Online Display

**Monitor measurements in a separate window.**

1. Introduction

The Zahner Online Display is a separate stand alone software for viewing data of a running measurement conveniently. Therefore the Online Display takes over the data of the Thales window automatically either over a file interface or TCP/IP. Using the TCP/IP protocol measurements running on distant computers can be monitored over a network.
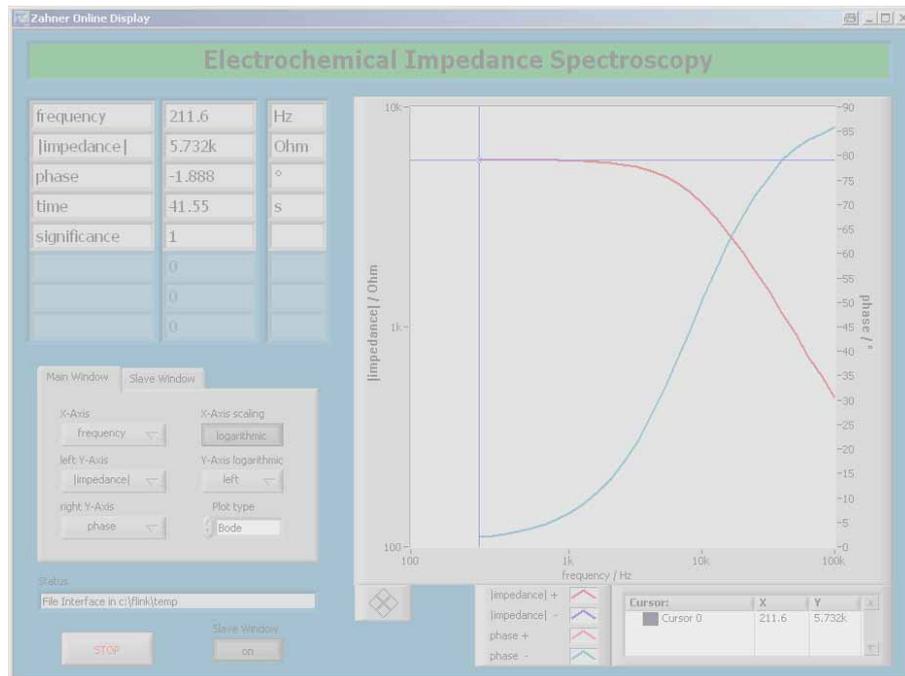
2. Installation and Removal

2.1 Installation Procedure

The Zahner Online Display is installed during Thales install. If you want to install it separately execute setup.exe in the folder OD of the installation CD and follow the steps depicted below.
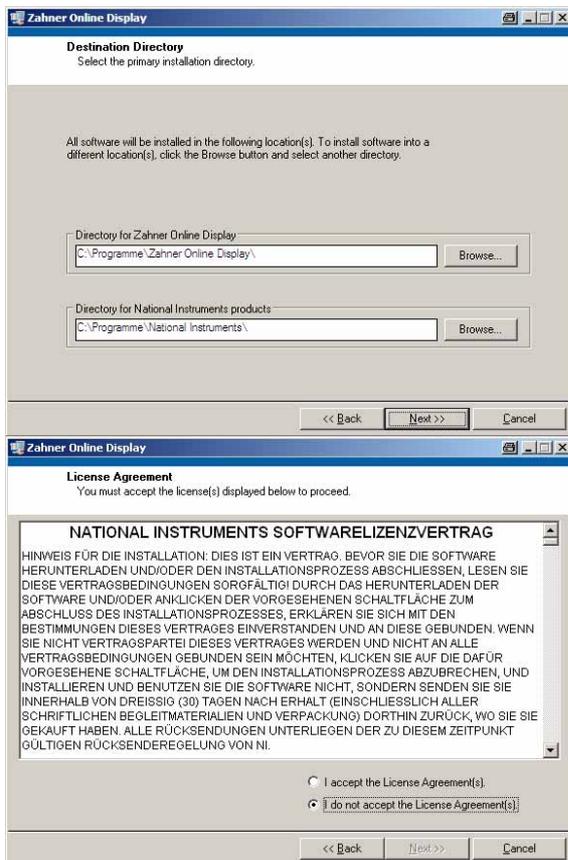
After initialisation of the installer the paths for installation of the Zahner Online Display and the National Instruments Run-Time Engine can be altered.
There are no changes necessary so accept the defaults with the Next>> button.

