

News bits

Call for papers deadline

The deadline for submission of abstracts for the 2004 EOS/ESD Symposium is Monday, January 12, 2004. The final submission deadline for the finished papers is Monday, May 31, 2004. To obtain the Symposium Call for Papers, phone ESD Association headquarters at 315-339-6937, or visit the association's web site at www.esda.org to download a copy of the Call for Papers in pdf format.

New Editor for *Threshold*

Terri DeMario has joined the ESDA headquarters staff as a marketing administrator. As well as assuming the role of Editor for *Threshold*, she also has responsibility for the ESDA web site, marketing and communication projects, the Web Buyers' Guide, and serves as the press contact for the association. Terri may be contacted at the ESD Association, 7900 Turin Road, Building 3, Rome, NY 13440; phone: 315-339-6937, fax: 315-339-6793, e-mail: info@esda.org.

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ESD Association Headquarters: A look back and now

by
Lisa Pimpinella
HQ Operations Manager

Previous issues of *Threshold* have described The ESD Association's organizational structure. Within the Business Operations of the ESDA is a box entitled HQ operations. I would like to share with you some details about that box. The best way to describe something is to start with the beginning.



Lisa Pimpinella

A Look Back: 1993

I walk to work. The ESDA Headquarters office is neither far from my house (nor any other) and is centrally located in the city of Rome, (Italy would be nice), NY. As I reach the building where the office is located, I travel through a dark cold entry and climb a full set of stairs to the top floor of an old bank building. I round the corner and am greeted by glass-partitioned walls: orange shag carpet, and my co-workers, who are office assistants just like me.

Today I drive to work, to a rustic wooded office complex located in North Rome, (still not Italy) NY. I enter comfortably organized and efficient office suites where I spend my day. The office has a state-of-the-art training room, mail production room, conference areas, and office space that is

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The main office at ESDA headquarters will accommodate 5 employees in comfortable office suites, all with windows. Each workstation includes state-of-the-art computer equipment.

From the president

What's in store for ESDA in 2004?

The ESD Association Executive Committee and Board of Directors met at our Rome, NY headquarters in December 2003 to layout ideas, concepts, plans, and budgets for our ongoing operations in 2004 and beyond.



Ed Weggeland

We are finalizing our 3-year strategic corporate plan, objectives, and requirements to satisfy the needs of industry and all of our members. During our February 2004 meeting series, we will continue our work in all areas of service to our industry.

It is my vision that, in addition to carrying out all of the programs to meet our objectives, we specifically focus our attention on meeting the needs of our industry and

delivering our programs on a global basis.

We will prepare ourselves to meet the challenges of shifting geographical patterns and plan to be in a strong position to have ESDA serve industry, all of industry, wherever they might be located.

You have elected a very strong Board of Directors who collectively have decades of experience in serving our industry and providing leadership to our association. This leadership coupled with our professional HQ staff will continue our forward momentum.

Take a moment and go to our web site (www.esda.org) and see information about all our operations, programs, and leadership individuals.

On a personal note, I have been a member and participant in our association for 25 years and look forward to serving as your President. With help from all of you and the volunteer teams that are in place, it will be my pleasure.

Association news

Tentative Schedule
ESD Association
Standards and Committee
Meeting Series
Wilshire Grand Hotel
Los Angeles, CA
February 19-24, 2004

Thursday, February 19, 2004

8-5 TAS

Friday, February 20, 2004

7-5 TAS
8-12 Grounding WG-6
8-12 Ionization WG-3
8-5 Device Testing WG-5
1-5 Handlers WG-10

Saturday, February 21, 2004

7-5 TAS
8-5 Device Testing WG-5
8-12 Work Stations WG-53
8-12 Cleanrooms WG-55
1-5 Packaging WG-11

Sunday, February 22, 2004

8-12 Flooring WG-7
8-12 Simulators WG-14
8-12 Gloves WG-15
8-12 ICE
1-5 Standards Committee

Monday, February 23, 2004

8-4 Tech Prog Comm
2-5 Steering

Tuesday, February 24, 2004

8-5 Board of Directors

Note: The Garment Working Group is planning to meet during the February series, but date and time were not determined by publication time. When this detailed information becomes available, it will be posted on the ESDA web site (www.esda.org).

Association news

Education program in Singapore

The ESD Association is developing a comprehensive professional certification program to meet the industry's need for professional ESD control personnel. Several new tutorial and seminar courses have been produced or are in development, and three of these courses will be offered March 24-25, 2004 in Singapore. The three courses are: ESD Basics, ESD Auditing & Evaluation Measurements, and ANSI S20.20 ESD Program Development and Assessment. Further details of this new program are in development, and will be released on the ESDA web site (www.esda.org) when information becomes available.

