Draft Final Meeting Summary
Version 3.0

EPEAT – National Workshop

June 16th, 2003
Intel Ocotillo Campus - 4500 S. Dobson Road

Chandler, AZ

This document is not intended to be a meeting transcript, *per se*. It is a summary of key themes and some (though not all) of the background dialogue. For the most part, questions and answers and other commentary will be reported without attribution. The meeting summary's structure parallels that of the meeting agenda.

MEETING HANDOUTS

- Code of Conduct for the EPEAT National Workshop
- Draft Agenda
- Questions for the Breakout Groups
- Evaluation
- EPEAT – Background
- "A Review of Model DfE Assessment Tools (WEPSI Market Drivers Subgroup)"
- Overview of DfE Assessment Standards
- Attendee List

All of the above will be posted on the www.epeat.net website or may be obtained by contacting Larry Chalfan of the Zero Waste Alliance at lchalfan@zerowaste.org or at 503.279.9383.

Additionally, EIA distributed a paper on "Electronic Product Environmental Labels."

OPENING REMARKS AND INTRODUCTIONS

The meeting was called to order at 9:00 AM on June 16th, 2003.

Ted Reichelt the meeting host and the Environmental Projects Manager of Intel Corporation welcomed all to the Intel Facility. He provided a "virtual" tour of

the entire complex and then kicked off the process of introductions.

Adam Saslow, facilitator, and President of Consensus Solutions, Incorporated explained the role of the facilitator, code of conduct and ground rules as well as the agenda for the day. Viccy Salazar, US EPA and a member of the EPEAT Steering Committee indicated that the purposes of the day's meeting were twofold:

- Exchange Information – points that will be carried up to the Development Team when it is formed; and,
- Solicit Feedback – to help the Steering Committee and subsequently, the Development Team to determine appropriate direction.

THE OPPORTUNITIES AND BARRIERS FOR INCLUDING ENVIRONMENTAL ATTRIBUTES INTO THE INSTITUTIONAL PROCUREMENT FRAMEWORK

Eric Friedman, Director of State Sustainability, Massachusetts Executive Office of Environmental Affairs

The MA Green Purchasing Program (GPP) began in 1994. Today it oversees purchases of over $300 million (on state government purchases alone) and maintains 2 full time staff. When it began, it focused on recycled products - the philosophy being that if you do not BUY recycled products (e.g., create the market for them), then you fail to close the loop. Today the GPP has evolved to consider other environmental criteria including energy efficiency, toxics, and waste prevention in a range of procurement areas.

In 1999 the GPP wrote a contract (it will be up for re-bid in 2003) that sought to procure computer equipment meeting a range of environmental criteria. Bidders were able to attain up to 100 points (15% of the total) for environmental designs that met several criteria including: toxic constituents, recycled content, take back provisions, packaging, "upgrade-ability," Design for Recycling, Worker Health and Safety, 3rd Party Certification and Other Criteria.

Several lessons were learned:

- MA practices are not likely to change the industry in a global sense (though one participant later said that the MA process is starting to do that very thing). The purchasing power is simply not great enough.
- Re-sellers (a separate segment) did not take the specifications seriously and did not contact OEM's.

- There is little consistency in design among OEM's - some models of equipment meet some of the specifications some of the time;
- The information provided by OEM's was inconsistent across OEM's and hard to compare.
- Procurement officials set up contracts – but that does not mean they are electronics experts – time is of the essence. Later, Mr. Friedman noted the growing national trend of procurement de-centralization (though this is not the case in MA) as a related challenge.
- Environmental design is just one factor in the purchasing decision – the equipment must meet the needs of the users.
- There are advantages to applying elements of other procurement tools including the LEED Rating System and the Green Seal Standards. Later, Mr. Friedman also recognized the Swedish Public Sector Guidelines.

Purchasing issues highlighted by Mr. Friedman included:

- How to score and effectively evaluate is a challenge regardless of the product – it is, for example, the biggest issue for MA in cleaning products.
- Who, specifically, within an OEM is the person to best exchange information on environmental purchasing and design
- Environmental design is one design specification. It is one of a host of criteria for purchasing electronics
- Simplicity is crucial

Moving forward, Mr. Friedman indicated that an assessment tool like EPEAT will be helpful if:

- One set of information is carried across multiple jurisdictions;
- The tool generates a yes/no answer – if it is simple to use, consistent, credible, and easily understood;
- Manufacturers understand the tool;
- It does not inhibit the three major features: price, performance or availability; and,
- It is managed by someone or something that has standing in the industry and is trusted by all parties.

