

# **IEEE SW Test Workshop**

Semiconductor Wafer Test Workshop

**Jerry Broz, Ph.D.**

General Chair

SW Test Workshop

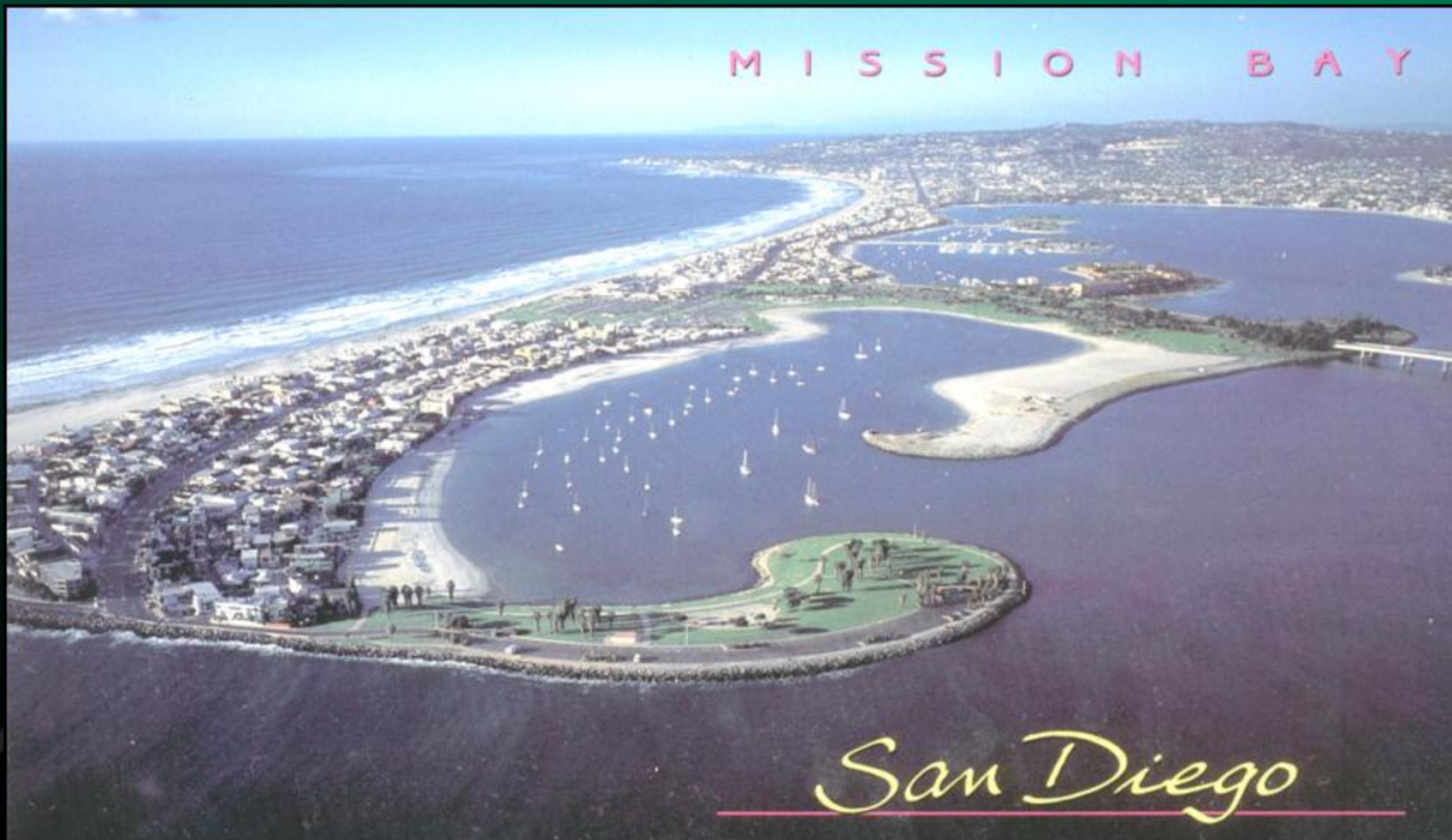


## **Welcome to the IEEE SW Test Workshop**

**June 3-6, 2007**

**San Diego, CA USA**

# 17<sup>th</sup> Annual SWTW



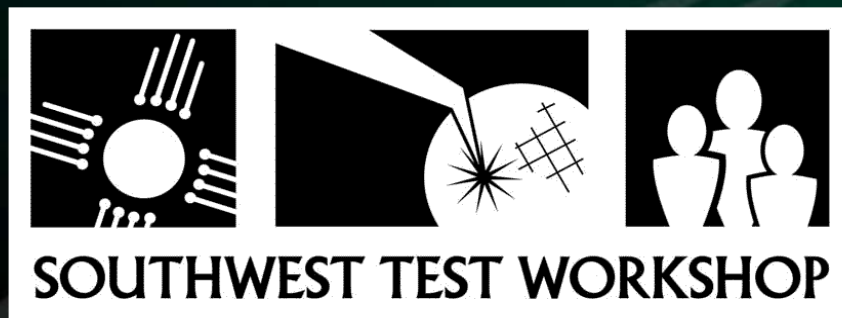
June 3-6, 2007

IEEE SW Test Workshop

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# What's New for 2007 ?

- New Name ...
  - IEEE Southwest Test Workshop is now the IEEE Semiconductor Wafer (SW) Test Workshop.
  - IEEE SW Test Workshop (SWTW)
- New Logo ...

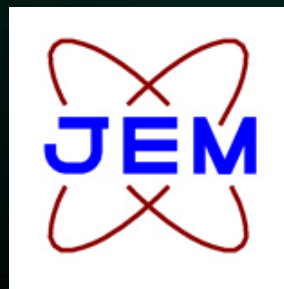


# What's New for 2007 ?

- Record Number of Submissions ...
  - 9 Technical Sessions
    - Total of 31 Podium Presentations
  - 2 Poster Sessions
    - Total of 12 Poster Presentations
  - Select presentations eligible for presentation during the SEMI TechXPOT Program at SEMICON-West.
- Products / Services EXPO – 2007
  - SOLD OUT ! (... thanks ! ...)
  - Expanded to 40 full size booths

# What's New for 2007 ?

- Corporate Supporter Program (... thanks ! ...)



# What's New for 2007 ?

- New General Chair ...
  - Jerry Broz, Ph.D. (International Test Solutions)
  - Technical Program Chair for past 7-years
- New Chair Emeritus ...
  - William Mann
  - General Chair for past 16 years
- New Technical Program Chair ...
  - Brett Crump (Micron Technologies)

# What's the Same for 2007 ?

- SWTW IS a Probe Technology Forum ...
  - “THE” Conference for Wafer Test Professionals
  - Practical solutions to real problems
  - Sponsored by the IEEE Computer Society and the Test Technology Technical Council
  - A balance mixture of semiconductor manufacturer and supplier presentations
- Informal Conference ...
  - Great social activities and informal discussions
  - Meet new people and have a little fun !