Exhibit space available

At least 30 exhibitors have already committed to the 2004 EOS/ESD Symposium. There is still good space available, but it's going fast. To reserve your space and for information on exhibiting, contact Lisa Pimpinella, ESD Association, 7900 Turin Road, Building 3, Rome, NY 13440; phone: 315-339-6937, fax: 315-339-6793. To view the complete list of exhibitors, visit the ESD Association web site at www.esda.org

Glossary available

A revised advisory document *ESD ADV1.0-2003: Glossary of Terms* is available for downloading in PDF format from the ESDA web site at www.esda.org.

The ESDA has published the System Level Draft Standard Practice Document-14.1



Leo G. Henry

The ESDA received several comments from members who visited the ESDA web site and responded to survey questions posted earlier this year. In an effort to provide feedback to some of those comments, I wish

to focus on the existence of the new system level HBM ESD draft document, completed by WG-14. The document applies to the event that occurs when a charged human, with metal in hand, contacts an object at a lower potential. This document should help most of you in certain areas of your ESD duties.

Keeping members informed

I would also like to address comments from some of you who requested that the ESDA keep the members informed of any new standard development and to keep you updated on the leading standards for the EOS/ESD industry. There are over 2000 ESDA members, but the total Standards Working Group (WG) membership numbers less than 100, with individual WG membership totaling less than 15. Therefore, we need to inform others of standards activities and this membership newsletter provides means to inform the industry. Please read on.

History of ESD DSP-14.1-2003

This system level draft standard practice (SP) document, *ESD DSP14.1-2003: System Level Electrostatic Discharge Simulator Verification*, was approved by the WG in June 2003. The ESDA published it in August 2003, it was available at the 25th Annual EOS/ESD Symposium booth in September. It is presently available at the ESDA Headquarters located in Rome, NY (www.esda.org). To purchase

your copy, contact the ESDA at 315-339-6937 or info@esda.org.

Prior to this new publication, the ESDA published another WG-14 document, a technical report completed in 2000, entitled *ESD TR-07: Calculation of Uncertainty Associated With Measurement of ESD current*. This TR document is free to members and is downloadable from the members page on the ESDA web site (www.esda.org). The TR defines uncertainty as the boundary of deviation of a measured quantity from its true value. It is used to reflect the quality/accuracy of a measured result as compared with the true value. The TR then recommends that this uncertainty must be calculated for each calibration parameter. This is because all ESD simulator pulses are difficult to measure due to their very fast rise times (< 1.0 nsec in most cases) and their stochastic behaviour. It follows then that all possible error sources should be considered to get to the true uncertainty. Many examples are used in the TR and particular attention is paid to the tip voltage and risetime of the system level simulator.

A few good things...

This article simply serves not only to inform but also to highlight a few aspects regarding the system level 14.1 DSP document.

1. The DSP document included contribution from over 30 participants who have rotated in and out of the WG over the several years that it took to complete the document. These WG members represented at least 21 different companies, and when the document was completed, there were 12 of us who had the patience to stay to the end.
2. The purpose of the DSP document is not only to define a measurement system but also the fixtures that can be used to make accurate and reproducible measurements of the discharge current from the

system level ESD Simulators. Let's be clear about which simulator. For this 14.1 system level DSP document, we are referring to the hand-held simulator or ESD Gun that uses the 300 ohm & 150 pF circuit to produce the ESD pulse. This is not to be confused with the WG5.1 component level Standard Test Method (STM) document, where the HBM simulator uses a 1500 ohm & 100pF circuit. The current levels associated with each method are quite different; at 15kV, the maximum current values are 45A for system level and 10A for component level. The overall waveform shape and risetime (0.7 nsec for system level and 2-10 nsec for component level) are also significantly different.

3. The scope of the DSP document defines a time-domain measurement technique for verifying compliance of discharge current using defined industry methodologies.

4. The application is such that the DSP document is intended to be used primarily by the different users of hand-held ESD simulators during simulator verification. The users include designers, manufacturers, and calibration facilities.

5. This 14.1 DSP document references two other system level documents: ANSIC63.16 (Test Methodologies) and IEC61000-4-2:Part 4 ESD (Test and Measurement Techniques). Please be sure to note the difference in focus between these test methods and the ESDA system level DSP document.

6. For the verification process, the DSP document provides the means to build/construct a current target /sensor (transducer) that is to be used to measure ESD discharge parameters.

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Association news

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ESD Association Headquarters: A look back and now



The state-of-the-art training facilities at ESDA headquarters. Educational programs and planning meetings are held in this spacious area of the office. Additionally, there are office suites for 3 HQ employees adjoining this training room.

staffed by Program and Marketing Managers. If the phrase “You’ve come a long way Baby” means anything to you, it describes how I feel every morning as I sip my hot chocolate while responding to e-mails.

