

NEDA Components Roundtable
March 29, 2007
Dallas, TX

| Full Individual Name | Org Name | Full Individual Name | Org Name |
|-----------------------------|--------------------------|-----------------------------|--------------------------|
| Aaron Perez | Allied Electronics, Inc. | Howard Dellar | Electro Sonic, Inc. |
| Picky Malhorta | Allied Electronics, Inc. | Patricia Smith | Future Electronics, Inc. |
| David Williams | Analog Devices, Inc. | Jay Smith | Future Electronics, Inc. |
| Vincent Ciccolo | Analog Devices, Inc. | Mary Carter Berrios | KEMET Electronics Corp. |
| Donald E. Elario, Jr. | Arrow Electronics, Inc. | Mike Williams | Mouser Electronics |
| Sharron Peek | Avnet | Pete Shopp | Mouser Electronics |
| Rob Taflinger | BI Technologies | Dan Cuddihy | NKK Switches |
| Michael Prince | Brothers Electronics | Leonard A. Metzger | Panasonic Industrial Co. |
| Kim Heinle-Nelson | Digi-Key Corp. | Mark Frimann | Texas Instruments |
| Lorae Wendlandt | Digi-Key Corp. | Bruce Gerig | Texas Instruments |
| Patrick Glasser | Digi-Key Corp. | Dan Wikander | Texas Instruments |
| Patty Zbacnik | Digi-Key Corp. | Jeff Beaty | TT Electronics |
| Roxanne Finseth | Digi-Key Corp. | David Bender | Tyco |
| Shelly Helm-Guzek | Digi-Key Corp. | Rod Spear | TTI, Inc. |
| Barney Martin | NEDA | Melanie Pizzey | TTI, Inc. |
| Robin Gray | NEDA | | |

| |
|--|
| MEETING NOTES COURTESY OF MELANIE PIZZEY OF TTI |
|--|

Group introduction:

Barney Martin – VP Industry Practices

Robin Gray – Exec VP – NEDA: Interested in comments from group on counterfeiting.

Don Elario – Arrow: Also interested in the counterfeiting issues.

Dan Cuddihy – NKK Switches: Various forms of data being requested from customers has been a huge challenge. Providing data down to the level of detail requested (micro) has been extremely difficult. Need a standard format.

Rod Spear – TTI: Primary goal is not to leave this meeting without agreement on the NEDA worksheet as it relates to incorporating the China RoHS information. Counterfeiting has become a much bigger issue as well. We need to focus on China RoHS as follows:

- ask the manufacturers what they are doing
- Mary will show the Kemet data
- Jay will share Vishay data

Rod would also like to applaud NEDA for the support on getting the Berry Amendment changes pushed through.

Bruce Gehrig – T.I.: China RoHS is a key issue. Interested in learning more about upcoming Korea RoHS.

Dan Wikander – T.I.: Counterfeit parts and RoHS are two hot buttons at T.I. right now. We need to be able to report status on RoHS no matter which one. T.I. wants to “automate” on labels, and we need consensus. The challenge is to follow JEDEC in the IC world. JEDEC is not caught up with RoHS, and they are trying to get JEDEC and ROHS to co-exist together. T.I. will use the China logo because of a lack of a standard in the industry. T.I. is taking initiatives on the bar code label with a data identifier. JEDEC thinks that NEDA does not want to touch the standard labeling because of legal issues.

Barney and Rod were in great agreement that someone from JEDEC must have missed the JEDEC meeting because NEDA proposed those standards to JEDEC two years ago.

Sharon Peek – Avnet: Avnet is labeling with the RoHS labels, and they have assigned internal part numbers for any supplier that did not change part numbers. Sharon is participating on a task force to address the counterfeiting issues within the military. There is also a member from Arrow on the task force.

Howard Dellar – Electro Sonic: Second meeting, and here to learn more about all topics.

Mike Prince – Brothers Electronics: Interested in China and EU RoHS issues.

Picky Malhotra – Allied: First meeting – How are distributors representing compliance in the catalogs?

Aaron Perez – Allied: Here to learn more and get an idea of how to manage data.

Rob Taflinger – B.I. Technologies (TT Electronics): Want to stay in touch with what distributors and customers need. Interested in updates to the NEDA worksheet. B.I. asked their Chinese division about China RoHS, and the feedback they received is “don’t worry about it yet. The material breakdown by family is enough for now.”