# “Who's Fault Is It?”

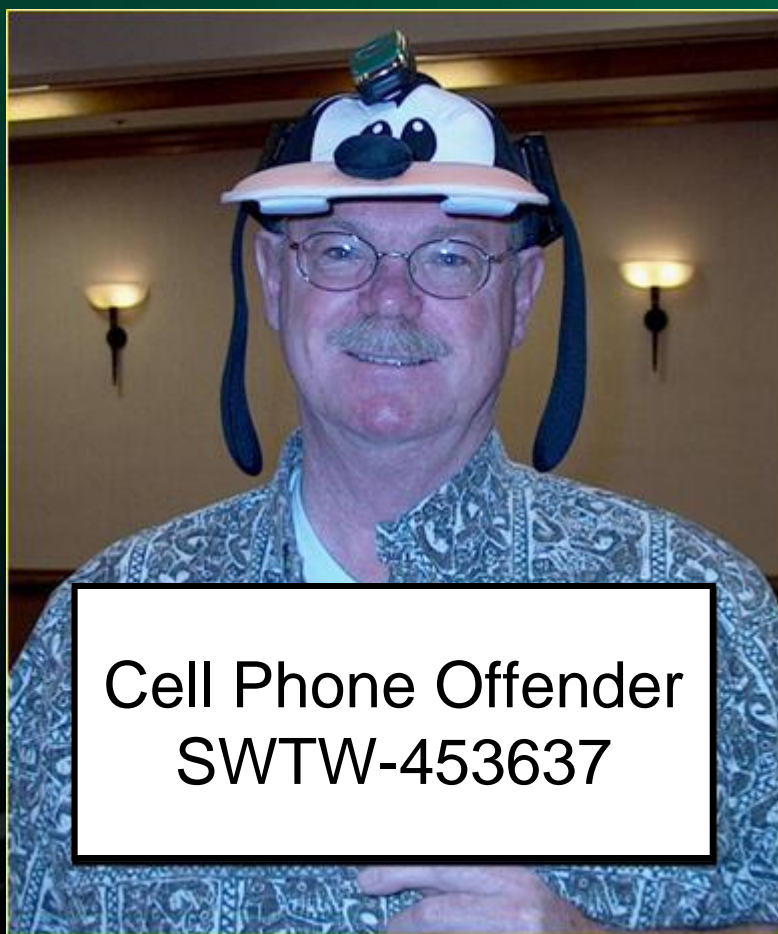
- Organization and Technical Program ...
  - Jerry Broz, Ph.D., International Test Solutions, General Chair
  - William Mann, Chair Emeritus
  - Brett Crump, Micron Technologies, Program Chair
  - Maddie Harwood, CEM Inc., Registration and Finance Chair
  - Meredith Griffith, CEM Inc., Exhibits / Registration Coordinator

## Steering Committee

- Nadine Aldahhan, Freescale
- Jack Courtney, IBM
- Warren “Stu” Crippen, Intel
- Michael Egloff, AMD
  - EXPO 2007 Coordinator
- Michael Harris, Texas Instruments
- Ken Karklin, Touchdown Technologies
  - Program Committee
- Ger Koch, NXP Semiconductor
- Patrick Mui, JEM America
  - Program Committee
- Rey Rincon, Integrated Test Corp.
- Roger Sinsheimer, Xandex
  - Program Committee
- Fred Taber, BiTS Workshop
  - Proceedings Coordinator
- Bill Williams, At Large



# Silence your cell phone !!!



# Technical Program / Agenda

- Sunday, June 3, 2007
  - Tutorial w/ 3 presentations
  - Registration and Cocktails
  - Dinner
  - Probe Year In Review
  - Keynote ...

**“Working with Suppliers to Reduce the Cost of Test”**

**Vikas Sharma**

Intel Wafer Test Manager  
Sort Test Technology Development

# Technical Program / Agenda

- Monday, June 4
  - Continental Breakfast
  - Probe to Pad Contact Mechanisms
  - Controlling Pad Damage
  - Lunch
  - Strategic Design Methodologies
  - Large Area Array Probing
  - Exhibits Open From 6:00 to 9:00 PM
    - Carving Stations Dinner
  - Probe Engineer Pentathlon at the Barefoot Bar

# Technical Program / Agenda

- Tuesday, June 5
  - Continental Breakfast
  - Advanced Probe Card Technologies
  - RF Probing
  - Lunch
  - Probe Potpourri
  - Exhibits Open from 3:00 to 5:00 PM
  - Two Poster Sessions from 3:00 to 5:00 PM
  - Reception, Dinner, Seal and Shamu Show
    - Busses depart for Sea World at 6:00PM

# Technical Program / Agenda

- Wednesday, June 6
  - Three chances to win a 4-GB Apple iPOD
    - Must be present to win !
  - Continental Breakfast
  - Probe Interfaces and Connectivity
  - Probe Challenges
  - Best Presentations Awards
  - Adjournment and Lunch