I have been with the Association for 10 years and have watched and participated in its adjustments, changes, and growth. I have worked for 7 different Sr. Vice Presidents, 6 Presidents, and many Business Unit Managers, Committee chairs, and volunteers. I have met talented, gifted people who all share one thing in common with me: our commitment to the success of the Association.

Look Now: 2004

The Association is organized into seven Business Units. On the Technical side: Standards, Symposium, International Council on Education (ICE), and Certification. On the Business side: Marketing & Communications, Human Resources, and HQ Operations. Each Business Unit has

the support of the HQ Operations Team. Three HQ Team members comprise that Team: Terri DeMario, Marketing Administrator; Tammy Muldoon, Program Manager; and me, Lisa Pimpinella, HQ Operations Manager.

HQ staff personnel are directly responsible to the Sr. Vice President of the Association as well as to all of the Business Unit Managers. We assist the committee chairs and Board of Directors as they work within the operational units. There is nothing we do not touch. On many days we field calls from 10 different Association Volunteers that require our assistance and action.

It is difficult and lengthy to give you all the details of our daily activities. Rather, a look at one Business Unit at a time will provide you with insight, information, and knowledge about what the HQ staff does and why we are all committed to this organization’s success.

Symposium Business Unit

The Symposium Business Unit is comprised of a Business Unit Manager, the Steering committee, a Meeting Planning site consultant, and a HQ Program Manager. The Symposium committee plans and executes every aspect of our annual Symposium event from the Call for Technical Papers and selection of abstracts to production of the proceedings and registration for the technical program and workshop presentations. The Program Manager participates on the committees by attending the meetings, participating in conference calls, and completing tasks as required.

HQ staff participates in the execution of all tasks and assists all members of the committees beyond the Steering Committee, including committees covering Technical Programs, Workshops, Arrangements, Registration, and Audio-Visual. There are hundreds of volunteers involved with this process and it is our job to assist them all.

In addition to my Operations Manager duties, I am also the Program Manager at HQ responsible for Symposium. My primary responsibility is to participate in the process of planning, organizing, staffing, directing, and implementation of the annual Symposium, in addition to working independently and with the Symposium Business Unit and Symposium Committee members. The best way to describe it is to list some of the things accomplished while working with the Symposium Team.

- Develop mail list targets for mailings of Call for Papers and Symposium Program
- Create, print and distribute the Call for Papers
- Categorize abstracts and distribute within the committee

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The ESDA Standards Program: A Cooperative Effort

by
Tammy Muldoon
Program Manager

The ANSI accredited ESD Association Standards Committee, TAS Committee, and the Standards Working Group Committees meet 3 times per year, including during the annual EOS/ESD Symposium. The activities of each working group are primarily focused on updates and revisions to existing documents, and the development of new standards and technical reports within each working group's specific ESD area of expertise.



Tammy Muldoon

Each working group's area of focus and its chairperson are listed below, followed by a list of working group members. Many of the members listed below hold seats on multiple working group committees.

- WG1 – Wrist Straps: Brent Beamer
- WG2 – Garments: Kay Adams
- WG3 – Ionization: Rick Rodrigo
- WG4 – Worksurfaces: Dale Parkin
- WG5.1 – Device Testing (HBM): Mike Chaine
- WG5.2 – Device Testing (MM): Mark Kelly
- WG5.3.1 – Device Testing (CDM): Leo G. Henry
- WG5.3.2 – Device Testing (SDM): Mike Chaine
- WG5.4 – Device Testing (TLU): Gary Weiss
- WG5.5 – Device Testing (TLP): Steven Voldman
- WG6 – Grounding: David Swenson
- WG7 – Flooring: Dale Tucker
- WG8 – Symbols: TAS
- WG9 – Footwear: Dale Parkin
- WG10 – Handlers: Joe Bernier
- WG11 – Packaging: Brent Beamer
- WG12 – Seating: Stanley Weitz
- WG13 – Hand Tools: Jeff Salisbury

- WG14 – Simulators: Mike Hopkins
- WG15 – Gloves: Gene Chase
- WG53 – Workstations: Tim Jarrett
- WG55 – Cleanroom Considerations: Tom Albano

