

From Push to Pull

Two years ago we reported in our newsletter that we were facing a very special situation as a pioneer with leading-edge technology. Back then we were forced to approach potential customers proactively to offer them our technology. Also the ecosystem of complementary technologies, such as connectors and transceivers were not yet developed. Thus, “Market and Technology Push” was our strategy.

Although, we are still pushing our technologies towards potential customers, the situation today has changed. More and more customers are approaching us based on our achievements. Obviously, the market has recognized the advantages of the electro-optical circuit boards and is “pulling the technology” more and more. We have successfully partnered with key connector and transceiver suppliers allowing us to demonstrate the whole ecosystem with new generations of their products.

An interesting example of this was the recent demonstration of

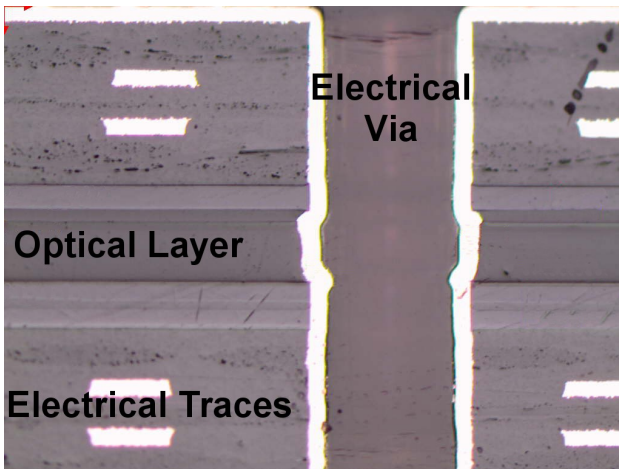
optical backplane technology at ECOC 2012 in Amsterdam. The demonstration was a “real-world example” and used vario-optics’ polymer waveguides to connect expansion cards in Xyratex’s prototype “OneStore” SAS storage system.



The system consists of a midplane-daughter card system. Finisar provided their high-speed optical engines which support 12 x 12 Gbit/s bidirectional bandwidth (12 x 28 Gbit/s are waiting in the wings). The communication is based on 2 x 12 polymer waveguides with a dimension of 50 µm. They are plugged together via Huber + Suhner's optical backplane connectors. The presentation triggered a high level of interest from those

attending.

The “Technology Pull” is leveraged by further technology developments on our side. A key part and very critical to realize is the electrical via through the optical layer. Early this summer, we were able to prove the feasibility of this approach in a joint effort with Varioprint AG. This feature allows more freedom in the design of electro-optical circuit boards. The vias withstand the common delamination and temperature tests.



In the case of a sensor project we proved out that customer splitters and combiners based on planar polymer waveguides provide better optical performance and cost-efficiency than fiber based systems. The design freedom of planar polymer waveguides allow

the realization of very effective optical components. The related photolithographic process enables manufacturing with very high reproducibility at very low-cost.



We would be very happy to discuss your challenges and needs with you. A good opportunity would be the **Electronica 2012 in Munich (13th – 16th of November)**. You are kindly invited to visit us at our booth:

Hall B1, Booth 634.

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