FOR IMMEDIATE RELEASE

HDP User Group Announces New Project

Cave Creek, Arizona Oct 23, 2014. The High Density Packaging (HDP) User Group headquartered in the United States announces the Smooth Copper Signal Integrity project which is focused on evaluating the effects of processing smooth copper foil for Printed Circuit Boards (PCBs) and the roughness on all sides of a trace produced when the circuits are fabricated. It will also evaluate the variation caused by etch chemistry/oxide chemistry and just as critical, the methods of roughness measurement.

Copper foil used in the making of PCBs is treated and prepared in order to increase the surface roughness and promote adhesion to the epoxy board material. This copper is then etched to create the electrical circuits on the board. The frequencies of electrical signals in today's electronic applications have approached the point where the roughness of the copper traces is affecting the quality of the electrical signals and limiting the speed of the system. There is a critical need for understanding of the issue and methods for reducing the roughness without sacrificing adhesion.

Presently there is a lack of an industry standard test method below 5 um, so the true roughness and variability is unknown. Traceable standards for roughness and variability around the standard using various measuring technology should be evaluated.

Although foil type (tooth structure) and moisture contribute to loss, the largest effect is the oxide roughening treatment given the copper to promote inner-layer bonding. Signal Integrity as measured by insertion loss is becoming critical at higher frequency. Even a highly specified foil, laminate and oxide treatment can result in signal variation and drift over time.

System designs with > 10Gbs on a channel, that do not have a wide enough margin can see a drop in data transfer rates, sometimes below the critical functioning level. This is a very relevant topic/concern as there are many systems in the industry today with > 10Gbs data transfer rates.

John Davignon HDP user group facilitator said "Many of our member companies are interested in better characterizing the effects of fabrication processes on smooth copper and subsequent copper roughness measurement technology, which has significant impact on system performance at high speed". We will be having an open conference call to discuss areas of study and scope of the proposed project.

At the present time, all interested parties are invited to participate in this effort. There will be a kick off WebEx meeting on Nov 5th at 11 AM Central Time. For more information, please contact

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About HDP User Group

HDP User Group (www.hdpug.org) is a global research and development organization based in Cave Creek Arizona, and is dedicated to "reducing the costs and risks for the Electronics Manufacturing industry when using advanced electronic packaging and assembly". This international industry led group organizes and conducts R&D programs to address the technical issues facing the industry, including design, printed circuit board manufacturing, electronics assembly, and environmental compliance. HDP User Group maintains additional offices in Austin, Texas; Stockholm, Sweden; and Tokyo, Japan.

For more information, visit HDP User Group on the Internet at www.hdpug.org or contact Larry Marcanti at larrym@hdpug.org, phone number +1 214-621-7792