To proceed with the installation you have to accept the license agreement of the National Instruments Run-Time Engine.
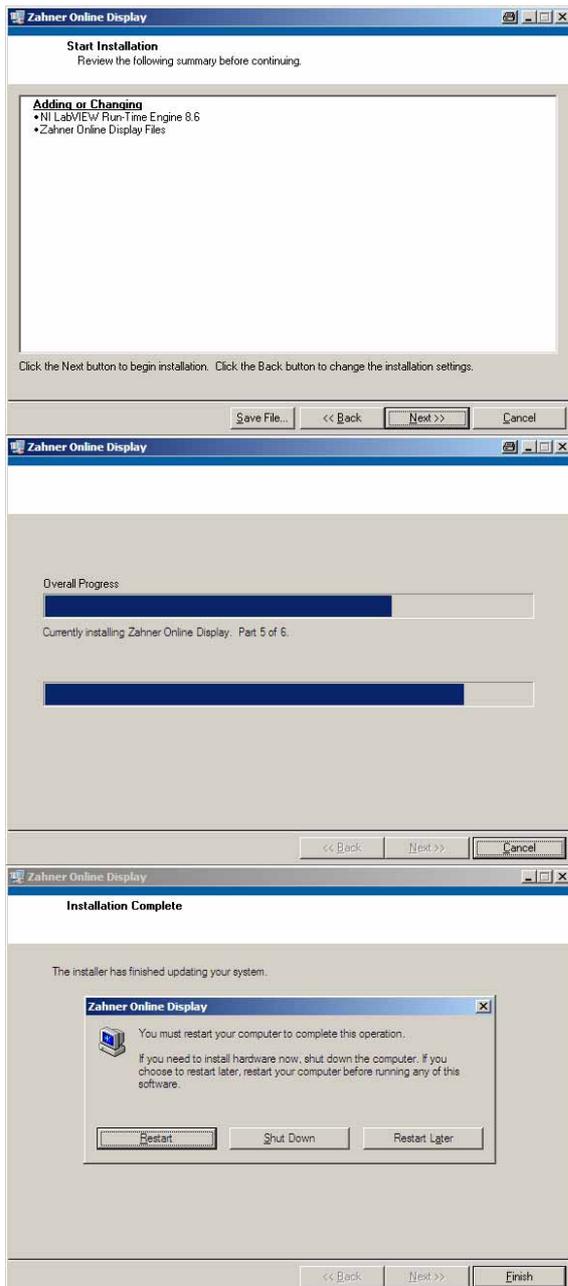
All components to be installed are listed before installation actually starts.

The setup program detects whether the NI LabVIEW Run-Time Engine is already present on the computer. If not, it is automatically added.

Now the software is installed on your computer. This may take a while.

If the NI LabVIEW Run-Time Engine was installed you are asked to reboot your computer at the end of the installation.

Otherwise simply quit the installation with the Finish button.

2.2 Removal

The Zahner Online Display can be removed from your computer by using the Software icon in the Windows control panel. Locate Zahner Online Display in the list of installed software and click on remove. The Online Display is now removed from your computer.

If you do not need the National Instruments LabVIEW Run-Time Engine anymore (e.g. for some other software) you can remove it, too. Locate the entry National Instruments-Software in the list of installed software and click on change/remove. If no other software needing the Run-Time Engine is detected you are asked to remove it automatically. Otherwise a dialog listing all installed National Instruments software will appear. Here you can remove the NI LabVIEW Run-Time Engine 8.6 manually.

3. Usage of the Online Display

After installation your start menu contains an entry Zahner Online Display for the convenient start of the software. Always start the Online Display before performing a measurement or testsampling so communication can be set up correctly.