Mary Carter-Berrios – Kemet: Responsible for ensuring compliance with all regulations. Kemet has recently made some changes to their website, and also published a worldwide change notice to all customers that the reel labeling on Kemet products will change. The new label is extremely pragmatic and easy to understand. Mary participates on various committees and in organizations such as JEDEC/IPC – lead free labeling specifications, MSL Pb Free profile, EIA Std 20 for non-IC devices to document discrepancies in what product can withstand, IPC 1752 committee. On April 6, class I and II will be released from IPC, and should be followed shortly by classes III and IV.

Melanie Pizzey – TTI, Inc.: Interested in updating of NEDA spreadsheet to include the China RoHS information. Still need information from several suppliers to update our internal product information.

Pete Shopp – Mouser: Continue to have challenge with suppliers who have not indicated exemptions in their compliance information.

Mike Williams – Mouser: Same issues as Pete.

Dave Bender – Tyco Electronics: Tyco has implemented web data with RoHS information and he will demonstrate later at this meeting.

Len Metzger – Panasonic: Counterfeiting is an issue. There have been a drop in number of customer inquiries for RoHS, but not the complexity of the requests. For example, some are asking for “class 6” information listing weights of all substances, which is extremely difficult to provide. He does not agree with supplying manufacturer’s data to third party data providers.

Jay Smith – Future: Need for updating NEDA spreadsheet. Interested in discussions on counterfeiting. Congratulations to Robin on Berry Amendment success. Ready to work on NEDA position paper at this meeting to update with new China RoHS.

Patricia Smith – Future: Chairperson for Trade Compliance Committee. Need more input from NEDA members on this committee. New regulations for China trade, and she will be asking Robin for help in the near future. There are some enforcement groups focusing on counterfeiting. Please see Patricia for participation in the Trade Committee.

Kim Heinle-Nelson – DigiKey: Distribution efficiencies – how do we manage inventory – standardization of labeling, etc.

Roxanne Finseth – DigiKey: Works with the IT department – interested in how to manage data and provide to the customers.

Shelly Helm-Guzek – DigiKey: Compliance Manager – Need more information on China RoHS, and want to improve the process of getting information from suppliers.

Patrick Glasser – DigiKey: Interested in information from suppliers and also to learn about REACH.

Patty Zbacnik – DigiKey: Need consistent information, interested in RoHS globally and learning about all topics on the agenda. Generally it is a challenge to be “in between” the customers and the suppliers when dealing with these issues.

Lorae Wendlandt – DigiKey: VP of Corporate Initiatives – interested in how to work together in managing data, and to gather ideas about how to manage this whole process.

David Williams – Analog Devices: Interested in the China RoHS discussion, labeling changed, looking for someone to lead the way in standards, and looking forward to Dan Wikander’s presentation on labeling.

Vincent Ciccolo – Analog Devices: RoHS not 100% in place. Interested in China and Hong Kong.

Jeffrey Beatty – TT Electronics/Optek Technology, Inc.: Distributor Sales Manager. Challenge to provide data to distributors. The labeling is going to be interesting as we are coming to a point in which we will have a label that is 8 x 11 attached to a bag that is only 2 x 3!

COUNTERFEIT PARTS DISCUSSION:

Arrow dedicated a person to manage the counterfeit issues. There are 10-15% of items in the supply chain that are counterfeit. NASA and some missile programs have identified parts that are counterfeit, and this has become a major issue for the military and in Washington.

Most suppliers are keeping the counterfeit discoveries very confidential because they do not want the “bad guys” to get data and information, and find out that the suppliers are on to them. Also, suppliers might be concerned about bad press.

Sharron Peek stated that the secrecy is primarily due to the fact that suppliers do not want to educate the counterfeiters. Sharron’s task group is working on guidelines for how to purchase parts – a “method of purchasing” – no brokers – only AUTHORIZED distributors!

Sharron will present request to committee for sharing data with NEDA group. Arrow and Avnet have members on this committee.

ACTION ITEM: Sharron to advise Barney of outcome of request to share data with NEDA group.

GIDEP is sitting on this same committee as well – they are changing the method of GIDEP alerts as a result.

Dan Wikander stated that it is difficult for a counterfeiter to copy unique information on labels. There is a “license plate” or trace # on parts which has a huge impact in allowing the counterfeiter to copy the data.

Mark at T.I. is responsible for a task force at T.I. that is working on combating counterfeiting and also the RoHS compliance requirements. T.I. is collecting data internally for all counterfeit reports. T.I. will share this data with any authorized distributor, but not with the brokers. They are not responsible for any parts not manufactured by T.I.

If U.S. Customs has control of counterfeit products, they can destroy it. If a broker has “bad” product, they don’t get credit unless they return it. At this point the counterfeit product can go back into China, and into the channel.

