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NEMI Materials Composition Data Exchange Statement of Work

NEMI Materials Composition Data Exchange Project,
part of the PLIM Technology Integration Group (TIG) and coordinated with the
Materials Declaration Project, RoHS Transition Task Group
Project Name: Materials Composition Data Exchange

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Purpose:

Work with the appropriate international standards bodies to help define and validate standards for the electronic exchange of Material Composition data between all elements of the value chain and across the entire product lifecycle in order to support requirements of the WEEE and RoHS Directives:

- Support for bulk material, component, sub-assembly and finished product level reporting
- Definition of standard data exchange formats and transfer protocols
- Automate data exchange query and response where possible, while also supporting human interaction

Key Related Groups and Activities:

Efforts will be coordinated with and will leverage existing activities, including:

- NEMI Materials Declaration Project – this group will be responsible for defining the business processes and the content requirements (will be the lead into the Joint Industry Guide and related organizations – EIA, EICTA, JGPSSI); efforts of these two teams will be tightly linked.
- Related standards bodies – IPC, RosettaNet, IEC

The intent is for the NEMI Materials Declaration Project to have responsibility to define/develop recommended processes, content and human readable format requirements, while the Materials Composition Data Exchange team will be responsible for defining/developing corresponding machine readable format standards and B2B data exchange mechanisms.

Background and Drivers:

Global efforts are underway to standardize how the Electrical and Electronic Equipment (EEE) industry

will declare hazardous and other materials in products and components. Due to the distributed nature of today's electronics industry, this will impact all elements of the value chain worldwide. A standard approach to materials composition declarations, including data collection and exchange, will reduce the cost and complexity of compliance and make a more efficient and effective process for the overall supply chain. Materials composition declarations are needed to meet both the requirements of RoHS which becomes effective in July 2006 and WEEE which becomes effective in July 2005. Many electronics OEMs are working to have reporting capability established by the end of 2004 in order to support their development cycles (typically range from 6-18 months, depending on complexity) and ensure compliance. Some OEMs are already being asked for this information, or at a minimum, asked to show how they will comply, primarily from their customers in Europe. Three major industry associations have been involved in defining the requirements for materials declaration: Electronics Industries Alliance (EIA), European Industry Association (EICTA) and the Japan Green Procurement Survey Standardization Initiative (JGPSSI). The years of work that has taken place both within and between these industry associations has resulted in a draft Material Composition Declaration Guide.

Currently, Material Composition data exchange is primarily accomplished through email exchange and MS Excel spreadsheets. While this may meet short term needs, it is difficult to scale and automate. In order to support industry requirements across all supplier, EMS, OEM relationships, standardized data exchange formats and protocols are required. RosettaNet has been working on defining Partner Interface Processes (PIPs) to support this data exchange at the component level. The IPC/NEMI PDX team is also working to include Material Composition data within the next release of PDX, including BOM level associations to enable product level roll-ups. However, these efforts are still in their infancy and many suppliers are not RosettaNet capable. Near term solutions will have to support "low-tech" data exchange with a roadmap to delivering a more automated solution.

Scope:

- International Materials Composition Data Exchange Format Standards
- International Materials Composition Data Exchange Protocols
- B2B infrastructure requirements required to support the above
- Support for "low-tech" data exchange (i.e. email/excel) and its integration into "high-tech" (i.e. xml-based) systems
- Support for bulk material, component, sub-assembly, and product level reporting
- Support for query and response (customer -> supplier -> customer), as well as publish (supplier -> customer) data exchange processes
- Support for multi-tier supply chain data collection
- Support for "electronic signature" of supplier provided data to support liability requirements

Objectives:

- Review international activity to understand current state and identify relevant organizations and contacts
- Define data exchange requirements and develop use cases to test and validate standards
- Identify pilot participants and resources
- Determine pilot matrix to exercise use cases
- Conduct pilots to validate standards and exchange mechanisms
- Develop matrix of available standards and exchange mechanisms against requirements, including pros/cons, dependencies and required infrastructure

- Make recommendations on International Materials Composition Data Exchange Format and Protocol Standards
- Develop a roadmap for delivering Materials Composition Data Exchange capabilities that covers near-term requirements and technical limitations while providing a path to full B2B capabilities, including IT infrastructure requirements and trading partner dependencies
- Produce report summarizing pilot results, recommendations and next steps

Schedule:

Call for Participation meeting	June 30, 2004
First Team meeting	July 7, 2004
- Define Team membership	
- Review SOW and revise as required	
Second Team meeting	July 14, 2004
- Agreement on revised SOW	
Complete Discovery activities	Aug. 11, 2004
Conduct 2-day Workshop	Aug. 30/31, 2004
Define requirements and use/test cases	Sept. 15, 2004
Identify pilot participants	Sept. 15, 2004
Complete pilots	Nov. 24, 2004
Complete Project and issue report	Dec. 22, 2004