中国海洋大学
青岛市光学光电子重点实验室
Key Laboratory of Optics & Optoelectronics, Qingdao
2001

Spectra visualization for self-made spectrum acquisition and processing software

Performed by

Optical Spectroscopy Dept. Ocean University of China (LaoShan Campus), College of Information Science & engineering

Notes

This implementation has been done as part of SciChart "Free Educational license" for academic and non-profit projects.

Industry

Spectroscopy, Scientific

SCICHART
> High Performance Realtime Charts

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Background

The Laser Multispectral Diagnostic Analysis and Sensor Technology research group operating out of the Optics & Optoelectronics laboratory established in 1996 and has a focus on improving the spectral technology in the marine sphere.

Project Motivation and Goals

Actively promoting the development of marine exploration technology, the spectrum software project in conjunction with leading global photonics enterprises aims to enable more manufacturers to produce small portable spectrometers. The software is designed to support a wider range of USB Spectrometers.

The Requirements

- To handle high frequency visualization of processed spectra.
- To operate at 1000 – 2000 data points every 10 milliseconds
- Output in customizable XY axis series
- Handle simultaneous line charts and retain smooth UI
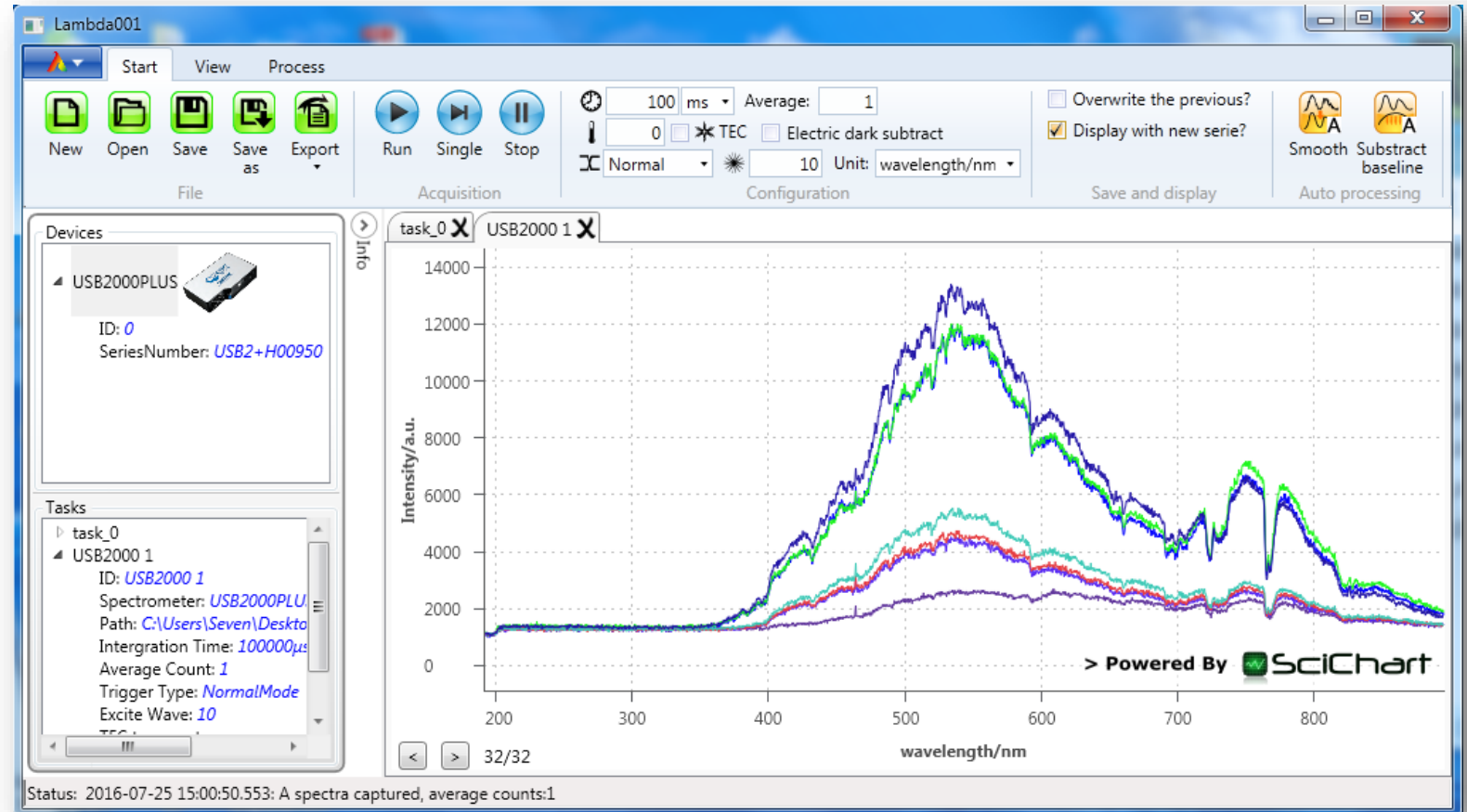
Software main interface

