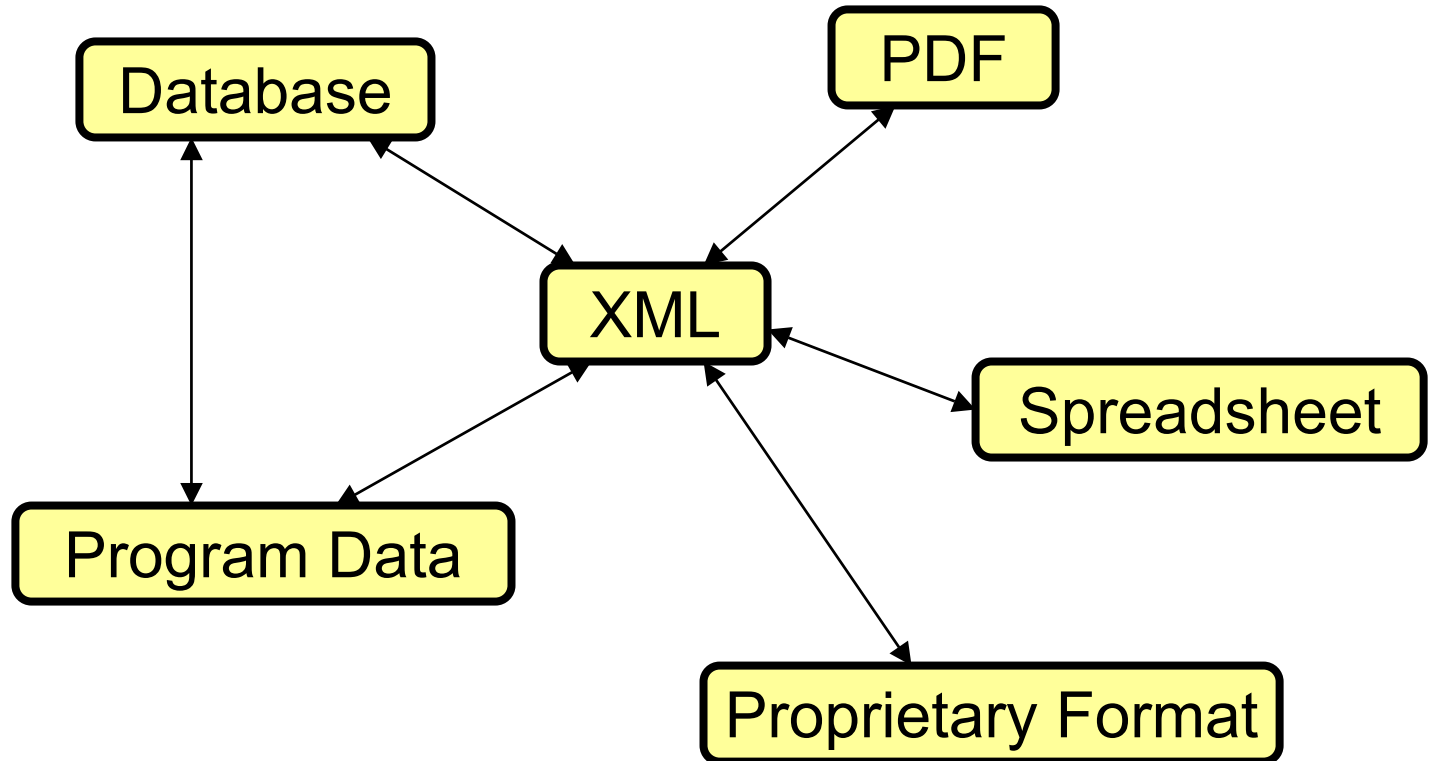
- XML provides an easily machine read data format which is compatible with many tools
- PDF is presentation of the XML
 - Presents the information in a human readable form
 - Allows manual data entry
 - Provides mechanism to digitally sign data