Generally everyone is finding that the long lead time items are more prone to counterfeiting.

Robin Gray stated that T.I. has taken a leadership role in combating counterfeit products by sending a letter to all customers encouraging them to buy only from AUTHORIZED distributors. Many buyers are willing to take risks if parts are in shortage or price competitive. Buyers need to be educated.

There is a task force working on legislation now introduced into Congress to increase penalties for counterfeiting. There is a second task force working on enforcement, and a third task force working on authentication efforts. These are being spearheaded by the U.S. Chamber of Commerce and the “Coalition Against Counterfeiting and Piracy”.

There is a growing problem with WEEE – no control over recycling companies in that if products are not destroyed properly they could be reintroduced into the market primarily in Asia. Be AWARE! NEDA is targeting an ad campaign toward customers to educate on dangers of buying from non-authorized sources.

Rob Taflinger pointed out that raw materials can also be counterfeited. Recently they have discovered that core substitutions were being made on magnetics products. The counterfeiter was making substitutions in order to sell the parts cheaper.

Dan Cuddihy commented that we need to educate customers on the dangers of making these decisions to buy from “other” sources. We need to stress the importance of quality vs. cost.

Rod Spear commented that validation for purchasing from authorized sources is established at the purchase order entry. Try to plug the leaks up front. Sometimes buyers at customers try to return parts that we did not sell to them. Receiving and RMA departments internally must pay very close attention to incoming rejects, and the sales departments should do a better job of qualifying the return requests.

Barney asked if there is anything NEDA can do to help with the counterfeit issue. Jeff Beatty asked what can we do to expose those brokers who continually sell counterfeit parts? Robin responded that there is a potential risk for the company that makes the claim (i.e. libel, slander) and they would need to be sure they can back up and defend the claim, but certainly could be considered if the party was willing to take those risks.

Suggestion was made that we add this to our July meeting agenda. Jay Smith suggested we create a “best practices” document for preventing and handling counterfeit issues. Include points regarding Part identification and label uniqueness. Also, possibly create a “known problem” file for those who have been identified as repeat offenders. Could be a “sticky” issue, but worth some discussion.

ACTION ITEM: Barney to establish a Counterfeiting Task Force to look into these issues prior to the next meeting.

Dan Wikander shared a presentation from T.I. on “China and EU Labeling” – co-existing with JEDEC JESD97. (refer to Dan’s presentation for details)

Any T.I. products labeled as “PbFree” are China RoHS compliant. T.I. is approaching compliance “to the strictest of standards”, and they are using the China RoHS logo on labels. Dan commented that we do not need to try to come up with a new logo since this one already exists. We need to try to encourage everyone going forward to use this logo. Another comment made regarding labeling is that attributes on the label can also prevent counterfeiting. T.I. is not using “X and O” label on unit containers. The X/O chart is on documents with the shipments.

Dave Bender does not like the phrase “China RoHS compliant” because he believes that eventually they will have a need for exemptions. There are no restrictions on what you can send into Chin “today” as long as it is labeled correctly.

Barney commented that he would like to “revive” the Ecommerce Roundtable to discuss the new industry issues with electronic data requirements, etc. He will start by initiating a conference call to discuss interest, and then proceed from there.

Mary Carter-Berrios made a presentation on the Kemet “green” website information. Kemet classifies RoHS – NO, RoHS – PRC, RoHS – EU on labels. Kemet is using standard Kemet part numbers, but on RoHS compliant parts they could be either EU or PRC compliant. Kemet will NEVER mix the two types on a single reel. The labels differentiate EU vs. PRC. Kemet has also developed a spreadsheet for RoHS compliance. It can be found at the following link below:

Kemet Website Link:

<http://www.kemet.com/kemet/web/homepage/kechome.nsf/weben/Green%20Product%20Roadmap>

Specific spreadsheet by product series for China RoHS:

[http://www.kemet.com/kemet/web/homepage/kechome.nsf/file/greenproductchina/\\$file/China_EU%20RoHS%20Status_01Mar07_Post-Rev2.xls](http://www.kemet.com/kemet/web/homepage/kechome.nsf/file/greenproductchina/$file/China_EU%20RoHS%20Status_01Mar07_Post-Rev2.xls)

Kemet adopted China RoHS symbol on web data pages, and also the “X’s and O’s” chart. There are links to certificates of compliance on the web site. Exemptions are included and specified on the spreadsheet. This is the first time they have posted the worksheet on the website.