Mr. Friedman closed by distributing the Final Environmental Language for Desirable Environmental Criteria (5/99)

BREAK

EPEAT – WHAT IS IT? WHO IS INTERESTED? WHAT'S BEING SAID AND HOW WILL IT ALL COME TOGETHER?

Clare Lindsay, US EPA/OSW
Wayne Rifer, Project Manager, Zero Waste Alliance
Adam R. Saslow, President, Consensus Solutions, Inc.

Ms. Lindsay indicated that US EPA has supported both the WEPSI and NEPSI processes for several years. The Office of Solid Waste specifically has been seeking a method, vehicle, or system for regarding responsible environmental designs and particularly in this sector. The NEPSI process has focused on financing systems and their utility in promoting greener design but environmental design has remained outside the scope of NEPSI. WEPSI was a broader cut at similar issues – though more regional in its orientation. It is WEPSI that has led us to this workshop today.

Beyond NEPSI and WEPSI, EPA HQ, several regions, as well as other federal agencies[1] have developed a Memorandum of Understanding (MOU) so as to better harness the purchasing power of government. John Howard – Office of the Federal Executive – and other federal colleagues are working to begin the Federal Electronics Challenge. Please refer to www.federalelectronicschallenge.net.

Wayne Rifer then presented on the nexus between EPEAT and NEPSI/WEPSI with some of the contextual history that comes to bear.

Mr. Rifer indicated that NEPSI is in its second year and may have finally turned a meaningful corner. The central question for this multi-stakeholder process has been how to fund an end- of-life management system and simultaneously create a supporting infrastructure. Just last week participants developed a "hybrid" system combining an advanced recovery fee (ARF) that converts to a partial cost internalization (PCI) model. ARF is a point of sale fee that covers all end of life management elements for computers, peripherals and televisions. The ARF component will likely jump start the system so that minimal levels of service can be established by a community looking to create a program while simultaneously providing opportunities for manufacturers to act more independently. Many details need to be addressed including the timing of implementation.

Mr. Rifer then moved to a presentation on EPEAT (which may be obtained on the EPEAT website (www.epeat.net) or via e-mail to wrifer@concentric.net).

EPEAT starts today in earnest. The EPEAT Steering Committee (see Appendix 1) is looking for feedback on the concept and approach today. If there is momentum to go forward beyond today, a multi-stakeholder Development Team shall be formed. This Team will be tasked with the responsibility of developing the tool. The Team will examine all viable options in an open and

[1] Signatories include Interior, DoD, US EPA and the US Postal Service

fair collaborative process guided by an independent facilitator. The Development Team will also be tasked with reaching agreement on a "home" or "parent organization" (e.g., LEED's US Green Building Council) for administration of EPEAT.

Specifically, the Steering Committee anticipates that the following questions and characteristics will need to be addressed:

- Product and Attribute Scope
    - What does it include? What is omitted or addressed later (e.g., PDA's, Cell Phones, Computers, Monitors)?
    - Focus solely on EOL issues or the entirety of the lifecycle?
    - Can EPEAT provide the marketplace?
    - Key Characteristics
        - Transparency
        - Flexibility and incentives for innovation
        - Voluntary
        - Simple and Clear
- Tool Design and Structure
    - Extent of Paperwork and Administrative Requirements
    - Self Declaration v. 3rd Party Certified
- Parent Organization

The EPEAT Steering Committee, to this point, has been the energy and momentum in the transition from a WEPSI concept to the creation of a nationally viable tool. Beyond today, there will be a handing off of developmental responsibility though the Steering Committee and specifically, the Zero Waste Alliance will maintain fiscal responsibility as a US EPA grantee.

