



The IMAPS Northern California Chapter

presents

IMPACT OF SURFACE FINISH ON SOLDERING OF PRINTED CIRCUIT BOARD ASSEMBLIES

**Speaker: Mulugeta Abteu, Vice President,
EMS Technology Development, Sanmina-SCI**

Date: Wednesday, February 3, 2010

Location: David's Restaurant
Banquet & Conference Facility
5151 Stars & Stripes Drive
Santa Clara, CA 95054

AGENDA:

11:30 AM – 12 PM	Registration & Networking
11:30 AM – 12:15 PM	Buffet Luncheon
12:15 PM – 1:00 PM	Speaker Presentation

Abstract: Surface finishes are one of the most critical features of Printed Circuit Boards. The surface finish type and profile affects the wetting and reliability of solder joints. All available surface finish options have advantages, and limitations that can have detrimental effects on the interconnect structure. This is particularly challenging with Pb-free solders. In the absence of a comprehensive selection metrics that takes into account the most critical attributes of surface finishes for optimal soldering, identifying and selecting any surface finish is likely to be both difficult and risky. Defects such as Black Pad, Brittle Inermetallic (IMC) formation, inadequate hole fill during wave soldering, micro and Kirkendall voids, etc., are some of the defects directly related to surface finishes. Results of experimental investigations conducted to identify the effects of surface finishes on wetting will be discussed. A comprehensive surface finish selection matrix with a comparative merit index is suggested. Major issues encountered as a result of improper surface finish selection will be presented, including hole-fill issues with Organic Solderability Preservatives (OSP) and brittle IMC problems with Nickel-Gold finishes.

Speaker Bio: Mulugeta Abteu is Vice President of EMS Technology Development at Sanmina-SCI Corporation, responsible for Interconnect Processes, Component Engineering and RoHS Compliance Technology. Mulugeta has over 20 years of experience in the electronics industry. He holds MS Engineering in Micro-electronics Packaging from San Jose State University and is currently a doctoral candidate at SUNY Binghamton. Mulugeta has published several technical papers covering Lead-free soldering, Electronic Cleaning and High Density Interconnection in board and device level packaging.

Luncheon Fee

IMAPS Members \$20.00; General \$25.00; Students (with ID) \$10.00

Price includes lunch and program. Please email Gina Love at glove@cctlaser.com to reserve your space today! Registrations will be confirmed via email. We accept cash and checks at the door.

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