

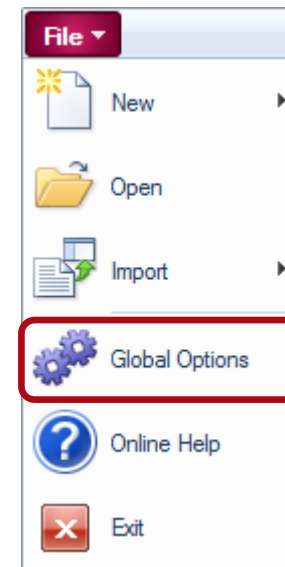
UseCase.0001 (1.1)

Setting Global Options in VirtualLab

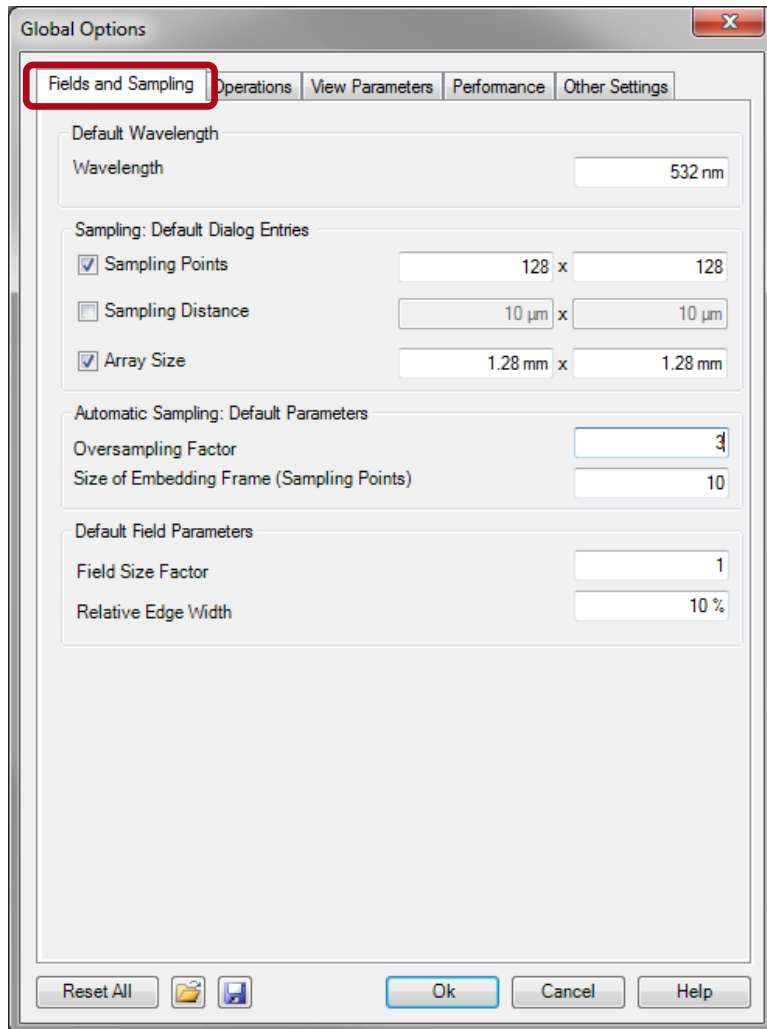
Keywords: global options, settings

Description

- This use case describes the basics about the global options dialog of VirtualLab.
- Global options are used for different aspects of VirtualLab, for example view or performance settings.
- The general structure of the edit dialog of the global options is explained.
- The global options dialog can be opened by clicking on the Global Options item in the **File** menu:

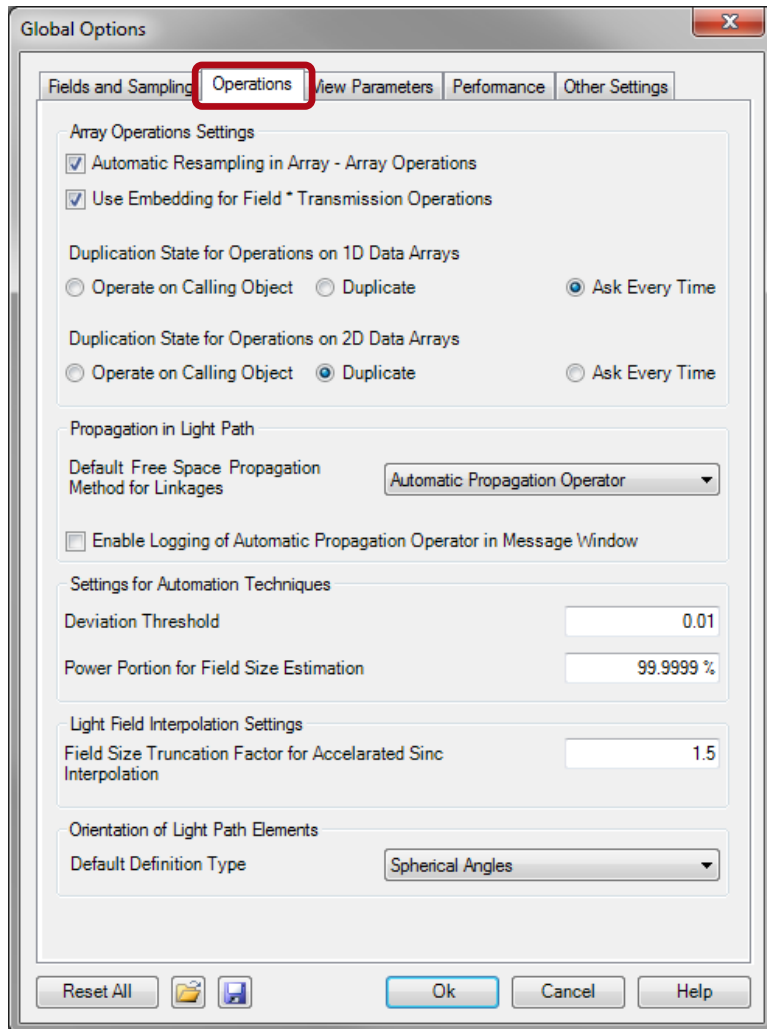


Global Options – Field and Sampling



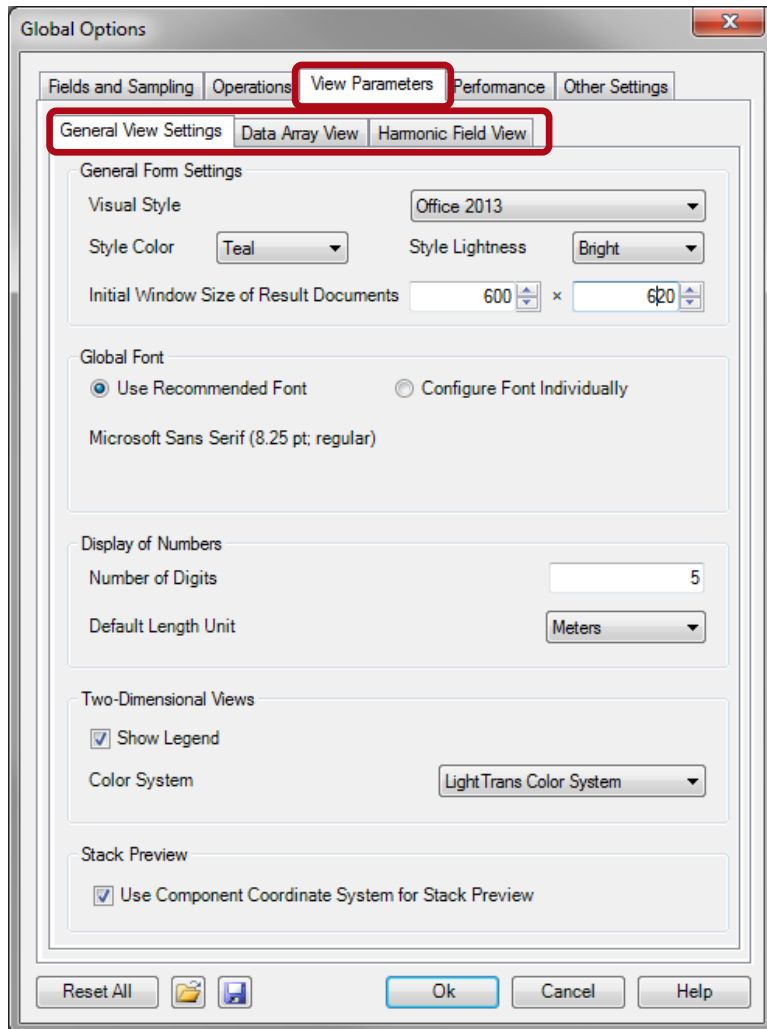
- The user can enter several defaults for the generation of fields on the **Fields and Sampling** tab.
- For example:
 - default Wavelength
 - global Oversampling Factor
 - global Field Size Factor
- These defaults are used during the simulation of the optical setup.