Dave Bender demonstrated TYCO’s website including China RoHS information. Tyco has the capability coming to provide compliance information and exemption data for compliant parts only in batch files in Excel. The data is not available yet for non-compliant parts. Tyco is putting the China RoHS symbol on their label. Generally, this is a global change. Their printed catalogs have not been updated yet but will be at some point in the future.

Jay Smith discussed the NEDA position paper on environmental compliance. He reviewed the main points of the paper and summarized for the first-time attendees. The group discussed the need to add China RoHS information. Jay agreed to update the NEDA worksheet and present at the Roundtable meeting the following day.

ACTION ITEM: Jay Smith to update position paper.

Barney announced that the next meeting will be held in July in Middletown, PA. The CITC meeting will be on July 10, followed by the Roundtable meeting on July 11-12. The meetings will be held at the Phoenix Contact facility. Anyone interested in golf on Thursday should notify Barney or Arnold Offner, and they will try to arrange some tee times at a local course.

Barney reviewed the agenda items. Rod Spear commented that originally Kemet was concerned about IP issues being at risk with China RoHS. He asked what had changed? Mary Carter Berrios explained that it is not conceivable or possible for Chinese labs to obtain the “secret recipe” to produce their components by doing these types of tests.

Kemet questioned and interviewed each lab in China with local Kemet employees. They asked for pricing and contract commitments. Then they were able to narrow the list down from 18 to 3 companies. An analytical PhD interviewed al l3 in Chinese regarding the technical aspects of their testing capabilities. Samples were sent to all labs to find out which lab has the closest results to the Kemet results. Kemet received some very attractive pricing.

Barney asked what needs to be tested? Mary Carter Berrios responded that Kemet has made a business decision to have the parts tested at the homogeneous level even though it is not yet a requirement. At this time no other manufacturers in the group have made the same decision.

The discussion then turned to XRF machines. Comment was made that customers generally do not understand the capabilities of the machines and are making erroneous decisions based on inspections using XRF. Niton was mentioned. Niton has admitted that their current website is “over-selling” the capabilities of this equipment. The XRF scanner should only be used as a “first step”, but further testing is needed beyond the scanning. Mary commented that there was a Kemet customer using a Niton device that was detecting cadmium, but was mistaking another chemical for cadmium. Niton admitted that there was a defect or mistake in their software program.

ACTION ITEM: Rod Spear will send Barney the information on Niton.

Consensus by the group that manufacturers and distributors do not need to be concerned about REACH at this time.

Patricia Smith reviewed the actions of the Trade Compliance Committee with the group. She recommended that NEDA adopt a standard for the “General Statement of Assurance”

so that everyone is using the same language with the customers. This is a document that asks questions to customers regarding the use of their products.

Mary Carter Berrios reviewed the IPC1752 documents with the group. The pdf files have an electronic signature that is considered a legal document. Mary advised of precautions with using digital signatures. If importing into XML and exporting back to Adobe, there are warning messages that advise if changes have been made to your documents.

Kemet is implementing Class I and II. This will be followed shortly by Class III and IV. Phase 2 at Kemet will allow an XML download. You can download into XML to manage your internal information.

There is also another type of 1752 which is “request/reply”. There is a section for customer’s name and part number. There is a series of drop-downs that would build the Kemet part number and load it on the form when customers request it. There are issues when the customers do not request correct part numbers.

Shelly at Digi-Key has similar issues with customers submitting data incorrectly. This creates double work in that changes have to be made and then resubmitted again. Mary commented that most large customers are stating that if they can get at least Class I and II data now, that would be of great help. (i.e. Sun Microsystems and others)

Len Metzger commented that Panasonic can respond to 1752 on request.

March 30, 2007:

David Williams asked if any supplier plans on labeling with the X’s and O’s information on the product unit labels. Analog plans on labeling X’s and O’s on the box, but not the unit package. This will be an additional label showing chemical compliance.

This is legally not required at this time, but may be a matter of convenience to get product moved through customs more quickly. Consensus by the group that the X’s and O’s data is critical on the suppliers’ web sites.

Rob Taflinger added that it will put a burden on the Chinese to create labels for these boxes. They will place the information on their web site and paperwork will be shipped with the parts. BI will not recommend labeling each box.

Dave Bender indicated that the intent of the X/O data is for recycling and a label could be discarded with the original box, therefore adding no value. He suggested the possibility of providing a copy of this label inside the box that could travel with the parts as needed. This might help get product through customers, but that is not a legal requirement.

Consensus is that information should be available on the web, but labeling is not necessary.