Following this presentation, there was some brief commentary from the participants. Some observations included:

1. Outcomes: "It appears as though the Steering Committee has it figured out already." Mr. Rifer refuted this and said that the Steering Committee had no predetermined vision.
2. Among the attributes to be considered should be some environmental performance metric.
3. 3rd Party involvement will be problematic for industry. Mr. Rifer responded later that there is a range of options in this area and that he was not envisioning "inches of paperwork." This concern, however, was echoed at other times in the session.
4. Will companies be punished for using their own "institutionalized" systems? Mr. Rifer validated that as an important issue.
5. Will the assessment tool be geared to procurement language?
6. The tool must work for both procurement officials and purchasers.

7. Energy Star has value while other tools are lacking.
8. Purchasers cannot use something that is complicated – the tool must be easy to use.
9. Though the "system" is burdened already, EPEAT does present an opportunity for industry – it has the promise of being simple and logical.
10. Is the mindset of the Steering Committee to develop a tool for state and federal government officials or rather something that would guide OEM's to green design? Jonathan Katz (of the Steering Committee) indicated that the hope was for EPEAT to drive design through procurement.
11. Why not look toward European or Japanese labeling? Another participant indicated that these labels currently have no value in the US marketplace.

THE STATE OF THE ART IN EOL MANAGEMENT

Jerry Powell, Editor, Resource Recycling Magazine, and E-Scrap News

What are the attributes of an optimized EOL Products Management System? Are they in place today or are we falling short? Mr. Powell discussed the latest trends in Product Stewardship and Processing Technology as well as the challenges ahead. His presentation may be obtained from the www.epeat.net website or by writing Larry Chalfan of the Zero Waste Alliance at lchalfan@zerowaste.org or at 503.279.9383.

Mr. Powell's views are based upon interviews with 500 firms.

Trends:

- Primary Factors or Drivers:
  - Service Fees
  - Sale of Re-usable Parts
  - Value of Base Metals
  - Shredders
- Large Generator Trends and Small Generator Trends
- Capture from Local Communities:
  - April produces the largest volume
  - Programs are catching on from the cities to the suburbs
- Unsettled trends:
  - E-waste Management
  - Export Issues
- Product Stewardship
  - Japan is interesting
  - Canada has negotiated an ARF system with implementation expected this fall
- E-cycling Trends

- OEM involvement is increasing
- Re-use is a declining market – non-profit reclaimers are declining
- More of a focus on disassembly economics
- Industry consolidation for e-scrap in Europe and on the US horizon
- Slow growth in contract and toll processing – a very common practice in recycling

Challenges:

- There is zero gold in garbage - miniaturization and dematerialization reduce scrap value
- There are a multitude of products and designs
- Smelter economics are contaminating long term planning (i.e., labor issues, regulatory compliance factors and virtually no new infrastructure to replace aging facilities)
- NEPSI has failed – focused on collection, not market development which is needed
- Do you sell it mixed? Plastics recycling market is very limited
- Wide variances in cost structures – recycling is a labor intensive industry
- Issue of regulation v. voluntary action

As earlier, Following this presentation, there was some brief commentary as well as question and answer interaction from the participants. Some observations included:

1. Market Development IS an important element within the NEPSI process (less critical than funding mechanism... but critical nonetheless)
2. Will the trends offset one another? Labor economics…. Technology (automated) v. prison labor.
3. One participant appreciates the 6 trends…. Justification for a tool that focuses on the future. The Development Team should take a wider view of field of play. Miniaturization may lead to disposability. Flat chip impacts. How do you build something flexible enough to look forward… yet still consider near term issues. Need someone on the Development Team to look at market trends! The very process of innovation yields environmental design improvements
4. EOL aspects? Or energy content… de-materialization is that bad? No… it's good. We need to broaden away from EOL… and include energy, materials selections etc…. We MUST think more about things other than EOL impacts.
5. We are shortening the re-use side because of the manufacturers ability to produce more effective and economically viable products. Why do we need the recycling chain? It's not the manufacturers job to recycle. OEM's are designers, marketers, and product development specialists. Nor is it the local government's job to recycle or is it? Why do we need

the recycling chain? I the final analysis it's always going to end up with the recycler.

6. We must build an effective infrastructure… we saw it in motor oil, scrap tires…where the infrastructure did not exist it led to HUGE environmental problems. We need a COHESIVE network to solve the problem of the material that's out there… as well as the material that WILL be out there.
7. CRT glass shortage in Asia. The economics of shipping come into play. 90 glass processors in US. Easily loadable and transferable. Corning Asahi is shipping the entirety of a US plant to China.
8. ADDING things is important… not a choice between EOL OR other things. Also… we really need to look forward. Having SMALL recyclers is important too.