# Pentathlon at Barefoot on Monday

- Great Events ...
  - Energy Loss and Dampening Challenge
  - Aeronautical Projectile Challenge
  - Dimpled Sphere Rolling Challenge
  - Laminar Vortex Ring Accuracy Challenge
  - Dreaded Synthetic Siege Engine Challenge
- Great Prizes !
  - Bragging rights (of course)
  - Awards on Wednesday

# Sneak Preview



Training Purposes Only

# Tuesday Program

- Relaxed networking
- Private reception
- Buffet Dinner
- Seal and Shamu Shows





# <http://www.swtest.org>

- Central Online Repository
  - Past presentations
  - Online registration
  - Most current news for SW Test Workshop
  - Sign up for our mailing list
- Tremendous continued success !!
  - Over ninety-five thousand visits !

# Recognition & Awards

- Best Overall Presentation
- Best Data Presented
- Most “Inspirational” Presentation
- Best Presentation, Tutorial in Nature
  
- Other “Special Awards”

# SWTW-2006 Awards

## Co-Winners - Best Overall Presentation

"Parametric Study of Contact Fritting for Improved CRES Stability"

Dr. Christian Degen, Oliver Nagler, Michael Horn, Dr. Florian Kaesen  
Infineon Technologies AG

"Fritting – Experiences with Non-ohmic CRES while  
Wafer Test Probing"

Jan Martens  
Philips Semiconductors – Hamburg



## Winner - Best Data Presentation

"Key Methods in Reducing Pad Crack Risk at Probing Low-k Wafers"

Frank Hwang, Steve Hsu, J. H. Chen  
TSMC

Dean Yang, Wensen Hung, Jacky Tsai  
Micronics Japan Co. LTD



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# SWTW-2006 Awards

## Winner - Most Inspirational Presentation

"Novel Methodologies for Assessing On-line Probe Process Parameters"

Jerry Broz, Ph.D., Brice Blanc, Gene Humphrey (ITS)  
Rhett Moore (Micron Technologies)  
Patrick Mui (JEM – America)



## Winner - Best Presentation, Tutorial in Nature

"Lessons Learned Probing Power Management Devices in a Multi-DUT Test Format"

Paul O'Neil  
Cascade MicroTech - Europe



# The “Special” Award



“What A Load  
Of Crap !”

