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Duo claim distortion tolerant DWDM transponder advance

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STOCKHOLM, Sweden — Optical susbsystem start-up CoreOptics has come out of stealth mode about the 10Gbit adaptive distortion tolerant DWDM transponder it has been developing in collaboration with lead customer Marconi Corporation.

Talking to EETimes at the European Conference on Optical Communications (ECOC) here, Christoph Schulien, vice president of marketing at the Nuremberg, Germany based company said the MSA 300 pin format module achieves its high tolerance against link impairments such as chromatic dispersion and polarization mode dispersion by using a maximum likelihood sequence estimator (MLSE) as a key building block.

"Most people in this field agree using electronics means such as MLSE algorithms is the most likely method to make optical transmission come out cleanly, but many have thought it is too difficult, maybe even impossible, to make it work. We have now demonstrated that this approach it is possible. We are now ready to sample the chips and modules to leading Tier 1 equipment manufacturers, and anticipate volume production early next year," said Schulien.

He adds the key feature of the product , the first such transponder of its type, is the MLSE based 'electronic equalization engine', that acts adaptively as part of the receiver to compensate for both optical and electrical distortions accumulated along the transmission link.

Using either hardware or software adaptations, the module can be configured for a variety of applications, including metro and regional DWDM systems, long haul and ultra long haul versions and Sonet/SDH based systems with DWDM.

Key benefits claimed for the module include cost effectiveness by obviating the need for conventional dispersion compensation modules and dual storage amplifiers.

Schulien says the transponder would enable transmission of 10Gbit/s services on deployed 2.5Gbit/s metro networks, improving operators' margins from their installed base.

While the 300 pin MSA form factor is fine for current applications, Schulien says the road map includes versions using the XFP type interface in the future, which he expects will win out in the long run for reconfigurable optical networks.