STANDARDS COMMITTEE

Chairperson: Ron Gibson - Celestica

Members include: Kay Adams – TechWear, Inc., Tom Albano – Eastman Kodak Co., Brent Beamer – Static Control Components, Inc., Donn Bellmore – Universal Instrument Corp., Joe Bernier – Intersil Corporation, Don Boehm – Dou Yee Enterprises, Michael Chaine – Micron Technologies, Eugene Chase – Electro-Tech Systems, Cheryl Checketts – General Dynamics Decision Systems, Timothy Fahey – Noveon, Melissa Feeney-Jolliff – Taos International, Steven Gerken – United States Air Force, Leo G. Henry – ESD TLP Consultants/Testing, Timothy Jarrett – Guidant Corporation, Mark Kelly – Delphi Delco Electronics, John Kinnear – IBM Corporation, Carl Newberg – River's Edge Technical Service / Microstat Labs, Dale Parkin – IBM Corporation, Richard Rodrigo – Simco, Arnold Steinman – Ion Systems, Inc., David Swenson – Affinity Static Control Consulting, LLC, Fred Tenzer – Desco Industries, Julius Turangan – Western Digital Corp., Robert Vermillion – RMV Technology Group, LLC, Edward Weggeland – Static Control Components, Inc., Craig Zander – Restronics Company, Inc.

Technical Administration Support (TAS) Committee

Chairperson: Leo G. Henry - ESD TLP Consultants/Testing

Members include: Steven Gerken – United States Air Force, Ron Gibson – Celestica, John Kinnear – IBM, David Swenson – Affinity Static Control Consulting, Fred Tenzer – Desco Industries, Craig Zander – Restronics Company, Inc.

Members of Working Groups

Members include: Tom Albano – Eastman Kodak Co., Robert Ashton – White Mountain Laboratories, Alan Barber – Don Reichhold Specialty Latex, Jon Barth – Barth Electronics, Joe Bernier – Intersil, Brent Beamer – Static Control Components, Inc., Donn Bellmore – Universal Instrument Corp., Don Boehm – Dou Yee Enterprises, Tilo Brodbeck – Infineon Technologies, Larry Burich – Lockheed Martin, William Casselman – QRP, Inc., Michael Chaine – Micron Technologies, Eugene Chase – Electro-Tech Systems, Cheryl Checketts – General Dynamics Decision Systems, Jacquana Diep – Advanced Micro Devices, Yona Eckstein – Noveon, Mark Fancourt – Lehigh Safety Shoes, Marti Farris – Intel, Melissa Feeney-Jolliff – Taos International, Eugene Felder – Desco Industries, Stephen Fowler – Fowler Associates, Horst Gieser – Fraunhofer IZM, Dale Gross – Flexco, Vaughn Gross – Green Mountain ESD Labs, Inc., Evan Grund – Oryx Instruments, Arleigh Hartkopf – Ansell Healthcare, Michael Hopkins – Thermo-Key Tek, Satoshi Isofuki – Tokyo Electronics Trading Co., Ltd., Leo G. Henry – ESD TLP Consultants/Testing, Mike Hopkins – Thermo Key Tek, Timothy Jarrett – Guidant Corporation, Niels Jonassen – Technical University of Denmark, Mark Kelly – Delphi Delco Electronics, John Kinnear – IBM Corporation, Rick Knight – Ranger Plastic Extrusion, Inc., John Maas – IBM Corporation, Natarajan Mahadeva Iyer – IMEC, Timothy Maloney – Intel, Michael Manders – United States Air Force, Carl Metz – Metz ESD Systems Inc., Thomas Meuse – Thermo Key Tek, Andreas Mueller – Freudenberg Building Systems, Inc., Carl Newberg – River's Edge Technical Service / Microstat Labs, Chris O'Connor – Ultra Test International, Charles Perry – Monroe Electronics, David Pommerenke – Hewlett Packard, Donald Pritchard, Bill Ricker –

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Standards

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The ESDA Standards Program: A Cooperative Effort

Kewaunee Scientific Corp., Dale Parkin – IBM Corporation, Dennis Rivers – Denclare Technologies, Richard Rodrigo – Simco, Martin Rudat – DuPont, Jeff Salisbury – Seagate Technology, James Sketoe – Boeing Co., Douglas Smith – DC Smith Consultants, Arnold Steinman – Ion Systems, Inc., David Swenson – Affinity Static Control Consulting, LLC, Larry Ting – Texas Instruments, Inc., Dale Tucker – VPI, LLC, Julius Turangan – Western Digital Corp., Robert Vermillion – RMV Technology Group, LLC, Steven Voldman – IBM Microelectronics, Scott Ward – Cypress Semiconductor, Merle Weight – Unisys, Gary Weiss – Agere Systems, Stanley Weitz – Electro-Tech Systems, Eugene Worley – Conexant Systems, Craig Zander – Restronics Company, Inc.

Note: See the Nov/Dec 2003 issue of *Threshold* for the most current activities of each working group.

The Standards Committee, referred to as StdCom, reviews, approves and publishes all Work In Progress (WIP), Draft and Final Standards, Test Methods, Standard Practices, and Technical Reports submitted by the individual working groups.