NEDA worksheet update: Jay Smith

Changes agree as follows:

Column Q – change to “within limits” of MCV

What should we do about part number referencing for China?

Change column “S” to be “EPUP Value”

Change column “T” from Safe Use to “EPUP Value” and separate into 2 questions

Add chemical symbols for X/O indicators

Discussed if there is a need to show further breakdown for the X’s and O’s data. Down below complete assembly? No – consensus to leave spreadsheet at higher level component assembly.

ACTION ITEM: Jay will make changes to the spreadsheet and send to Barney.

ACTION ITEM: Barney and Jay will organize a conference call to discuss how to split out part numbers and to discuss getting more rigorous about reporting exemptions.

A drop down box has been added to include exemption numbers. If there is more than one exemption being taken, the drop down box does not work. We should remove the drop down box and make a text cell in case more than one exemption is taken.

In the instructions keep a list of current annex numbers for supplier to choose from. Should we make it simpler and ask for a “Y” or “N” instead of which particular exemption the supplier is taking? Consensus to simplify the exemption column.

CITC Group Update – Patricia Smith

Group recommends that we create a white paper indicating how to share compliance information to enable smooth shipping around the world. This would also include requirements for the supplier to provide distributors with information.

Call to Action! We need membership and participation in this group! Need attendees for the July meeting!!

Berry Amendment Update:

Rod Spear explained the history to the group and recent NEDA success in getting critical changes pushed through Congress. Recently there have been questions as to whether or not the flow down is appropriate. If 10% or less content of specialty metals, no long applies.

ACTION ITEM: Barney will check to make sure Berry updates are on the NEDA web site.

Sharron commented that Defense is writing a new DFAR for Specialty Metals.

IPC1752 Updates: Mary Carter Berrios

The relationship between IPC and Adobe has become strained, so Adobe may not do too much for IPC in the future. They are working on version 2.0 which addresses multi-part number issues. There is a sub committee developing marketing and training for users. IPC needs to break the reliance on Adobe and provide direction on how others could develop a form that could be used. XML structure allows third parties to build their own forms.

IPC would be the “clearinghouse” to verify that the criteria is met for the proposed forms to ensure that forma can all roll into a common database.

China is on the table and being discussed by IPC committee. The “Tin Whisker” guys are interested in more information being included on the forms.

IPC is also starting to work on the “Perfect BOM Concept” – a document standards committee.

ACTION ITEM: Mary will email Barney the list of sub-teams in IPC and what they are working on currently.

ECA Update: Mary Carter Berrios

Niton came to the meeting and made a presentation. They have a device in the works that will analyze very small parts. The group pushed back on how they advertise the use of the device.

ECA spent time on discussing chin and REACH. Everything has completely changed since November of last year. They voted on and approved a component bulletin on Pb Free devices and tin whiskers. JES201 – is being re-written for passive devices.

ECA/JEDEC/IPC – joint committee working on JSTD-002 – solderability testing. All three groups vote. The new version addresses Pb-Free and using Pb-Free solders. The proposed changes failed in JEDEC, but passed in all other groups.

JEDEC Update: Sharron Peek

MSL Labeling: Discussion to put all labeling standards into one label document. JSTD 609 and JEP113.

ACTION ITEM: Sharron to call Barney next week to discuss pushing authorized distributors campaign at JEDEC.

Labeling Guideline:

ACTION ITEM:

Dan will review one last time next week and then Barney will publish to the group.

Packaging Guideline:

Do we need a new guideline? Yes, we need to update – Dan. Sharron agrees that we need to update.

Review and update NEDA Guidelines:

ACTION ITEM: Barney will take a look to determine if we need changes and assign a sub-committee to make changes and propose to the larger group.

Howard Deller asked if there is a way NEDA could provide a glossary of terms used.

ACTION ITEM: Barney will research and discuss at the next meeting in July.

Solderability Testing Study: Comment from Len and Mary that SolderTec is testing various products to replace the old studies that have been done in the past. They are analyzing surface organics.

Review of topics not addressed: Barney

Managing Data, Management Buy-In

The RoHS issues have generally been handled as a necessity but difficult to convince upper management of the value of possibly bringing additional business by being compliant.

Logos in catalogs – multiple logos? change logos? Continue on with how we are handling today? Picky Malhotra

Mouser will likely use the China E or EPUP. Digi-Key will do the same. Analog will use the China symbol going forward.

Barney advised that he will be “reviving” the Ecommerce Roundtable in light of all the new technology requirements for information sharing. More to come from NEDA shortly.

The meeting was closed by Barney. Our next meeting will be in Middletown, PA July 10-12.