Next-generation products demand high performance features such as increased density and speed. As a result, connector manufacturers are constantly challenged to develop the “next best thing” to service this multitude of applications from consumer electronics to datacom to telecom to military and medical. Working with standards committees enables a broad cross-section of disciplines including integrators, OEMs, system architects and design, component, assembly and manufacturing engineers to join together to provide an industry-wide solution that supports these application requirements based on national and international standards.

The Proposal
A standards committee creates a statement of work defining the objectives of a new standard proposal. Upon approval, this statement is passed on to a technical group that addresses the connector related issues that apply to the standard, such as:

- Can an existing connector design be adapted to meet the new application?
- Does a totally new connector need to be designed?
- Will the connector perform as expected in the intended working environment?
- Is there industry-wide support for the proposed solution?
- Is this a connection that will exist inside the enclosure?
- Is an external connector required?
- What cable lengths are required to service the applications?
- Will the cable need shielding?
- Can the connector perform at double the speed?
- Will the connector provide scalability in terms of future system upgrades?

Generally, the first recommendation is to adapt existing connectors in order to keep development costs to a minimum and reduce the time required to qualify the interface to the new standard.

The Participants
When working with standards committees, there are different levels of participation:

- OEMs and systems designers are usually involved in the entire solution that the standard defines, and they offer a greater commitment of time and resources as does a component supplier.
- Connector companies are focused on the electrical and mechanical parameters required for the interconnect solution to successfully transport the data in a manner that meets the requirements defined by the technical group.

The Process
Standards committees can conduct business in a variety of ways:

- Face-to-face meetings can be scheduled at predetermined intervals — monthly, bimonthly, quarterly or even annually. This method allows for informal discussions that can help to move the process forward.
- Regularly scheduled conference calls augmented by Web conferencing tools.
- A mix of conferencing technology and face-to-face meetings.
- Industry groups can sponsor “plugfests” where members can come together to test their products before releasing the standard under development. They also provide Web-based functions where related product releases and data sheets from member companies are posted. Although not officially part of the standard, they schedule their meetings at the same time and in the same location as the standards meeting to keep the lines of communication short and timely.

Benefits:

- Working in a technical group of industry peers, participants have exposure to other perspectives on “solving the problem.” Ideally, competitors become team members.
- Design engineers conduct numerous tests to ensure that the proposed solution actually performs to expectations. This enables potential problems to be solved early in the development process, thus saving costs for both the designers and potential end users.

Conclusion
Working with standards committees has proven to be beneficial to connector companies and to their customers because the basis for the solution that is the standard is tested before it goes to market. This ultimately results in a time and cost savings for design engineers and their customers. Furthermore, designing in compliance to standards provides opportunities for companies to develop broad-based solutions for both new and established markets.

Standards Committees Pave the Way for New Interconnect Solutions

By Jay Neer
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Molex has developed three versions of its iPass connector interface to meet the requirements of the SAS and SATA committees, as well as the PCI Express Work Group.

Molex is a global provider of connectivity solutions. Molex provides a wide range of products and services, including connector solutions, cable assemblies, and custom engineered products that are used in a variety of industries, including automotive, industrial, medical, and communications. Molex’s iPass connector interface is a high-performance interconnect solution designed for high-speed data transmission and signal integrity. The iPass connector is available in a variety of configurations to meet the specific needs of different applications, including server backplanes, storage systems, and networking equipment. The Molex iPass connector is designed to deliver high-speed data transfer rates, low insertion loss, and superior signal integrity, making it an ideal solution for high-performance data centers and server applications.

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