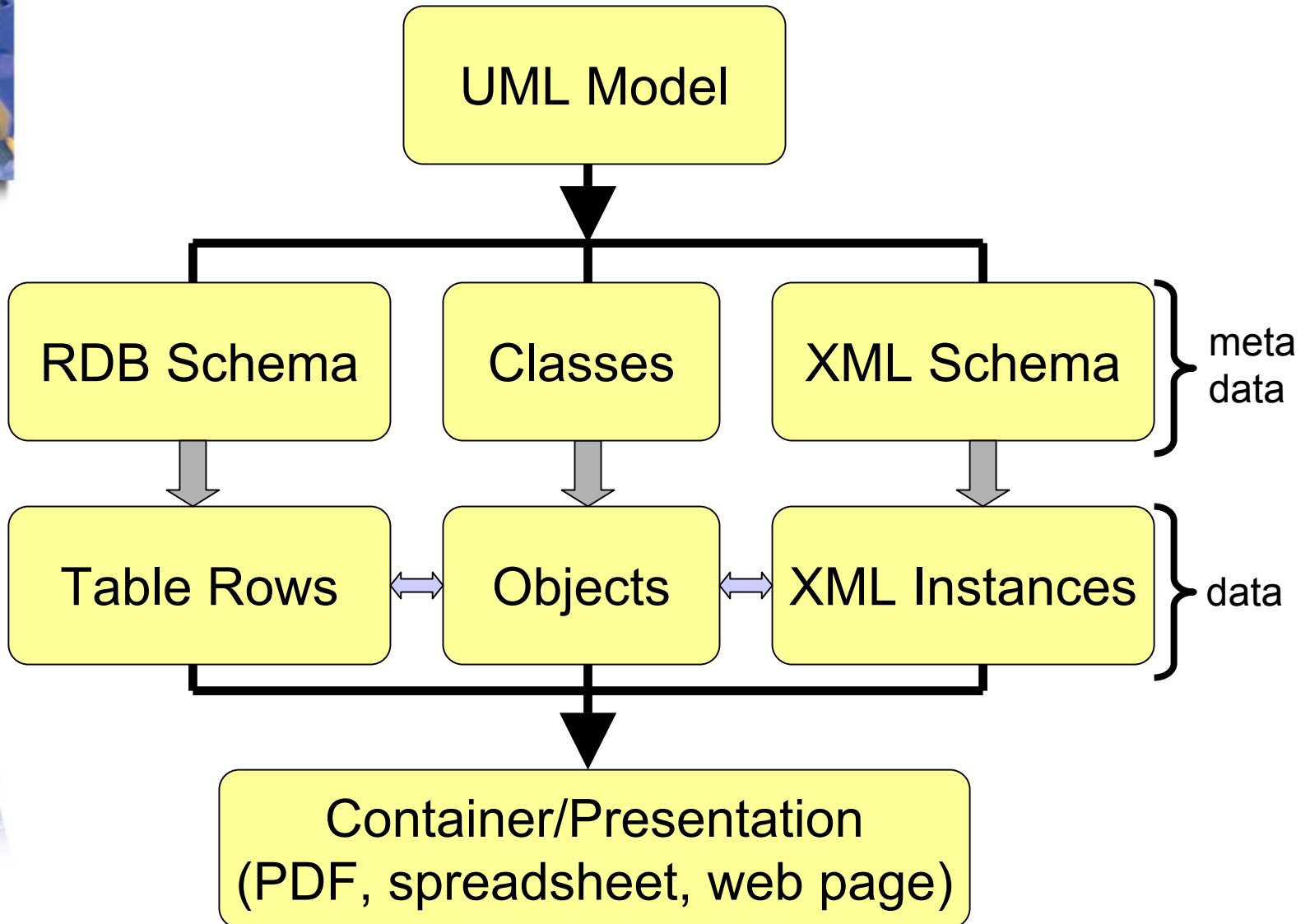
Adobe Portable Document Format (PDF) Implementation

- Human presentation of 175x XML data
- Estimated 500 million Adobe readers deployed
- The Adobe PDF reader is free to trading partners
- Large number of Independent Software Vendors (ISVs) supporting PDF
- Program platform stable and independent
- Platform supports manual entry
- Provides XML import/export to integrate with data management systems

Data Format Interaction



175x Design Flow





IPC 1750: a Family of Supplier Declaration Standards

- **1751 Generic Requirements**
 - Establishes the principles and details for any declaration necessary between members of a supply chain
 - Contains general information about the supplier
 - Supplemented by sectional standards that define specific details for customer requested information
- **1752 Material and Substance Declaration**
- **Future Declaration Standards**