The Technology and Administrative Support Group (TAS) provides continuous support and administrative services to StdCom and to each WG chairperson and their committee. TAS committee members assist the WG chairperson to finalize the document's purpose and scope. TAS is the technical interface to the WG and participates with experiments and lab testing. The TAS committee members are also responsible to assist the TAS Chairperson develop 5 year plans for future working group activities.

Each working group brings a variety of technical knowledge and expertise through their knowledgeable and talented committee members. Each of these members, collectively, donates their time and talents to the development of new industry

Standards, Standard Practices, Standard Test Methods, and Technical Reports. Due to the hard work of these men and women, their collaboration, and their overall commitment to the technology and understanding of ESD, the ESD Association has been informing and educating industry professionals for over 25 years.

The ESD Association also maintains an active liaison with the following organizations: Joint Electron Device Engineering Council (JEDEC), International Electro-technical Commission (IEC), International Disk Drive Equipment and Materials Association (IDEMA), Institute of Environmental Sciences and Technology (IEST), Semi-

conductor Equipment and Materials International (SEMI), U.S. Display Consortium (USDC), Surface Mount Technology Association (SMTA), Semiconductor Manufacturing Technology Consortium (SEMITECH), and the Institute for Interconnect and Packaging Electronic Circuits (IPC). A number of Association members have taken on the responsibility of maintaining these liaisons through various activities.

ESDA's standards have been adopted worldwide by industry, and applied uniformly by OEM's, service providers, material suppliers, and imbedded into Quality Control and Reliability programs.

Association news

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ESD Association Headquarters: A look back and now

- Notify authors of abstract selection and distribute paper-writing guides
- Create, print, and mail the Symposium Program
- Collect and format technical papers
- Produce Proceedings
- Organize and staff registration process
- Assist with on-site coordination
- Reconcile symposium event group

Within each bullet item there may be as many as 20 detailed tasks. This should give you a basic idea of Headquarters' involvement with the Symposium Business Unit. In future issues we will explore another Business Unit together!



From left: Lisa Pimpinella, HQ Operations Manager; Ed Weggeland, President; Tammy Muldoon, Program Manager; and Steve Halperin, Past-President.

Board of Directors Nominations

The ESD Association is requesting nominations for the Board of Directors (BoD). Each year, the Constitution and By-laws of the Association require the membership to elect four Members at Large to the BoD. Members are elected to three-year terms.

The Association's Human Resources Committee is required to prepare a slate of candidates to fill the four BoD positions, which will be vacated on December 31, 2004. The candidates may be nominated by the Committee or a member may submit a petition for a nominee. Petitions must contain 25 identifiable signatures and membership numbers of current ESD Association members, and must be received

by mail no later than February 18, 2004 at Association Headquarters: ESD Association, 7900 Turin Road, Bldg. 3, Rome, NY 13440-2069. (Faxed petitions will not be accepted.)

Ballots will be sent to the general membership by May 1, 2004, and must be returned no later than July 1, 2004. The results of the election will be announced at the Annual Meeting during the 2004 EOS/ESD Symposium in Grapevine (Dallas), Texas.

Further information is available from the ESD Association, 7900 Turin Road, Bldg. 3, Rome, NY 13440; phone: 315-339-6937; fax: 315-339-6793; e-mail: info@esda.org.

What's New On The ESDA Web Site

There have been several additions to the ESD Association web site (www.esda.org):

Program Manager Certification

The association has announced a new Professional Certification aimed at ESD Control Program Managers.

Expanded Staff and Board section

This new section introduces each member of the Association's Executive Committee, Board of Directors and Headquarters Staff.

2004 Call for Papers

The 2004 EOS/ESD Symposium has issued the annual Call for Papers.

Best Paper & Presentation Awards

The EOS/ESD Symposium has presented its Best Paper, Best Student Paper, and Best Presentation awards from the 2002 Symposium.

2004 Officers & Directors

The ESD Association, Rome, NY, has selected board members and officers for 2004.

2004 EOS/ESD Symposium Scheduled

The 26th annual EOS/ESD Symposium,

sponsored by the ESD Association, is scheduled for September 19-23, 2004, at the Gaylord Texan Resort & Conference Center in Grapevine (Dallas), TX,

Spanish- & Chinese-language versions of ANSI/ESD S20.20-1999 are available for download, free of charge.

2004 Symposium Exhibitors

View a complete list of exhibitors who have reserved space at the 2004 EOS/ESD Symposium.

New Press Catalog

View or download the complete press catalog listing all publications currently available for purchase with current pricing.

Revised Glossary of Terms

View or download this revised advisory document ESD ADV1.0-2003. Definitions and explanations of various terms used in Association Standards and documents are covered in this Advisory. It also includes other terms commonly used in the electronics industry.