SCICHART
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Solution Provided

High Performance
SciChart was able to handle 2000 data points every 10 milliseconds as well as being visualized in multiple line chart series.

Charting Types
Multi-Series Line Charts were simple to integrate and handled the High-Frequency Data requirements with ease.

Chart Customization
The main functions of the view menu were to control the display range or the cursor of the Chart area. Positions of data values and process menu functions were overlaid for simple processing.

Chart Axis
Modified axis that were a necessity with multiple data sets and types were easily implemented.
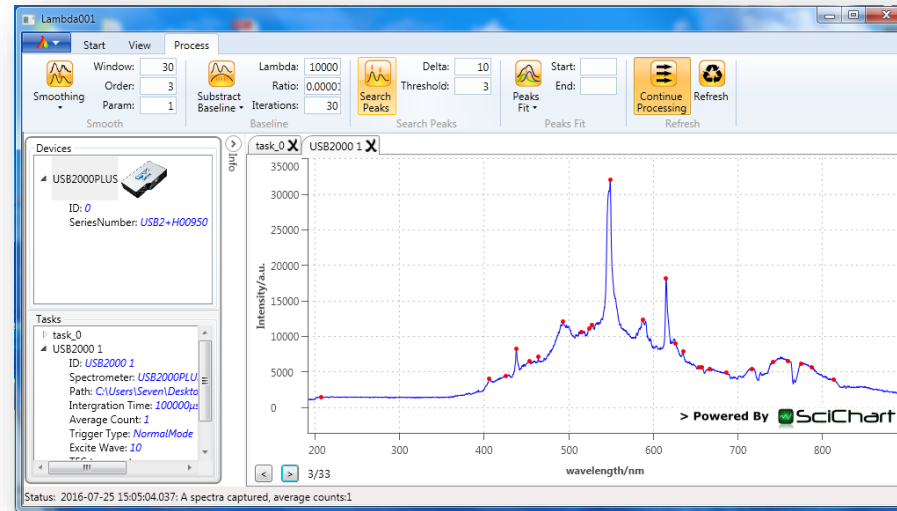
Software Spectrum Data Processing Function Screen

"
SciChart exceeded my expectations in every respect. I was able to achieve the goals of visualizing my data. It was very intuitive and easy to use. I would definitely recommend SciChart to others. "

**Wangquan Ye,
a PHD student majored in optical spectroscopy
from Ocean University**

Please read more:
http://it.ouc.edu.cn/sigma/group/ktz/show.asp?ktz=zre&classid=13&id=847

About SciChart

SciChart is a cross-platform WPF, iOS, Android and Xamarin Scientific & Financial Charting Library.

SciChart supports rendering of complex, interactive, real-time charts with many millions of data points for demanding scientific, medical and financial applications and embedded systems that require high performance, rich interaction and smooth updates.

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