December Event:
Member’s Christmas Party
Starting at 6:00pm

Member’s Party!!!

Come join us for an evening of FUN!

You and your Spouse/Guest are cordially invited to our annual Member’s Party.

• **When:** Friday, December 2\(^{nd}\) starting at 6:00pm
• **Where:** Historical Addison Stone Cottage
• **What:** Networking Happy Hour followed by a dinner and dessert.
• **Cost:** $25/person

**Watch for your invitation coming soon!**
Getting Outside Your Comfort Zone

One of the unexpected benefits of becoming a SMTA officer is having the chance to get outside of my comfort zone. Too often we can stay in our familiar surroundings never seeing beyond our personal space. Expanding your boundaries gives an opportunity for both personal and professional growth.

Personal Specific Examples

Wife driving a truck pulling a trailer on a long trip where she got a new puppy.

High School Robotics

Being pit and field coach at World Championships without any previous experience.

Students being pushed to execute tasks they did not know they could perform.

Taking officer position in SMTA

Meeting at Aboca’s instead of the DoubleTree Hotel

General Technology Examples

Stepping up and learning a new technology enabling the next step forward in process flow and/or optimization.

Leaving established stable job for high risk, high gain opportunity.

Having a willingness to push through that disruptive technology despite the inherent difficulties.

The following is a brief CV for Col Sanders

Lost job at railroad for fighting with colleague.

Practiced law until had anger management issues with his client in the courtroom.

Lost job with life insurance company for in-subordination.

Started lamp manufacturing company which failed.

Ran service stations – One closed during Great Depression, one burned down after ten years of operation and was rebuilt as hotel/restaurant which failed during WWII

Worked as assistant cafeteria manager until at the age of 65 started selling franchises which was initially rejected over 1000 times.

Summary

In our high-tech industry, we must evolve and grow or risk become obsolete. SMTA both provides a both platform for learning new technologies and connecting to professionals outside of your comfort zone.

Darrell Ray

VP of Technical Programs

Upcoming Chapter meetings

Chapter Calendar for 2016:
Dec 2nd  
Member’s Christmas party

Chapter Calendar for 2017

Jan-Cleaning

March 7th- Expo

April- Chapter Meeting

May- Chapter Meeting

June- Chapter Meeting

July- Top Golf

Sept 2017
National Medical Symposium in DFW

Sept. 2017 SMTAI in Chicago

November 3rd 2017 -
Dallas Geek-A-Palooza

Dec. 1st 2017-Member Party
Presidents Message

As we draw to the end of another wonderful year with SMTA Dallas, I thank all of the great volunteers that help spread the load and make great things happen for all guests and members. We have 12 volunteers. That is phenomenal !! To the members, I thank you for whatever level of involvement you have been able to participate in. We are a network of professionals and we all learn from each other. In addition to the great member party covered in this newsletter, we have a great year planned for 2017 already. I am so very excited. am convinced that people get back more than they contribute. We are a friendly group and I know that relationships are growing.

Gary Tanel, Dallas Chapter President

Dallas Chapter Membership Rolls— 115 Members !!

We welcome our newest members to the SMTA family:

<table>
<thead>
<tr>
<th>Name</th>
<th>Member Type</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hartfield, Cheryl</td>
<td>Individual</td>
<td></td>
</tr>
<tr>
<td>LaVine Christopher</td>
<td>Global Participating</td>
<td>Lockheed Martin Missiles and Fire Control</td>
</tr>
<tr>
<td>Rivas, Rich</td>
<td>Participating</td>
<td>Vi Technology</td>
</tr>
<tr>
<td>Gallizio, Giuliano</td>
<td>Corporate Supplier</td>
<td>Osai Automation System USA Corporation</td>
</tr>
</tbody>
</table>

