



July 26, 27, & 28, 2011
Early Registration Discount until 6/30
Hands-on ESD Workshop - Today's Challenges!

Class 0, S20.20, EOS, CDM, & Advanced Auditing
All New Hands-on Class Exercises!

Invited Speaker:

Dave Long - Staticworx
Flooring Selection and Maintenance Pitfalls



ESD Dream Team
[Dangelmayer Associates](http://DangelmayerAssociates.com)

Ted Dangelmayer
President & CEO

Please join us for this highly interactive workshop and hands on class exercises with six of our expert team members and only 20 students. We are pleased to include an invited speaker:

Invited Speaker: Dave Long, Staticworx

Terry Welsher
Vice President
Former AT&T Bell Labs
Director

Ginger Hansel
Director
Former Motorola Global
ESD Program Manager

Larry Fromm
Director
Former HP & Finisar
Global ESD Program
Manager

Carl Newberg
Director
- ESDA S20.20
Instructor
- Certified ESD Program
Manager
- ESD Book Author

Arnie Steinman
Business Development
Director

Min-Chung Jon
* ESD Materials Expert
* Resolved Industry
Wide Tape & Reel Issues

Lou DeChiaro
Foremost Authority:
* Device FMA &
EOS/ESD
Differentiation
* Optoelectronic - Lasers
* CDM/HBM Device
Design
* Circuit Board Design
* System Design

"Flooring Selection and Maintenance Pitfalls"

The selection of static control flooring involves a multiple disciplinary approach beyond what is covered by electrical standards organizations. Flooring installation problems are extremely costly due to the business impact associated with removal and replacement. This presentation will outline a strategy for identifying and avoiding unanticipated problems involving testing, maintenance, grounding, safety, installation and final certification. At the conclusion of this presentation attendees will have the necessary information to write a performance specification for static control flooring for electronics manufacturing and clean room applications.

Hands-on Workshop with the Dream Team: **Basic and Advanced Principles**

Intended for Professionals Who:

- Need Better Understanding of ESD Basics
- Desire Road-map For S20.20 ESD Programs
- Desire iNARTE Certification
- Need Better Understanding of CDM and S20.20, Class 0, and CBE

What You Will Learn:

- Charged Device Model & Class 0 Basics
- Auditing Skills
- 99% of ESD Failures are CDM Not HBM/MM
- CDM, CBE, & Class 0 Countermeasures
- Most Experts Misdiagnose CBE as EOS
- Hands-On CDM & Class 0 Test Methods
- How to Implement Sound ESD S20.20 Programs

Seven Meals Included

Workshop Agenda

Day 1: Tuesday, July 26, 2011

8:00 AM **Introductions--Beyond S20.20**

8:30 **Customizing S20.20 for CDM and**

Hardening
* ESD Modeling

Vicki Dangelmayer
Vice President Business
Development

Class 0- Larry Fromm

- o Implementing S20.20*
- o Strengths and Technical Gaps*
- o Customizing for CDM and Class 0*

9:30

ESD Basics- Terry Welsher

- o With Emphasis on CDM & Class 0*
- o Why CDM & Class 0 are not Well Understood*

Break

10:30

ESD Basics (Con't) - CDM vs. HBM

- o Discharge Characteristics*
- o Limitations of Designed-in Protection*
- o Why MM is Unnecessary*

Demonstrations and Videos

FMA: Differentiation Among the 3 Models

12:00

Lunch

1:30

ESD Basics (con't)

3:00

Break

3:30

ESD Basics (con't)

5:00

Adjourn

5:30

Evening: Complementary Seaside Dinner

Workshop Agenda

Day 2: Wednesday, July 27, 2011

Invited Speaker: "Flooring Selection and
Maintenance Pitfalls"

8:00 AM Dave Long, Owner, *Staticworx*

9:00 Auditing Measurements, Strategies and Pitfalls-
Ted Dangelmayer, Carl Newberg, Ginger Hansel

- o Introduction**
- o Common Measurement Pitfalls-
- Fieldmeters**

- Voltmeters
- Resistance Meters
- Event Detectors

10:00 Break

10:30 All New! Hands-on Class Exercises

- o Resistance Measurements
- o Event Detection- High Tech Egg Hunt

12:00 Lunch- Annisquam Yacht Club

2:00 ESDA TR53 Test Methods & Troubleshooting

Carl Newberg

- o Grounding/ Bonding Systems
- o Workstations
- o Wrist Straps
- o Constant Monitors
- o Footwear
- o Flooring
- o Personnel Grounding with Garment
- o Air Ionizers
- o Seating
- o Mobile Equipment (Carts)
- o Packaging

CDM Compliance Verification - Ted Dangelmayer

- o Common Findings
- 5:00 o Personnel Compliance**

Workshop Agenda

Day 3: Thursday, July 28, 2011

8:00 Ionization for Class 0- Arnie Steinman

- o Class 0 Considerations
- o Ionizer Choices vs. Applications

9:00 All New! Hands-on Class Exercises

- o Fieldmeter vs. Voltmeter
- o Ionizers

10:30 Break

11:00 Auditing Administration - Ted Dangelmayer

- o Sampling Plans
- o Data Analysis
- o Using the Data to Manage the Program

- 12:00 Lunch**
- 1:30 All New! Electrical Overstress (EOS) in Manufacturing - Many Failure from Many Sources-Terry Welsher**
- 3:00 Break**
- 3:30 Class 00 (Sub 125V Controls)-Carl Newberg**
o Ultra-sensitive Device/Board Controls
o Avoiding High Failure Rates (up to 100%)
- 4:30 Open Discussion**
- 5:00 Adjourn**

Location:

Dangelmayer Associates
14 Butternut Lane
Cape Ann, Gloucester, MA

America's 1st Fishing Port & Frequent Movie Venue



Local Sightseeing and Accommodations:
www.cape-ann.com

Major hotels w/i 30 minutes of Gloucester:

Peabody Marriott 978-977-9700

Comfort Inn, Peabody 978-777-1700

Courtyard Marriott, Danvers 978-777-8630

Transportation

45 minute drive from Boston's Logan airport

55 minute train ride from Boston

1.25 hr. drive from Manchester, NH airport

Seven Meals Included!

Hands-on ESD Workshop - Today's Challenges!

**Class 0, S20.20, EOS, CDM, & Advanced
Auditing**

*(CDM = Charged Device Model; Class 0= Ultra-Sensitive
Components)*

14 Butternut Lane, Gloucester, MA 01930

REGISTRATION FORM

Three day Workshop includes three lunches, three continental breakfasts, one dinner. Fee: \$1785.00 per person. Register by June 30, 2011 and deduct \$150.

Registration Information

Name: _____

Title: _____

Company: _____

Mail Stop: _____

Address: _____

City: _____ State: ____ Zip: _____

Phone: work _____

home _____

E-mail: _____

Fax: _____

Preferred method of contact: Phone _____

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Mail to:

14 Butternut Lane
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For more local accommodations, go to cape-ann.com

Thank you!

Vicki Dangelmayer
Vice President of Sales
vicki@dangelmayer.com
978-283-5156

www.dangelmayer.com

Seating is limited!

Complete your registration!
Seven Meals Included!

Contact: Vicki Dangelmayer; vicki@dangelmayer.com;
978-283-5156

Detach and retain for your records

2011 ESD Dream Team Workshop \$1785.00
(\$1635.00 by June 30, 2011):

Date paid: _____ Check #: _____ Amount: _____

Received from: _____

Company name: _____

Vicki Dangelmayer
vicki@dangelmayer.com

	Dangelmayer Associates 14 Butternut Lane Gloucester, MA 01930