Global Options – Operations



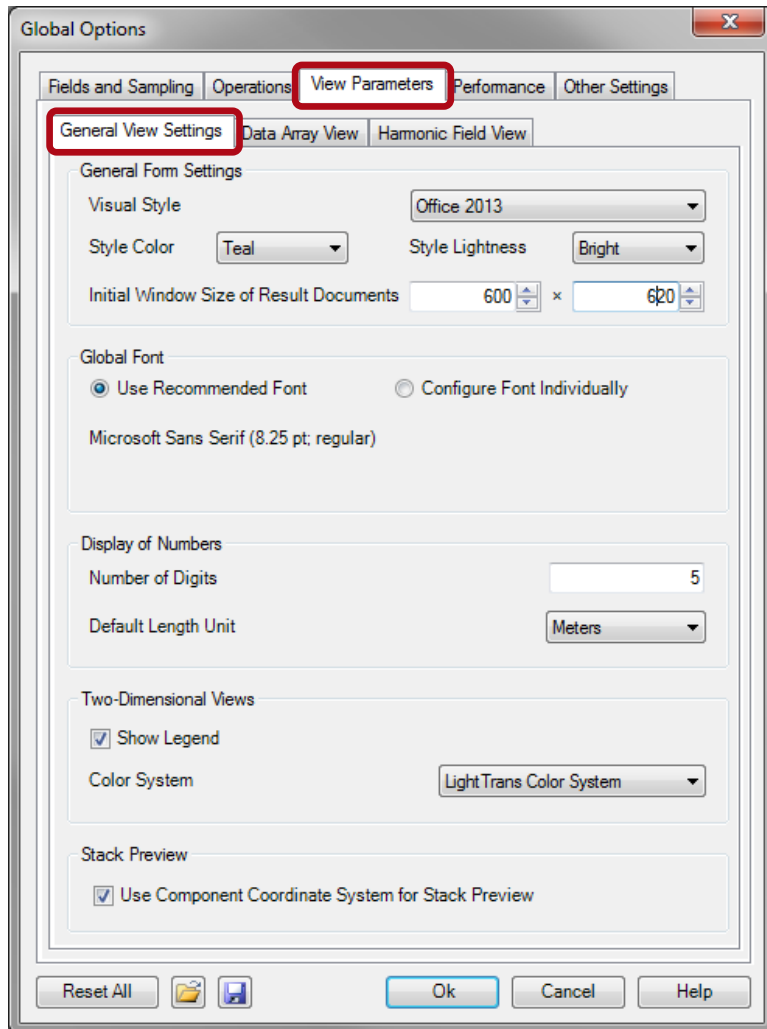
- The tab **Operations** can be used to specify the default behavior for different actions within VirtualLab.
- The user can select the default free space operator that shall be used within the system, or the defaults for the automatic propagation operator and many more.

Global Options – View Parameters



- The user can also specify view parameters.
- The defaults for view parameters are separated into 3 groups:
 - General View Parameters
 - Data Array View Parameters
 - Harmonic Field View Parameters

Global Options – View Parameters

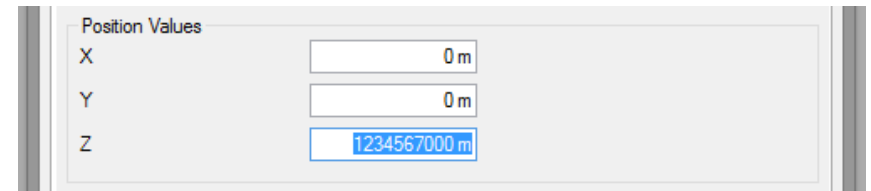
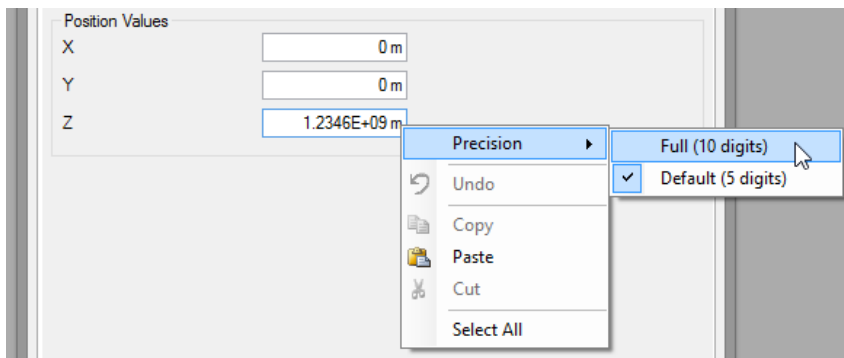