WORKING LUNCH

Participants had the opportunity to speak informally with each other at small lunch tables.

One third of the way through the luncheon, participants at each table were asked to discuss one or two "provocative questions" concerning the nexus of EOL Management Systems and the elements of environmental design. The views related in these small groups were discussed in a larger facilitated conversation just before the end of the session. Synopses appear below.

Group #1: How Can Communications Be Optimized Between OEM and Procurement Officials? How Does it Happen? How Should It Happen?

Currently a bid is solicited from the environmental group with an OEM. It is the environmental group that works (sometimes with the re-seller) to certify that products on a bid meet the specified criteria. Typically the environmental person will meet with the engineering team as well as suppliers to ensure compliance. Oftentimes the EOL piece is addressed in these conversations as well as materials, energy efficiency, disassembly, etc…

An on-line system would be great. EPEAT should be an online system. Ideally, state government or local government procurement officials should be discouraged from interacting with OEM's. Perhaps some shift in thinking from EOL to full life cycle and in doing so, the communications might be optimized between recyclers, OEM's and Designers.

Some brief commentary followed and included the following themes:

1. EIA has produced a position paper that might jump start things (this document was distributed to the participants later in the day)
2. A caution to ensure that in optimizing communications that the supply chain issues must remain resident in the conversations. OEM's must ensure consistency. One participant noted that the automobile industry is trying to tackle this though according to some, their system, IMDS is getting mixed reviews.
3. Might we consider something of a quick fix, like a materials recovery guideline?
4. Prison Labor Issues may distort the marketplace.

Group #2: How Do We Create A National Program that Works? Does it Need to Be a Federal Mandate or A Voluntary System

This group reported out in bullet point form.

- Energy Star is marketable, realistic, and obtainable. Based upon continued improvement, it allows for dynamic sectors.
- Low cost to industry – bottom line is cost.
- Education and outreach is a key marketability question – there is a lot of market and money tied to Energy Star
- Transparency – verification needs v. simplicity
- Verification and enforceability
- Needs to be a credible organization
- Should there or shouldn't there be a label?
- Easiest thing is "green? Or not green?"
- Yet it's helpful to have many different ways to get the answer to that question.
- Scalability… starts smaller… and moves to a more national scale? (No agreement) Allow sufficient lead-time for industry to allow for market transformation.
- Evaluate periodically… promote innovation and continued improvement

Group #3: What Should Be the Scope of the EPEAT Tool?

Like Group #2, this group reported out in bullet point form.

- More of a life cycle approach… some aspects of manufacturing (nothing more specific was mentioned)
- Break into components

- How do you capture environmental impacts as well as manufacturing impacts and transportation? Where do you draw the boundaries?
- Do you start with a narrow (Energy Star) scope or a broad scope and whittle down.
- Is this a criterion that would remain static? Will it get more stringent? Will it become a dynamic tool?
- Can you take credit for "other positives?"
- Energy,
- Materials of concern (e.g., toxics, hazardous materials)
- Recycled content
- What about the supply chain?

One comment was made about componentization or compartmentalization… "DfE Star?" "Recycling Star?" "A Ten Star Product?" Break the spectrum into chunks. 4 out of 5 might yield a Platinum Star.

Group #4: Who Else Should Be Involved?

Like the others before, this group reported out in bullet point form.

Thematically, this group foresaw two categories of involvement: Team Members and Guest Experts. Overall, the desire was to have people with a global perspective and a sound knowledge base. Certainly the groups represented at this National Workshop (e.g., Industry, government, environmental etc…) should be a part of the Development Team.

Team Members:

- Product developers, designers and marketing representatives
- Federal, State and Local Procurement officials or an association of procurement officials (e.g., WCSA)
- Corporate Procurement Officers
- Academics who know the scientific issues and can help prioritize and develop criteria for environmental performance
- Agencies in Federal Memorandum of Understanding
- Office of the Federal Environmental Executive

Others: (guests)

- Industry market trend expert
- Parent organization expertise (LEEDS person)
- International Representatives
- A "Futures" Expert

CONCURRENT BREAK-OUT SESSIONS

Each session included dialogue around an issue, and facilitated discussion on the use of tools and techniques to overcome the barriers encountered.