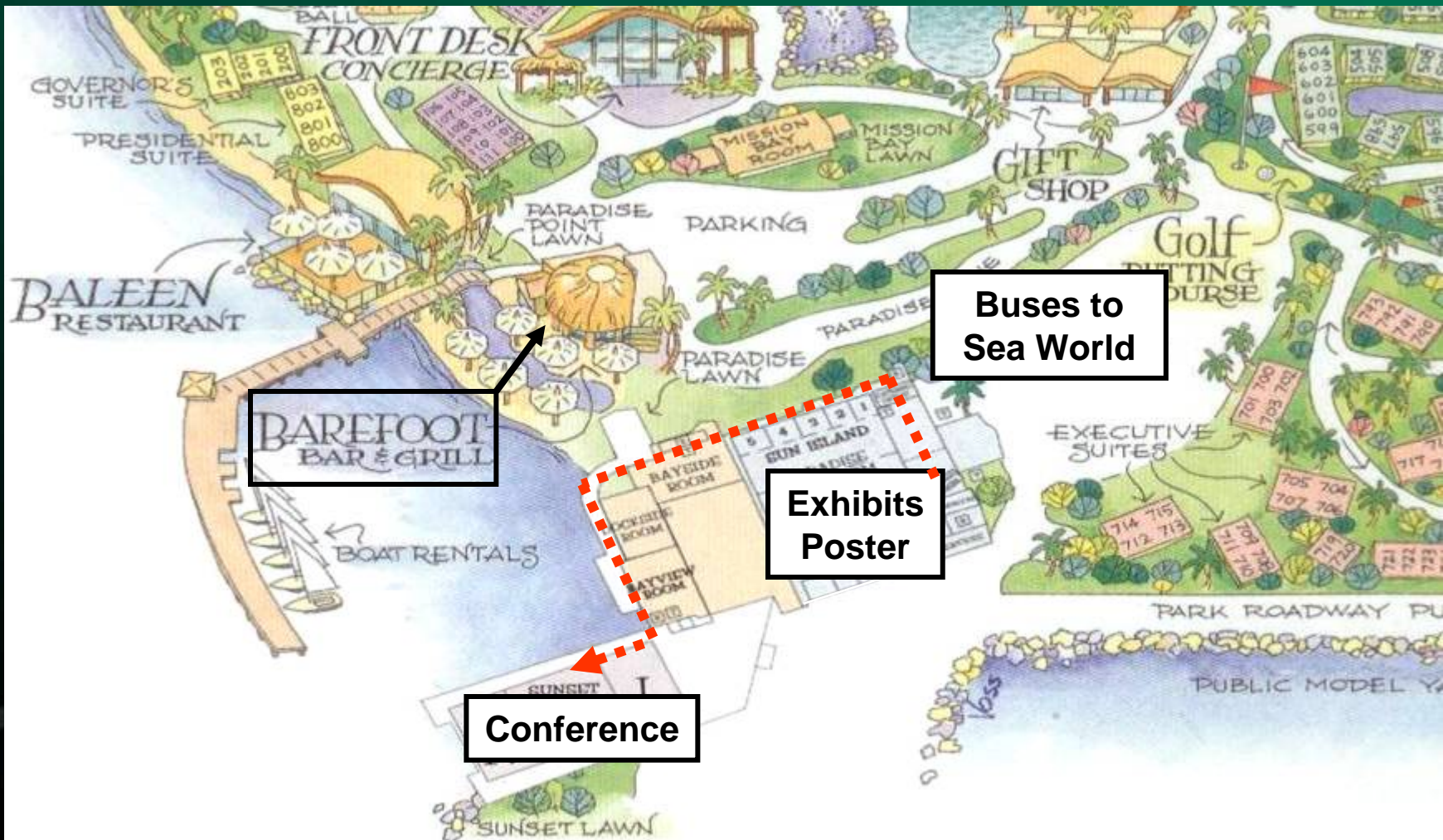
For the Poorest  
Disguised Sales  
Pitch