- The visualization of the VirtualLab user interface can be completely customized.
- This is done by the settings in the **General View Settings** tab.
- The user can enter the
 - Visual Style
 - Default Initial Window Size
 - Font to be used
 - Number of Digits

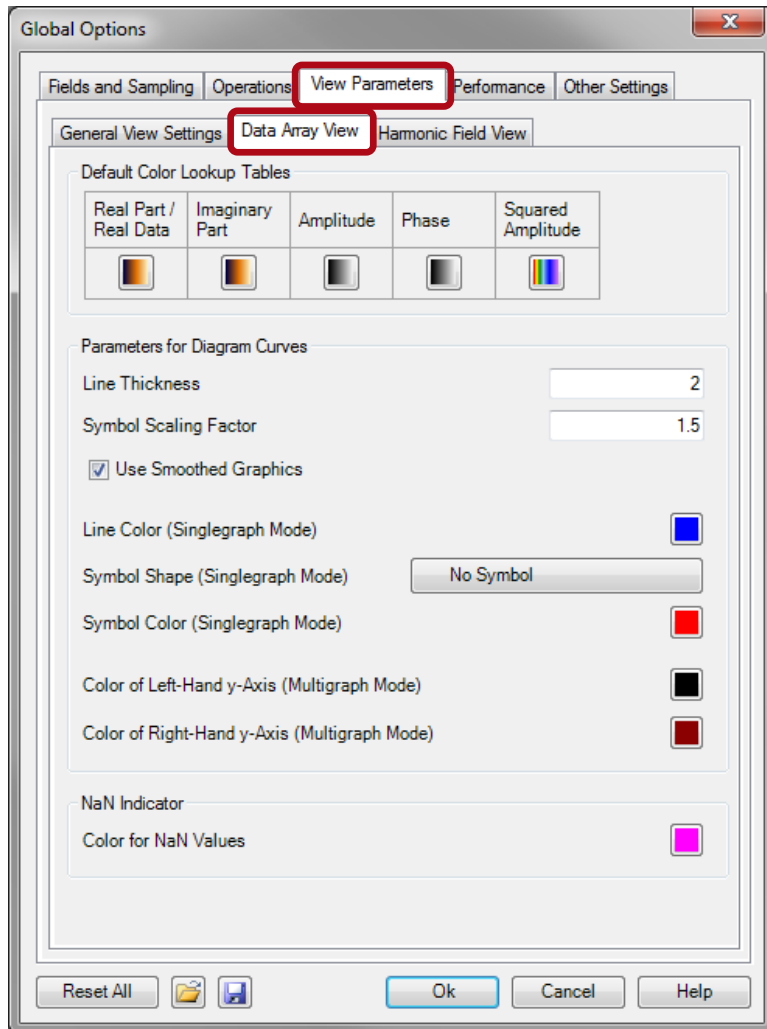
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Displayed Number of Digits

- The set value for „Number of Digits“ defines how many digits are shown for numbers by default.
- Most single number displays can be changed via context menu (right mouse click) so that 10 digits are shown instead of this default number in any case.