IPC 1752

Material and Substance Declaration

- 1 Scope**
- 2 Applicable Documents**
- 3 Requirements**
 - 3.1 Terms and Definitions**
- 4 Levels of Declaration**
 - 4.1 RoHS Yes/No Compliance**
 - 4.2 RoHS/JIG Materials Content Disclosure**
 - 4.3 Customer Specified Disclosure**
- 5 Data Model**
- 6 Business Processes**
- 7 Description of the Form**
- 8 Supplier Declaration Model**
- 9 Legal Issues and Certification Statements**
- 10 Audit Procedures**
- 11 Verification Procedures**

Six Classes of Reporting


Class	Description	Form type
Class 1	RoHS reporting at a homogeneous level in yes/no format	IPC-1752-1
Class 2	RoHS reporting at a homogeneous level in yes/no format and manufacturing information	IPC-1752-1
Class 3	RoHS reporting at a homogeneous level in yes/no format and JIG level A & B at the part level and other substances at the part level.	IPC-1752-1
Class 4	Same as Class 3 with the addition of Manufacturing information	IPC-1752-1
Class 5	RoHS reporting at a homogeneous level in yes/no format and JIG level A & B at the homogeneous material level and other substances at the homogeneous level.	IPC-1752-2
Class 6	Same as Class 5 with the addition of Manufacturing information	IPC-1752-2



IPC 1752 Summary

- **The 2 forms provide**
 - Requestor / Supplier information
 - Part information
 - Simple Yes/No RoHS Information
 - JIG level Declaration
 - 100% declaration at homogeneous level
 - Basic manufacturing information
- **Can save file in 3 different formats**
 - PDF form itself, includes Digital Signatures
 - XML data, will not include Digital Signatures
 - Both (XDF)
- **Using this XML based format allows for**
 - “**Send**” button to automatically send PDF, XML data or both
 - Automation to exchange data between the Requestor and Supplier databases

Schedule of Activities



Obtain agreement from key constituents (IPC, EIA /JEDEC (JIG), NEMI, RosettaNet).....	Complete
Develop draft data model and pdf form.....	Complete
Incorporate NEMI pilots feedback	Complete
Two day meeting to prepare draft standard.....	Complete
Circulate Final Draft Standard (60 days).....	Complete
Circulate as Proposed Standard for Ballot (30 days)	Sept '05
Resolve comments on Final Draft Standard.....	Current
2 nd Circulation.....	Dec '05
Release Final Standard.....	Dec '05
Publish Official Standard	Feb/Mar '06



IPC 1751/1752

- IPC will support the development and maintenance of standard forms
- Free download www.ipc.org/IPC-175X
 - September Draft for Ballot currently available
 - Final Draft for Ballot expected in December

Material Composition Declaration

© Copyright 2005, IPC, Bannockburn, Illinois. All rights reserved under both International and Pan-American copyright conventions.

This document is a declaration of the materials within the manufacturer parts listed. The parts must be declared compliant or non-compliant with RoHS (Restriction of the use of certain hazardous substances in electrical and electronic equipment) or as an unknown or obsolete part. Note: if the part is an assembly with lower level parts, the declaration encompasses all lower level materials.

DRAFT

Form Type

Declaration Type

Request for Information

Request Date	Request Document ID	Internal Part Name	Internal Part Number	Contact Name	
Respond By Date	Company Name	Manufacturer Part Name	Manufacturer Part Number	Contact Title	Contact Phone
Company Unique ID	Unique ID Authority	Manufacturer Part Version	Manufacturer Effective Date	Contact Email	
Digital Signature of Requester		Manufacturing Site	My ID for the Manufacturer	Requester Comments	

Supplier Information

Response Date *	Response Document ID	Contact Name *	Name of person certifying this declaration as true and correct *		
Company Name *		Contact Title	Contact Phone	Certifying Title	Certifying Phone
Company Unique ID	Unique ID Authority	Contact Email	Certifying Email		
Part Name	Part Number	Part Weight	Unit per Length/Area/ Thickness	URL for Additional Information	
Effective Date	Version	Manufacturing Site	Part Comments		
Alternative Recommended Part	Alternative Part Availability Date				

~~Manufacturing Information section intentionally omitted.~~

Manufacturing Process Information

Terminal Plating / Grid Array Material	Terminal Base Alloy	J-STD-020 Moisture	Maximum Reflow Temp	Maximum cycles for Reflow
			C	
Manufacturing Process Comments				