Corporate Members: 16

Global Members: 3

Complimentary members: 1

Participating Members: 15

Associate/Student Members: 10

Dallas Chapter Corporate Member List - September, 2016

<table>
<thead>
<tr>
<th>Name</th>
<th>Member Type</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alliance Rubber Company</td>
<td>JTAG Technologies</td>
<td>Renata Batteries</td>
</tr>
<tr>
<td>Barry Sales, Inc.</td>
<td>Keysight Technologies</td>
<td>Southwest Systems Technology Inc.</td>
</tr>
<tr>
<td>BBM, Inc.</td>
<td>Krypton Solutions</td>
<td>SPEA America</td>
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<tr>
<td>B2P Solutions LLC</td>
<td>Matthews Consulting</td>
<td>.St. James Technologies</td>
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<tr>
<td>CalcuQuote</td>
<td>Mek Americas LLC</td>
<td>Sunshine Global PCB Group</td>
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<tr>
<td>Conecssus LLC</td>
<td>.National Circuit Assembly</td>
<td>Super PCB</td>
</tr>
<tr>
<td>CR Assembly</td>
<td>NCAB Group</td>
<td>SVTronics, Inc.</td>
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<tr>
<td>Creation Technologies Inc.</td>
<td>NPI Technologies, Inc.</td>
<td>Test Equity LLC</td>
</tr>
<tr>
<td>DG Marketing Corporation</td>
<td>Optimal Electronics Corp</td>
<td>The IPS Group, LLC</td>
</tr>
<tr>
<td>E.T.S. Group, Inc.</td>
<td>Osai Automation System USA Corp</td>
<td>Thing Weaver Solutions, LLC</td>
</tr>
<tr>
<td>Electrolab Inc.</td>
<td>PAC Global, Inc.</td>
<td>Trilogy Circuits, Inc.</td>
</tr>
<tr>
<td>Fujitsu Network Communications</td>
<td>Philips Entertainment</td>
<td>Variosystems, Inc.</td>
</tr>
<tr>
<td>GSC (Garland Service Company)</td>
<td>Precision Technology, Inc.</td>
<td>VI Technology</td>
</tr>
</tbody>
</table>
Page 4 Technology Corner

Co-Planar structures

What is a “Co-Planar” structure? Co-planarity, as it relates to the signal on a PCB is where a portion of metal plane exists on the same layer as the Impedance signal and induces some specific amount of coupling due to the proximity of the adjacent plane/copper pour. Often in conjunction with ref planes on adjacent layers these structures offer mechanical and heat sink capabilities as well as EMI reduction greater than those in “free space” or in the case of the PCB, unused non metal areas.

On the other hand, multiple sequential co-planar structures CAN increase the possibility of cross talk and other un-wanted resonance effects, resulting in reduced Transmission line performance.

An example of Unintentional co-planar coupling is when a design is near completion and all details about the outer layer Impedances have been worked out. At the last moment the Engineer asks for more Thermal dispersion or heat sink capabilities and asks the layout person to perform a copper pour on the Surface layers to create better thermal capacity and to minimize emissions. Having done so, the fabricator now attempts to model the impedances based on Co-planar Structures. In some cases, if the Impedances are not re-visited after final layout prior to release to the potential fabricator to within 10% of the original intended impedance, You may receive a call from your fabricator regarding subtle re-line sizing to get closer to the intended impedances.

See examples:

This is where no copper pour gets any closer to an Impedance controlled trace than three times its width. An example would be a .005 line with at least .015 ground separations. (distance to adjacent copper pour) would be consider un-coupled, anything less may induce a slight amount of coupling changing the Impedance results up to 5%. In a +/-10% environment this is a problem for a fabricator.

What do you do? As always we advocate involving the fabricator at the earliest possible time possible.

See examples on Page 5
In Figure 1 a .0075 trace in “free space” gets approx. 60 ohms

For many years the “3 x rule” has been used and is still valid for most applications today.

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What do you do? As always we advocate involving the fabricator at the earliest possible time possible.

Karl Doebbert~
Leadership/Volunteer Section

Special Thanks to the following volunteers!!

Technical Advisor (Appointed) : Viswanadham Puligandla Ph.D. (Nokia (Retired))
Phone: 972-355 7107
Email: viswam38@gmail.com

Technical Advisor (Appointed) : Riki G. Brown (LeeMAH Electronics)
Phone: 951-733-2806
Email: rbrown@leemah.com

Set Up Committee (Appointed) : Jimmy Fallin (Philips Entertainment)
Phone: 214-647-7960
Email: jimmy.fallin@philips.com

Social Media Editor (Appointed) : Chintan Sutaria (CalcuQuote)
Phone: 909-278-8233
Email: csutaria@calcuquote.com

Board Liaison : Richard Henrick (Sanmina Corporation)
Phone Contact: 256-882-4579
Email Address: richard.henrick@sanmina.com
REASONS TO JOIN YOUR LOCAL SMTA CHAPTER

- Do you have something to share such as new technologies or new products?
- Are you new in a sales territory – do you know all the players? Do they know you?

Be informed and involved on the Local Chapter level:

- Take advantage of technical information provided at local meetings Get to know colleagues in your local area
- Network for technical information and get to know companies and people in your local area
  - Share information with colleagues on new products and services

THE MISSION OF SMTA

The Surface Mount Technology Association (SMTA) membership is a network of professionals who build skills, share practical experience and develop solutions in electronic assembly technologies and related business operations.

MEMBERSHIP DUES

Participating: $50 - If your company (same location/division) holds a Corporate Membership it’s employees are eligible to receive the full range of benefits at a discounted price.

Individual: $75 - This membership is designed for individuals who wish to join SMTA to receive all the benefits independent of a Corporate Membership.

Corporate: $450 - A corporate membership in SMTA provides discounts to employees located in the same location/division where the Corporate Membership is held.

Chapter Meetings:
Member and Student $19 The Student/Retiree Membership is available to all full-time post-secondary students and retirees.
Non Members: $25
New or Unemployed: Free

HOW TO JOIN
On-line at www.smta.org