Finisar INSTRUMENTATION NEWS
WINTER 2013

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▶ Keep up to date with Finisar technology discussions and news on our blog at: www.finisar.com/blogs/lightspeed

▶ Check for new software and Application Notes at: www.finisar.com/instruments

UPCOMING EVENTS

▶ Visit us at OFC/NFOEC, Anaheim, March 19 to 21, 2013, booth 2405

OFCNFOEC 2013
THE FUTURE OF OPTICAL COMMUNICATIONS IS HERE

▶ Visit us at the 13th Fiber Optics Expo (FOE) at Tokyo Big Sight, Japan, April 10 to 12, 2013

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INTRODUCTION

Welcome to the third edition of Finisar's Instrumentation News! This issue discusses Finisar's new WaveAnalyzer 1500S which provides a breakthrough in high-resolution optical spectral measurements. In addition we discuss Finisar's plans in the test&measurement domain for the upcoming OFC / NFOEC trade show.

WAVEANALYZER 1500S HIGH-RESOLUTION OPTICAL SPECTRUM ANALYZER

Figure 1: *WaveAnalyzer 1500S High-Resolution Optical Spectrum Analyzer*

We are excited to announce the release of the WaveAnalyzer 1500S High-Resolution Optical Spectrum Analyzer. The WaveAnalyzer 1500S provides a unique combination of ultra-high resolution and high-speed spectral analysis making it ideal for both production as well as research & development applications. This instrument utilizes coherent detection and offers sub-picometer wavelength resolution across the entire C-band of optical communication systems. For example, a full C-band scan with 20 MHz spectral resolution takes only 1/4 of a second whilst a detailed spectral analysis of a 100 GHz window can be obtained in under 20 ms.

A sample measurement, taken on a laser directly modulated with a 10.312 Gbps PRBS signal with a pattern length of $2^{31}-1$, is shown in Figure 2. The level of details shown is much higher than with measurements on a grating based OSA (which is shown in comparison).

This combination of fast measurement speed, together with the high sensitivity and low noise floor arising from the use of coherent detection, dramatically cuts test time thereby reducing overall production cost and enabling engineers and scientists in R&D to obtain more accurate results in a shorter time. The WaveAnalyzer 1500S also has the small footprint as the WaveShaper and low power consumption, simplifying its integration into lab and production test systems.

The WaveAnalyzer 1500S is controlled using a USB or Ethernet connection to a Windows based Computer which runs Finisar's WaveManager software package.
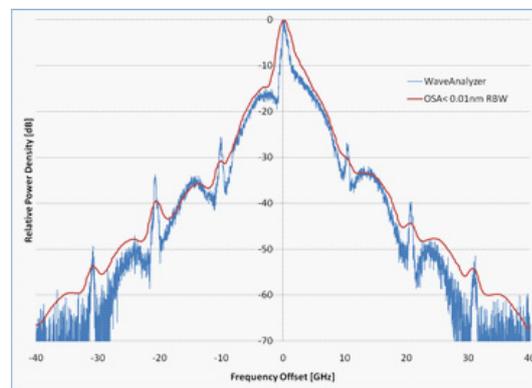

Figure 2: *sample measurement on a 10Gbps signal with a PRBS signal of length $2^{31}-1$*

Did you know...

...that the latest WaveShaper firmware allows the calibration file (*.wsconfig) to be stored in the WaveShaper?

All recently-shipped WaveShaper units contain this new firmware but in case you have an older WaveShaper "S" series or "M" series unit you can update the firmware and afterwards upload the calibration file – no more hunting for the WaveShaper CD containing the correct config file!

To upgrade the WaveShaper firmware, just download the document "WaveShaper–Firmware_upgrade.pdf" for further instructions. In case of any difficulties or uncertainties, feel free to contact our support team at waveshaper@finisar.com for more information.

OFC / NFOEC 2013

Finisar will exhibit on booth #2405 at OFC/NFOEC from March 19-21, 2013 at the Anaheim Convention Center following solutions from the Test & Measurement portfolio:

- ▶ The **WaveAnalyzer 1500S High-Resolution Optical Spectrum Analyzer** will be demonstrated for the first time and will showcase its ability to perform real-time, high-resolution measurements of complex modulated optical signals.

- ▶ The **WaveShaper 2000S Polarization Processor** will be displayed showing the creation of wavelength dependent Polarization Dependent Loss (PDL) and Differential Group Delay (DGD) traces. The ability of the WaveShaper 2000S to support polarization-independent functions including channel filtering, channel-drop or interleaving will also be demonstrated.

- ▶ The **WaveShaper 4000S Programmable Optical Processor** will be available for demonstration of the new **Fourier Processor** capability. Please contact Finisar at waveshaper@finisar.com in case attending this demonstration is of interest.

Finisar is also offering a free **WaveShaper Workshop** on "*Recent Advances in Programmable Optical Filtering*", on Monday, March 18. The following topics will be covered during the workshop:

- ▶ Update on new developments in the WaveShaper family

- ▶ "Optical FPGA": programming optical structures and functions in a WaveShaper using the new Fourier Processing capability.

- ▶ Polarization Dependent Loss (PDL) and Differential Group Delay (DGD) generation using the WaveShaper 2000S Polarization Processor

- ▶ WaveSketch – Finisar's new intuitive filter design software – makes it really simple to manually create arbitrary filter shapes just by click-and-drop using the mouse

- ▶ Hands-on training on WaveShaper capabilities

Further details of the workshop, including registration requirements, are available on www.finisar.com/instruments.

WaveShaper @ YouTube

The family of WaveShaper instruments is covered in various video sequences at YouTube. Simply go to www.youtube.com and enter the keywords "Finisar" and "WaveShaper" to receive a listing of the available videos.

India Sales Partner

Finisar welcomes MEL Systems and Services Ltd. (www.melss.com) as new test and measurement sales partner covering the entire country of India with a number of regional offices.

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