



Times Have Changed

Change is part of life in the Electronics Industry, but the last decade has seen an unprecedented change in the industry's manufacturing structure, and as a result, in the way the industry conducts Research and Development (R&D). The System houses (OEMs) have divested themselves of most of their manufacturing, and now depend on Electronics Manufacturing Companies (EMS providers) and ODMs located throughout the world to build their products. With the loss of manufacturing, they also lost much of the technical expertise that they relied on for solving technical problems and developing new technical solutions. Getting help from Bell Labs and IBM Research Centers is a thing of the past.

"The tangible benefit to Sun is a 20:1 ROI on our membership investment. The intangibles are important too, chief of which is the informal atmosphere and frank discussion of mutual problems."
 ~ David Love
 Sun Microsystems

The burden for technology development has largely fallen on the EMS providers, who do not have the systems level knowledge that it takes to address problems or develop innovations outside of the strict manufacturing area. Furthermore, because of tight margins, they do not have the resources necessary for R&D on an industry wide system level. The R&D they can afford must be focused and high payoff, which means they require close cooperation and direction from their customers, the OEMs. This same situation now exists throughout the supply chain, including the equipment manufacturers, component and material suppliers, and independent designers. The industry is truly global, and the technology issues are global as well.

Industry Wide R&D Issues Are Greater Than Ever

Like it or not, environmentally conscious manufacturing is a very real part of our industry today. Because we are global, we must also deal with different regulations from different countries, and different rates of implementation. We all know that making a change anywhere in the manufacturing supply chain, from a basic material replacement to a different cleaning process; can cause significant differences in the reliability and/or performance of the final system level product. And yet, we are being faced with these changes constantly today because of government regulation and consumer pressure to preserve the environment. Understanding the effect of these changes, and making the best choice of replacements from a cost and performance standpoint, requires extensive technical evaluation, and often that technical evaluation extends throughout the entire supply chain.

Are You Competitive?

Some of the most successful companies in our industry today have discovered the economies of scale and leveraging that pre-competitive cooperation R&D offers. By joining together with their EMS providers, their EMS providers' suppliers, and yes, even their competitors; sharing scarce resources and expertise to address issues of common interest; they have resolved major problems in a fraction of the time and at a fraction of the cost it would take to do it alone.

Cooperative R&D is not the only tool that a modern company needs to be competitive. They must employ many different strategies and options in today's extremely competitive marketplace. But cooperative R&D can offer significant advantages in addressing supply chain wide, global technical issues that all electronics companies face today. It is a tool that can probably be found in the toolbox of your competitors.

Benefits of Membership

"HDPUG's strength over other organizations is that it brings together members from all stages of the electronics supply chain to solve problems."
 ~ Thilo Sack
 Celestica Corporate Technology

Strengths:

- * Membership includes system integrators, contract assemblers, and component and material suppliers.
- * The membership is focused on the computer and telecommunications industries, which share the same needs.
- * Our current members are leaders in these two industries and their supply chains.
- * The membership is international in scope with members in Europe, Asia and North America, which is required in today's global marketplace.
- * Good interaction with members who all have access to a password protected website with project information and databases.

General Benefits:

- * Risks of introducing new technologies are shared with others.
- * More than sharing costs, exposure to other members in the same industry brings more diverse technical support into play.
- * HDP projects have generally been broader in scope than any single member company would have taken on, resulting in more information gained.

Project Focus Areas

- * Lead-Free Reliability Characterization
- * Lead-Free Laminate Evaluations
- * Design for the Environment Initiatives
- * Halogen-Free

Become a Member

Membership is available to companies active in the electronic packaging field in any of the following areas:

- * System Integrator
- * Assembly House
- * Component Supplier
- * Packaging Supplier
- * Equipment Supplier
- * Material Supplier
- * Consortium
- * Consultant
- * Educator

Projects are conducted by volunteers from member companies, and active participation is vital to project success. In many cases project participation is the greatest benefit gained by HDP membership.

Membership fees are determined by the degree of desired company involvement and a company profile. For detailed membership fee information or for a membership application, visit www.hdpug.org or contact our offices.



"It is HDPUG's team approach to a common objective that benefits all companies involved without jeopardizing the proprietary element of the individual companies participating."
 ~ Michael Kluwin
 Juniper Networks



About HDP User Group

HDP User Group is a non profit organization based in Scottsdale, AZ, USA, that offers memberships to companies involved in the supply chain of specifying or producing products using high density electronic packages (High Density Packaging). HDP is an international industry led group that 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.

Our Mission is to reduce the costs and risks for the Telecommunications and Computer industries when utilizing electronic packaging. This is done by improving cooperation between system integrators, contract assembly manufacturers, and suppliers in the high density packaging development and design process, using member resources supplemented by a small staff.

Contact Us

International Headquarters
10229 North Scottsdale Road, Suite B
Scottsdale, AZ 85253-1437, USA
Email: info@hdpug.org
Phone: +1 480 951 1963

United States:
Marshall Andrews
Email: Marsh57@hdpug.org
Phone: +1 512 258 0332

Europe:
Ruben Bergman
Email: ruben.bergman@hdpug.se
Phone: +46 8 86 9868

Japan:
Kazuhiko Nakamura
Email: hdpug@nifty.com
Phone: +81 70 5543 9539



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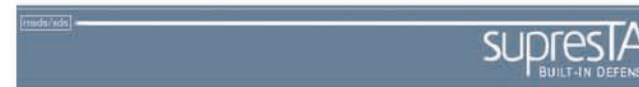
Agilent Technologies



National Semiconductor



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Are You Competitive?



INTERNATIONAL, INC®

Technology Development in Today's Global Environment

International Headquarters
10229 North Scottsdale Road, Suite B
Scottsdale, AZ 85253-1437, USA

Email: info@hdpug.org
Phone: +1 480 951 1963
Fax: +1 480 951 1107

www.hdpug.org