27 pass NARTE certification exams

27 individuals successfully passed their NARTE certification exams in October 2003 at the 25th EOS/ESD Symposium in Las Vegas, Nevada. Final certifications are issued after all required documentation has been submitted to NARTE and approved. Congratulations to the following people:

Technicians:

Michael Alumbaugh
Asher Azoulay
Gregg Carlberg
Roy Denton
Corey Evans
Carlos Guevara
John Hastings
Wing Kum Kok
Alan Moore
Steven Partridge
Jennifer Reddicks
Claude Sanders
Sarah Smith
Joan Tan
Junyan Yang

Engineers:

Ann Rahn
Frank Butler
Alex Duncan
Jon Jernigan
Jim Krzmarzick
Desmond Lee
Jimmy Liu
Doug Miller
Olga Prado
Patsawat Tachamaneek
Kim Sek Tan
Wooi Teong Tan

26th Annual EOS/ESD Symposium Scheduled for Grapevine (Dallas), Texas



The Gaylord Texan Resort and Conference Center is a brand new facility still under construction, scheduled to open in April 2004.

The ESD Association has scheduled the 26th Annual EOS/ESD Symposium for September 19-23, 2004 at the Gaylord Texan Resort and Conference Center in Grapevine, Texas. This new resort, opening in April 2004, is located just 6 minutes from the Dallas-Fort Worth Airport, 20 minutes from downtown Dallas and 20 minutes from downtown Fort Worth. State-of-the-art convention and meeting facilities offer 400,000 square feet of space to accommodate the Symposium experience, with 70 breakout rooms equipped for professional video, audio, lighting, high-speed Internet access and networking systems; three ballrooms (50,000, 32,375 and 3,300 sq. ft.); 180,000 sq. ft. of dedicated exhibit space; 40,000 sq. ft. of outdoor event lawn; and a 2,500 sq. ft. amphitheater.

Sitting high on a bluff overlooking Lake Grapevine, this resort welcomes guests to an authentic Texas experience. The Gaylord Texan mirrors the look and feel of a cattle baron's ranch house. All the legendary color, drama and heritage of Texas is showcased in a lush climate controlled setting under glass. The resort features 1,511 lavish, themed guestrooms with 141 luxurious suites reflecting three distinct Texas images: Lone Star, Hill Country and

Riverwalk. Accommodations include custom furnishings and decorative items, in-room refrigerator, coffee-service and safe, high-speed T1 and T3 Internet access, and two phones (one cordless) with voice mail and double lines.

The resort also features the Opulent Lone Star Tower, with 476 sophisticated guestrooms and exclusive meeting facilities that create an intimate "hotel within a hotel" feeling.

The resort offers seven restaurants, cafes and eateries throughout the facility, and in-room dining. Entertainment options for guests include the Dallas Cowboys Golf Club adjacent to the property, a contemporary Southwestern-style outdoor pool and 20-meter indoor lap pool, a world-class European spa, salon and fitness center with 13 treatment rooms, outdoor tennis courts, marina access for recreational water-craft, and nearby Grapevine Mills and historic downtown Grapevine for exclusive shopping, unique dining and entertainment.

Make your plans and mark your calendars! Watch *Threshold* and the ESDA web site (www.esda.org) for more details in coming weeks.

Preliminary Schedule Symposium Week

Friday, September 17, 2004

Standards Meetings

Saturday, September 18, 2004

Standards Meetings

Sunday, September 19, 2004

Registration Opens

Standards Meetings

ANSI/ESD S20.20 Seminar, Part 1

ESD Tutorials

Monday, September 20, 2004

Registration

ANSI/ESD S20.20 Seminar, Part 2

ESD Tutorials

Welcome Reception (Exhibit Hall)

Exhibits (p.m. only)

Tuesday, September 21, 2004

Registration

Awards Breakfast

Exhibits

Technical Sessions

Association Luncheon and Annual

Meeting

Professional and Technical Women's

Reception

Wednesday, September 22, 2004

Registration

Technical Sessions

Exhibits

Workshops

Thursday, September 23, 2004

Registration

Technical Sessions

Tutorials

Friday, September 24, 2004

NARTE ESDC Technician Exam

NARTE ESDC Engineer Exam

ESD Association announces new professional certification program

The ESD Association has developed a new professional certification program aimed at ESD Control Program Managers. This program was created for individuals that are involved in designing, implementing, managing, and auditing ESD control programs in their facilities. Until this program was developed, no formal program existed to train people to manage an ESD control program. The curriculum will provide program managers with the necessary tools, skills, and knowledge to successfully fulfill the obligations of their positions.

The certification program consists of several elements: required courses, an optional review class, an in-depth examination, and a continuing education requirement to maintain certification.

