The SESWrapper – The glue between the SES data acquisition software and external control programs.

SES Wrapper is a C function programming interface to the dll libraries of the SES software for remote control of a Scienta Omicron spectrometer when a high degree of system automation is requested.

In general, interfacing the SES libraries is easy, but for some environments the integration process is not straight forward. Some functions might not work out-of-the-box when it comes to exchange pointers and large data arrays with standard C libraries.

Therefore we have developed the SESWrapper easy-to-use programming interface that will enable our customers to integrate the SES software in LabVIEW (but also TANGO, EPICS and similar environments). This way of running a Scienta Omicron spectrometer implies that the SES.exe program is omitted for the benefit of an external control program.

SES Wrapper 2.7.3 is tested and released for:
32-bit and 64 bit Microsoft Windows 7
SES software 1.3.1
National Instruments LabVIEW 8.5

SES Wrapper 2.7.4 is tested and released for:
64 bit Microsoft Windows 10
SES software 1.8.0 and 1.9.0.
National Instruments LabVIEW 2018

The SESWrapper files can be found in a compressed zip archive on our FTP server:

ftp://ftp.scienta.se/SES/SESWrapper/

In the choice of developing an SESWrapper/LabVIEW application, it is essential to understand that the wrapper is a library of functions and not an executable application. It is the glue between LabVIEW and the SES libraries with a limited set of features.
The system control tasks (like data storage, file handling, manipulator control, graphical output etc) have to be done in LabVIEW. The SES software will just act as a slave for spectrum acquisition in this remote mode.

The wrapper documentation is found in the form of the HTML file seswrapper.chm in the zip archive.

The zip archive also includes LabVIEW example files providing functionality needed for basic spectrum acquisition. Each C function of the SES Wrapper interface is represented by a virtual instrument (VI) while other VIs contain functionality at higher abstraction levels. On top, the Sweep VI includes a graphical user interface (GUI) for spectrometer control.
This structured hierarchy makes it easy for users with programming skills to extend the GUI and develop new applications according to their specific needs but it is important to point out that the example files does not include data storage or other features outside the limits of the SESWrapper interface. They have to be designed in LabVIEW by the user.

Scienta Omicron AB

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