Given the State of the Art, What Kinds Of Product Attributes Will Be Necessary To Lead Directly To A Sustainable EOL Management System?

- What Are The Attributes Of Products Designed For Effective End-Of-Life Management? (This was guided as a brainstorming session of sorts)

  - Ease of Product Disassembly
  - Being Able to Find Critical Components (valuable and toxic)
  - Speed of Removal (number of steps to remove)[2]
  - Toxic content as it pertains to EOL
  - "De-materialization
  - Standardization of Materials
  - Minimization of materials types
  - Distinctions between material typology
  - Energy Use in Life Cycle
  - Energy Use in Use
  - Energy Use in De-manufacturing
  - Design for Re-use – Upgrade-ability
  - Recycled and Recyclable Content
  - "No Waste" goal or criterion
  - Compatibility or synergy between material types
  - Products that lend themselves to automated disassembly – commoditization of electronics products in recycling (a la ASTM)
  - Energy Intensity of Recycling System itself (e.g., logistics and regionalization and eco-industrial parks)
  - Understanding of the term of the life cycle
  - Compatible coatings and paintings
  - Re-sable materials (non-composites)
  - How do you design for:
    - Re-use
    - Recycling
    - Shredding
    - De-manufacturing
  - Hierarchy of preferential materials (resins, toxics, systems)

2 One participant encouraged the development team to hold a "Demolition Derby" or "Rodeo" between Development Team Sub-teams to see who could disassemble a product fastest.

- Post consumer recycled content and the markets that define the hierarchy
- Trends in materials used in products – don't sacrifice the designs of the future to put out the firs of today
- Performance elements v. prescriptive solutions
  - Flat Panels v. CRT's
  - Batteries
  - Packaging
  - Consumables (e.g., toner)

It was then noted that all of the above fell within or across one or more of three "umbrellas:"

- **Energy**
- **Materials**
- **Systems**

Further, life cycle economics needed to be an overlay – a sort of "beyond waste" paradigm.

- How Can We Create Linkages Between The Product Design Process And The End-Of-Life Managers?

The breakout group agreed that this can be done via Assessment Methodologies and Techniques, informational documents and the publication of lists like that generated above. Dynamics Performance (not prescriptions) measures must be developed for certain products though prescriptive examples might be used to explain the linkages.

Clearly better communication channels are necessary – something more than facility tours. Ideas raised included:

- Greater sharing of design information (this was contentious);
- Institutionalization of communication pathways (e.g., IEEE and IEEE Forums if developed with sensitivity to recycling interests);
- ECMA Environmental Data Sheets;
- Vertical integration in manufacturing stimulates communication;
- Changing the paradigm from reactive to proactive;
- Cost internalization of production costs;
- New Product dismantling rodeo or demolition derby; and,
- EPEAT Website

What Characteristics Of An Assessment Tool Would Make It Most Useful And Practical In Institutional Procurement Practices?

- What Electronics Products Should The Tool Be Designed For?

First, the breakout group seemed to tackle the characteristics of the tool including:

- Easy To Evaluate
- Non-Ambiguous
- Quick Implementation
- On-Line Forum
- Verification With Checks For Validity
- Multi-State Applicability And Reciprocity
- Global Applications
- Paperwork Issues
- Economical For All
- Measurable
- Transparent
- Flexible But Only Based Upon Sound Science
- Protective Of Rights To Innovate
- Modularity – The Tool Should Fit The Product
- Limited Number Of Choices Or Tiers
- Build On Existing Criteria
- Cost Effective
- Ensure Product Availability
- Utilize Best Available Science At The Time
- Mandatory For Procurement Officials
- Pass/Fail Orientation

The group then addressed the types of electronics products that EPEAT should be designed to evaluate.

1. NEPSI categories
2. Energy Star List
3. Top 5 most frequently purchased or highest dollar products
4. Products most often replaced
5. PC's or laptops

- How Can We Use The Marketplace To Incentivize Environmental Design?