Required Courses

The first required program manager certification courses, three tutorials and one seminar, were offered at the 2003 EOS/ESD Symposium in Las Vegas, Nevada. These courses are offered every year at Symposium and may be offered at other times throughout the year. If an attendee completed these courses in 2003, they may be applied toward Program Manager Certification.

- ANSI S20.20 ESD Program Development and Assessment (2-day course)
- Air Ionization: Issues & Answers
- ESD Auditing & Evaluation Measurements
- Electrostatic Calculations for the ESD Engineer

Beginning in 2004, at the EOS/ESD Symposium and possibly at other times throughout the year, additional tutorials will be offered to complete the course list:

- ESD Basics
- Packaging Principles

- ESD Standards
- Clean Room Considerations
- Environmental ESD Issues (System level ESD, cable discharges, EMI)
- Device Technology Overview (Input protection, Failure analysis, device testing)

Course topics were developed based on the types of skills generally required by individuals who are responsible for ESD control programs. The courses specifically developed for this certification program provide a greater depth of material than other tutorials offered by the ESD Association.

Optional Review Class

Since it will take some period of time for individuals to complete the required classes, an optional final overview course summarizing the materials and providing examples of what might be included in the certification exam will be offered every year at Symposium, beginning in 2005.

In-Depth Examination

The program manager certification examination will be held annually during Symposium week, beginning in 2005. The examination will most likely be open book and will consist of multiple choice and essay questions. The essay portion of the exam will be graded by two individuals.

Continuing Education

There will be a requirement for taking additional classes in order to maintain certification. Further information will follow regarding this portion of the requirements for certification.

To initiate an official file in your name or for further information, please contact the ESD Association, 7900 Turin Road, Bldg 3, Rome, NY 13440, phone: 315-339-6937, fax: 315-339-6793, e-mail: info@esda.org; or visit the ESDA web site: www.esda.org.

ESD Association selects 2004 directors and officers

The ESD Association has selected board members and officers for 2004.

Elected to the Board of Directors for three-year terms were:

Tom Albano, Eastman Kodak

Joe Bernier, Intersil

Arnie Steinman, Ion Systems

Steven Voldman, IBM Microelectronics

The Board of Directors also elected its officers. They are:

President

Ed Weggeland, Static Control Components

Senior Vice President

Mark Kelly, Delphi Delco Electronics Systems

Vice President

Joe Bernier, Intersil

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Ron Gibson, Celestica, Inc., as Treasurer

Leo G. Henry, ESD/EMI/TLP Consultants, as Secretary

Craig Zander, Restronics Company, Inc., as Marketing and Communications Business Unit Manager



Calendar of events

January 2004

Silicon Valley EOS/ESD Society Membership Meeting: January 20, 2004, Doug Smith presents "Confessions of a Windows Refugee, or How I Escaped Windows", Ramada Inn, Sunnyvale, CA; www.esdsiva.org

Texas ESD Association Meeting: January 26, 2004, Static Control in HDD Manufacturing; Sematech, Austin, TX; www.centxesdassoc.homestead.com

February 2004

Midwest Chapter ESD Association Membership Meeting: February 11, 2004; www.midwestesd.org

Silicon Valley EOS/ESD Society Membership Meeting: February 17, 2004, Ramada Inn, Sunnyvale, CA; www.esdsiva.org

ESDA Standards and Committee Meetings; February 19-24, 2004; Wilshire Grand Hotel, Los Angeles, CA; www.esda.org

March 2004

Midwest Chapter ESD Association Membership Meeting: March 10, 2004; www.midwestesd.org

Silicon Valley EOS/ESD Society Membership Meeting: March 16, 2004, Ramada Inn, Sunnyvale, CA; www.esdsiva.org

Texas ESD Association Meeting: March 22, 2004, Sematech, Austin, TX; www.centxesdassoc.homestead.com

April 2004

Midwest Chapter ESD Association Membership Meeting: April 14, 2004; www.midwestesd.org

JEDEX San Jose: April 15-16, 2004, San Jose Marriott, San Jose, CA; www.jedec.org

Silicon Valley EOS/ESD Society Membership Meeting: April 20, 2004, Ramada Inn, Sunnyvale, CA; www.esdsiva.org

May 2004

Texas ESD Association Meeting: May 17, 2004; Sematech, Austin, TX; www.centxesdassoc.homestead.com

ESDiscovery USA 2004: May 18, 2004, Silicon Valley EOS/ESD Society; www.esdsiva.org

ESDiscovery ASIA 2004: May 2004, Silicon Valley EOS/ESD Society; www.esdsiva.org

June 2004

ESDA Standards and Committee Meetings; June 3-8, 2004; Gaylord Texan Resort and Conference Center, Grapevine (Dallas), TX; www.esda.org