*“What happens at SWTW stays at SWTW !”*

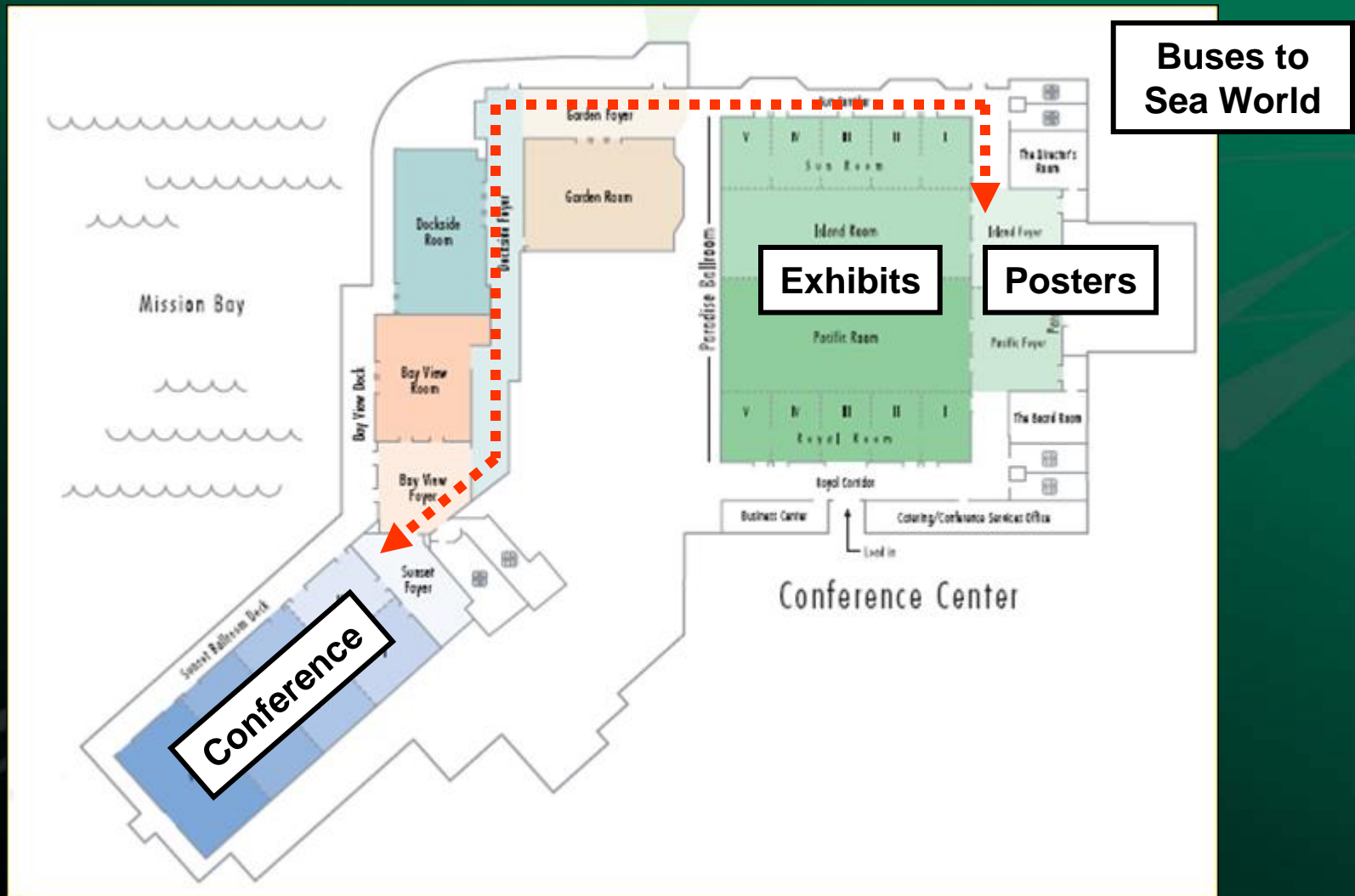
# EXPO 2007 – Exhibitors

1. MJC
2. DFW Test, Inc.
3. Wentworth Laboratories, Inc.
4. Electroglas, Inc.
5. **International Test Solutions** (supporter)
6. FormFactor
7. DTS
8. AMST (Advanced Micro Silicon Technology)
9. **Feinmetall GmbH** (supporter)
10. New Wave Research Inc.
11. inTEST Silicon Valley Corp
12. Rucker and Kolls
13. ERS America / Maccs LLC
14. Integrated Technology Corporation
15. Technoprobe SPA
16. SEMI
17. **Cascade Microtech, Inc.** (supporter)
18. Accretech USA, Inc.
19. DJK Global / Topcon
20. **QualiTau, Inc.** (supporter)
21. Left Coast Instruments
22. Apex America, Inc.
23. Scanimetrics
24. NHK International Corp
25. Advanced Probing Systems, Inc.
26. Camtek USA
27. TAMAR Technology
28. International Contact Technologies Inc.
29. Applied Precision, LLC
30. RD Chemical Company, Inc.
31. Integrated Test Corporation
32. SV Probe, Inc.
33. Oxford Lasers
34. MicroProbe
35. Tokyo Electron Limited (TEL)
36. **JEM America Corp.** (supporter)
37. **Test Advantage, Inc.** (supporter)
38. Reid-Ashman Mfg.
39. Point Technologies
40. DSL Labs, Inc.

# Don't Get Lost !



# Don't Get Lost !





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