During a measurement or testsampling the last data set of all available quantities is displayed numerically and also plotted in a graph, which can be freely configured at any time. The data is kept in memory until a new measurement is started.
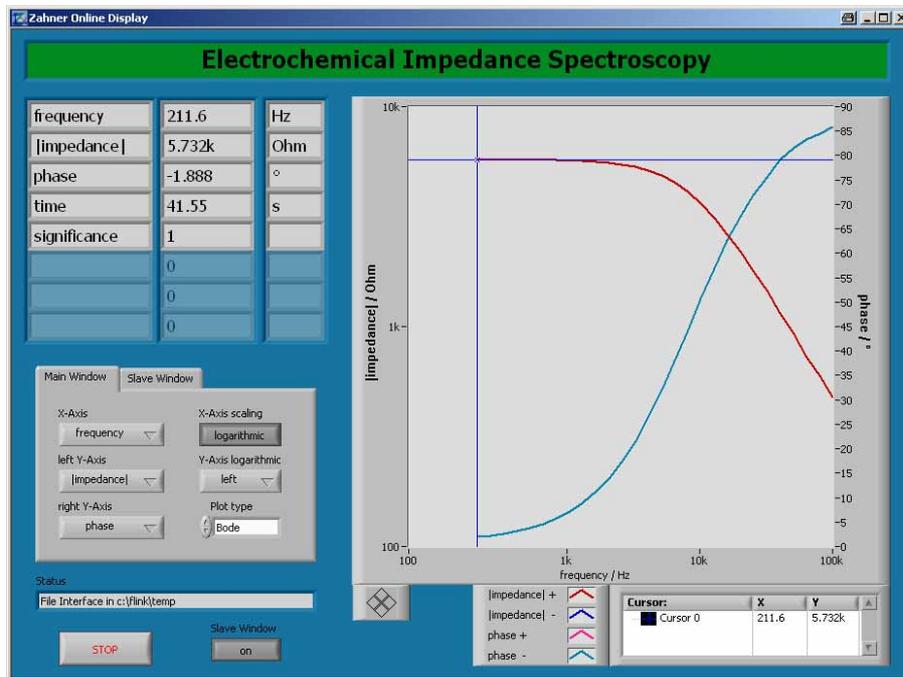
Axes

The axes of the graph can be chosen freely from all quantities measured. While displaying impedance measurements presets of the most common plot types (Bode, Nyquist -, Nyquist +) are available. These presets simply set the axes to the quantities required for the specific plot type. Of course these presets can be customized, e.g. a Bode plot with linear scaling of the frequency axis. The right y-axis can be disabled by choosing the entry inactive from the available quantities.

Cursor

During measurements the last data point is indicated by a blue crosshair referred to as cursor. After a measurement the cursor is set free and can be moved by dragging it with the mouse. It always snaps to the nearest data point which is displayed numerically in the small cursor window. By using the alternative (right) mouse button in the cursor window a context menu allows creation of additional cursors and their customization.

Legend

The legend allows identification of the curves by their color and/or line style. In logarithmic scaling the sign is coded by color. Red and pink lines denote positive sign, dark and light blue lines negative signs.

By clicking on the lines in the legend they can be customized in color, thickness and many other properties.

Slave Window

The button slave window enables or disables a second graph which can display additional quantities. It can be configured exactly like the main window using the second tab of the axes settings. This tab is only available during the slave window is displayed.

Log File

If enabled in Online Display.INI a log file is written of each measurement. The filename is built up from the date and time the measurement started in the format yyyy-MM-dd hh-mm-ss. Check the preset path in Online Display.INI to locate these files.

The log files are in ASCII format so they can easily imported into third party software. They begin with a header of five lines containing:

- File description, i.e. Zahner Online Display data file version: XX
- Numeric indicator of measurement type, e.g. Measurement type 0
- String describing the measurement type, e.g. Electrochemical Impedance Spectroscopy
- Measured quantities, e.g. frequency,impedance,phase,time,significance
- Units of measured quantities, e.g. Hz,Ohm,rad,s,

All following lines are filled with the actual data points in the order given in the file header. The values are in exponential representation with a dot as decimal separator separated by commas from each other.

4. Configuration: The INI-File

Configuration of the program is read from Online Display.INI, which is located in the same directory as the executable file. After installation Online Display.INI looks like this:

[Interface]
FileInterface=TRUE
MonitoredDirectory=/c/flink/temp
ServerIP=127.0.0.1
[Logging]
WriteLogFile=FALSE
LogFileDirectory=/c/thales/temp

[Interface]

FileInterface={TRUE, FALSE}

Chooses the method of data exchange between the Thales window and the Online Display.
TRUE Data is exchanged over an file located on the computer's hard disk. This is only possible if Online Display and Thales are running on the same computer.
FALSE Data is exchanged over TCP/IP.

MonitoredDirectory=Path

Sets the path of the exchange file used in file interface mode. Thales creates a file with the extension is_x in this folder in order to send data to the Online Display. Therefore this setting should not be changed. Mind the format with slashes instead of colons and backslashes. So c:\flink\temp is written as /c/flink/temp.

ServerIP=IP Address

Sets the IP address of the computer running Thales. The wildcard 127.0.0.1 is resolved to the IP of the local PC.
Ensure to enter 127.0.0.1 when using the file interface mode.

[Logging]

WriteLogFile={TRUE, FALSE}

When set to TRUE Online Display writes log files containing all information received from Thales for each measurement.

LogFileDirectory=Path

Sets the directory where log files are written when WriteLogFile set to TRUE. The filename is added automatically.Mind the format of the path with slashes instead of colons and backslashes. So c:\thales\temp is written as /c/thales/temp. This folder can be changed to user's convenience.