September 2004

ESDA Standards and Committee Meetings: September 19-23, 2004, Gaylord Texan Resort and Conference Center, Grapevine (Dallas), Texas; www.esda.org

EOS/ESD Symposium & Tutorial Program: September 19-23, 2004, Gaylord Texan Resort and Conference Center, Grapevine (Dallas), Texas; www.esda.org

ESD Certification Exams: September 24, 2004, Gaylord Texan Resort and Conference Center, Grapevine (Dallas), Texas; www.esda.org

From the Threshold chair

Continued from page 3

The ESDA has published the System Level Draft Standard Practice Document-14.1

Overall the DSP14.1 document is easy to read and it is only 12 pages. The TR is 20 pages in length, but provides the reader with all relevant basics. Get your hands on both documents if you do not already have copies. They may help you improve the results that you have previously acquired.

Until next time
Stay Happy

Association news

White paper

A white paper entitled *ESD Phenomena and the Reliability for Microelectronics* is available for downloading in PDF format from the ESD Association web site (www.esda.org).

This paper addresses the serious nature of ESD for the next generation of electronics and the need for further research in the area. The paper presents insights into present-day ESD phenomena, an overview of ESD effects on electronic chips and systems, and a summary of future issues and challenges facing ESD reliability as further advances in semiconductor technologies are made.

To purchase a copy of the white paper, contact ESDA at 315-339-6937 or info@esda.org.

Letters to the Editor

Letters to the editor are welcome. Please include your postal address (even on e-mail) and a telephone number. Letters will be edited for length and style. Send letters to:

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| <p>Howell Packaging, Division of F.M. Howell & Company P.O. Box 286, Elmira, NY 14902 Tel: 607-734-6291 Fax: 607-734-8667 Designers & Manufacturers of ESD Protective Packaging, Paperboard & Thermoformed Plastic, In-House Testing</p> | <p>DESCO 3651 Walnut Avenue, Chino, CA 91710 Tel: 909-627-8178 Fax: 909-627-7449 www.desco.com Manufacturer of ESD control products including wrist straps, mats, foot grounders, ionizers, shielding bags, floor finish & more</p> |
| <p>Conductive Containers, Inc. 4500 Quebec Ave. North, New Hope, MN 55428 Tel: 1-800-FARADAY Fax: 763-537-1738 www.corstat.com Manufacturer of CORSTAT and ESD protective plastic materials for shipping, storage and in-plant handling</p> | <p>3M Electronic Solutions Division Tel: 1-800-328-1368 www.3M.com/eisd Manufacturer of static control permanent flooring, wrist/heel straps, static shielding bags, & testing/monitoring equipment</p> |
| <p>Technical Coating International, Inc. 150 Backhoe Road, Leland, NC 28451 Tel: 910-371-0860 Fax: 910-371-0929 www.tciinc.com Manufacturer of ESD Films, Foil Laminates, and Specialty Structures (Barrier, Opaque, Transparent, & Recyclable)</p> | <p>VPI 3123 S. 9th St., P.O. Box 451, Sheboygan, WI 53082-0451 Tel: 800-874-4240 Fax: 920-458-1368 E-mail: floor@vpiflooring.com www.vpiflooring.com Manufacturer of ESD Control Solid Vinyl Floor Tile</p> |
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| <p style="text-align: center;">Barth Electronics, Inc.</p> <p>1589 Foothill Drive, Boulder City, NV 89005 Tel: 702-293-1576 www.barthelectronics.com ESD Test Equipment, including AdVanTage TLP™. Setting the standard for measurement & true ESD simulation.</p> | <p style="text-align: center;">Molded Fiber Glass Tray Co.</p> <p>6175 US Highway 6, Linesville, PA 16424 Tel: 814-683-4500 Fax: 814-683-4504 www.info@mfgtray.com Manufacturer of static dissipative trays and containers for static protection</p> |
| <p style="text-align: center;">rubberbands.net</p> <p>PO Box 75267, Colorado Springs, CO 80970 Tel/Fax: 719-683-2419 www.rubberbands.net Electronic Grade Rubber Bands, mfd. in the USA, vacuum-sealed antistatic, dissipative, conductive with distributors worldwide.</p> | <p style="text-align: center;">Vermason Ltd.</p> <p>1 Avenue One, Letchworth, Herts., SG6 2HB, England Tel: +44 1462 672005 Fax: +44 1462 670440 sales@vermason.co.uk Manufacturer of ESD products. For more information, www.vermason.com</p> |
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More institutional listings, previous page

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Threshold™ Publication Schedule

| Issue | Deadlines |
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| July/August ----- | June 1 |
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