A. Executive Order
B. Label Recognition
C. Would a Procuring Agency Really Be Allowed to Pay a Premium?

D. Awards
E. Large Purchasing Blocks
F. Advertising – Educate Agencies
G. Higher Initial Cost
H. States should allow other government entities to access contracts
I. Hospitals

BREAK

CREATING THE VISION, MISSION AND CHARGE FOR THE EPEAT DEVELOPMENT TEAM

The views related in the breakout session dialogues helped the participants catalogue the elements of a vision and charge for the development team in this session.

Elements of the EPEAT Vision

- User friendly to all users
- Some tool that large buyers can use to assess environmental soundness as a way or method to produce innovative design on manufacturing end
- Build on (or use) what's already out there.
- Do not let the "perfect" be the enemy of "the good." Come up with something reasonably strong in the short term.
- Legitimate stakeholders must build the tool.
- Build market development provisions into the process that develops the tool.
- Help to reduce environmental impact of products throughout the lifecycle.
- Design EPEAT in a way that will not only be used but shall influence buying AND, thereby, design decisions.
- Needs to work for ALL stakeholders.
- We need to not only build but also MARKET the tool.
- We need to build a tool that is truly visionary, sustainable for electronics products and find ways to apply those in the practical realities of the day.

- The tool needs to be self-sustaining.
- A tool that promotes continuous improvement in environmental performance (incremental steps that lead us in the right direction are good)
- A tool that encourages flexibility and innovation.
- Robustness, verifiability, and transparency.
- Low cost…and causes no delay in time to market.
- Maintain our focus but still design the model in a way that may be replicable for other product types – and track lessons learned.

EPEAT Mission

Three participants caucused to form the following mission.

To develop, build-on or adopt an existing Assessment Tool, and to actively disseminate an Assessment Tool that:

- Promotes continuous improvement in the environmental performance of electronic products without stifling, and while encouraging, innovation
- Informs purchasing decisions by institutional purchasers regarding the environmental attributes of electronic products
- Provides market advantage for companies that provide products that achieve superior environmental performance
- Is low cost, user friendly, and causes no delay in time to market
- Produces credible, verifiable outcomes that are accepted by relevant stakeholders
- Provides sufficient value in the marketplace to sustain itself

Remaining participants were asked to express their comfort level with the above and no one expressed any objection.

EPEAT Charge

- Collect, collate analyze and prioritize existing efforts – look for common denominators and leverage work completed to date. Don't reinvent the wheel.
- The charge to the development team in the EPEAT Overview seems right…the rest seems a bit prescriptive.
- Getting a reality check from purchasers/procurement officials as well as the private sector community on how to make EPEAT a useful tool. (P/O chicken and egg thing)
- Getting a reality check from OEM's as to whether EPEAT actually effects product design (OEM chicken and egg thing)
- Test drive EPEAT through FEC.
- Tie ALL our efforts today into a discrete package of elements.
- The market drove LEEDS into existence… in the same way; the market needs to drive EPEAT.
- Hurry up! Keep to a short timeline.
- Reconcile the scope issue… EOL v. lifecycle…v. other.
- Reconcile the scope issue… by product Laptop/Desk top… BOTH
- Pilot scale… test… on a state level? FEE?

SUMMARY AND CONCLUDING REMARKS

Larry Chalfan, Project Director, Zero Waste Alliance

Mr. Chalfan indicated that to a great extent, all parties have similar wants for:

- an effective system to reduce impacts of end-of-life electronics,
- a single system that is simple, science based, credible and works for all parties,
- a system that is low cost for all parties,
- a respected, credible host organization.

He pointed out that the EPEAT tool can be valuable to all parties by assisting leading manufacturers with market presence, making it easy for procurement officials to get wanted information and, of course, reducing the environmental impacts of end-of-life electronics.

When asked if they wanted to be involved with the continuation of the project, a large majority of the participants indicated that they would.

On behalf of all participants, Mr. Chalfan thanked Intel for hosting the workshop, Recycle America for providing the beverages and snacks. He also

thanked all participants for their interest, time, and talents in the EPEAT national workshop.

ADJOURN

The National Workshop was adjourned at 4:55 PM.

APPENDIX I: EPEAT STEERING COMMITTEE MEMBERSHIP AND CONTACT INFORMATION

Last Name	First Name	Organization	Phone	E-Mail
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