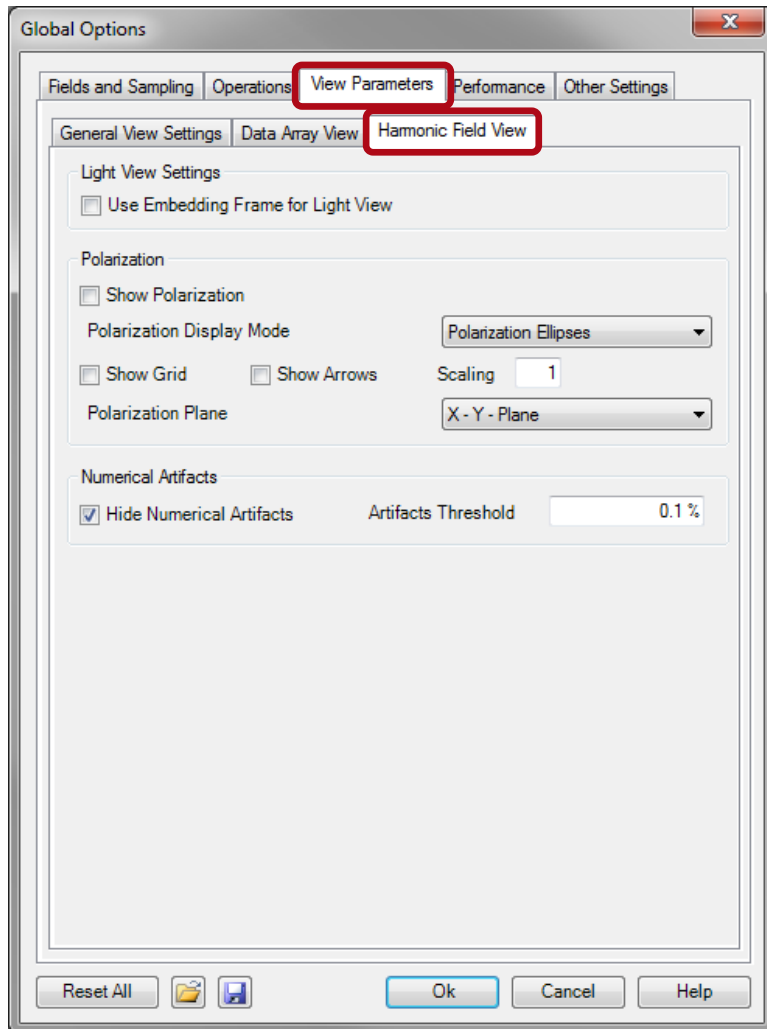


Global Options – View Parameters



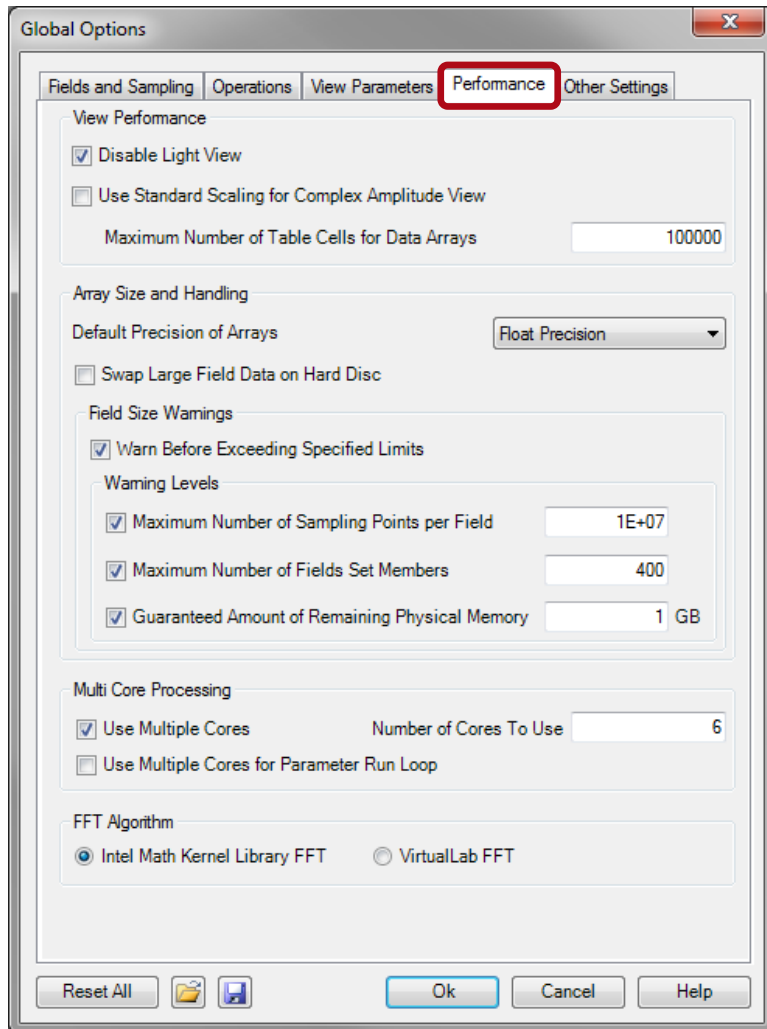
- On the **Data Array View** tab the user can specify the defaults for the visualization of Data Arrays.
- The user can configure which color lookup tables shall be used by default.
- In addition, for 1D data arrays, the line parameters (colors, thickness, symbols) can be specified.

