Library of Lab-proven DSP Algorithms for Coherent Optical Transmission Systems

VPIphotonics offers new pluggable toolkit to VPItransmissionMaker Optical Systems
with DSP algorithms developed by Fraunhofer Heinrich Hertz Institute

September 23, 2013, London
VPIphotonics teams up with the Photonic Networks and Systems department of Fraunhofer Heinrich Hertz Institute to provide lab-proven electronic Digital Signal Processing algorithms. This extensive DSP library is available as pluggable toolkit to *VPItransmissionMaker™ Optical Systems* version 9.1.

VPItransmissionMaker Optical Systems is the market-leading simulation platform for optical transmission systems. The recently released Version 9.1 offers several new simulation modules and modeling improvements to support arbitrary 4D and conventional 2D modulation formats, bit stream encoding and decoding using linear FEC codes, design of linear electric circuits and many more features and enhancements.

The new toolkit for coherent optical systems enables to perform a diversity of DSP functions, among them

- I/Q imbalance correction
- Blind chromatic dispersion estimation and compensation
- Clock recovery and deskew
- Carrier frequency and phase recovery
- Polarization demultiplexing
- PMD compensation

These algorithms support a wide range of modulation formats including dual-polarization BPSK, QPSK, and mQAM as well as polarization-switched QPSK. They are developed and tested in Fraunhofer HHI's lab environment for many different application scenarios.

Combined with the unique modeling features of *VPItransmissionMaker Optical Systems* the new toolkit enables users to design, compare and optimize high-speed transmission systems based on the digital–coherent technology under real-world conditions.

Live preview demonstrations will be shown at *ECOC 2013*, booth 318!

About VPIphotonics
VPIphotonics sets the industry standard for end-to-end Photonic Design Automation comprising design, analysis and optimization of components, systems and networks. We provide flexible simulation software and design services supporting requirements of active/passive integrated photonics and fiber optics applications, optical transmission system and network applications, as well as cost-optimized equipment configuration. Our award-winning solutions are used extensively in research and development, and by product design and marketing teams at hundreds of corporations worldwide. Over 140 academic institutions joined our University Program enabling students, educators and researchers an easy access to VPIphotonics' latest modeling and design innovations.

About Fraunhofer HHI
Fraunhofer Heinrich Hertz Institute (HHI) is a leading research institute for fixed and mobile telecommunication networks. Activities in photonic networks and components expand a spectrum from highly capacitive flexible long-haul networks to the broadband in-house network and their components as well as test and measurement equipment.

Contacts

VPIphotonics GmbH
Carnotstr. 6, 10587 Berlin, Germany
Phone: +49 30 398058 0
Email: info-DSP@VPIphotonics.com
Web: www.VPIphotonics.com

Fraunhofer Heinrich Hertz Institute
Einsteinufer 37, 10587 Berlin, Germany
Phone: +49 30 31002-414
Email: products-pn@hhi.fraunhofer.de
Web: www.hhi.fraunhofer.de/pn