Global Options – View Parameters



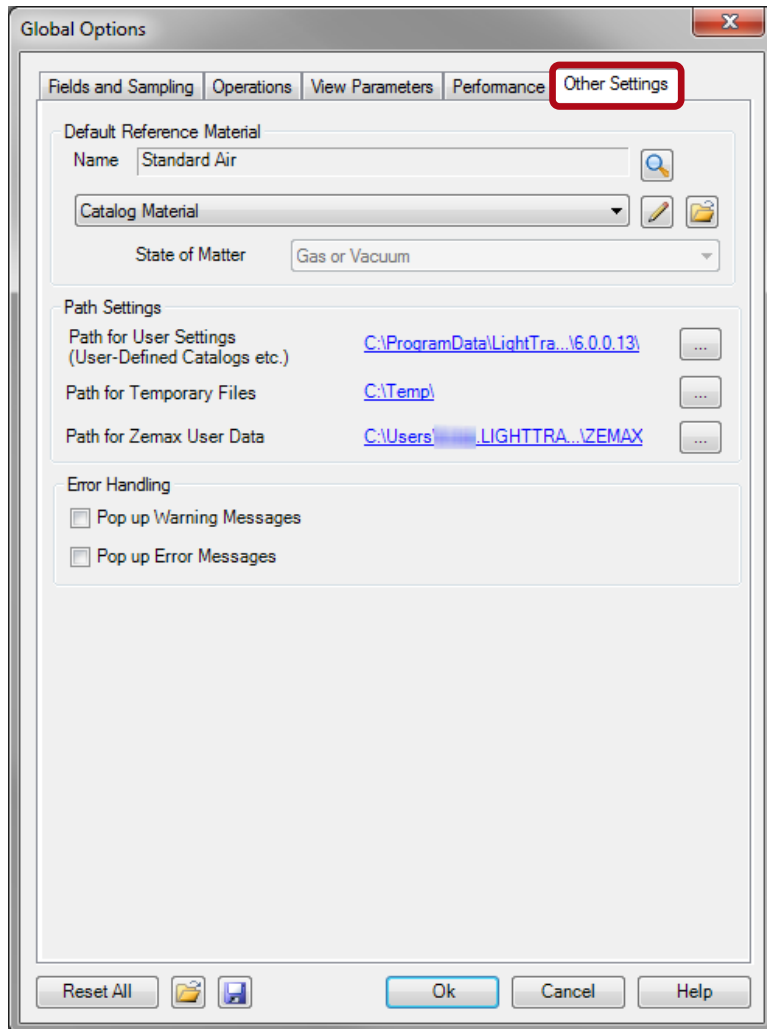
- The view of harmonic fields can be preconfigured by the settings available on the **Harmonic Field View** tab.
- The user can select whether and how initially polarization information (ellipses) shall be shown.
- In addition he can define whether numerical artifacts shall be hidden.

Global Options – Performance



- Performance settings can be specified on the **Performance** tab.
- The user can specify
 - to disable the light view
 - the precision for arrays
 - whether to swap large data on hard disc
 - options for parallelization
 - FFT algorithm to use

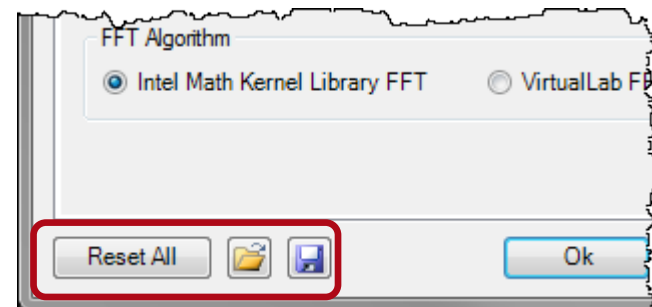
Global Options – Other Settings



- On the tab page **Other Settings** the user can enter miscellaneous settings.
- For example it is possible to specify the path to the
 - temporary files
 - Zemax user data (used for Zemax import)

Load and Save of Global Options

- Because of different global default settings it can happen that simulation results differ from PC to PC.
- In order to avoid this problem, the user can save and load configured global options of VirtualLab.
- This allows that users to work on any PC with used defaults.
- It is still possible that results differ from PC to PC, but then it is not due to different VirtualLab settings, but due to different hardware. This cannot be helped by VirtualLab ;-)
- In addition an easy way to reset the settings to the standard configuration is available on the bottom of the edit dialog.



Summary

- The edit dialog of the global options allow to specify several defaults within VirtualLab.
- The defaults can be configured for views, performance settings and operations.
- It is possible to load and save the global settings. This allow an easy transfer of the settings onto another computer.