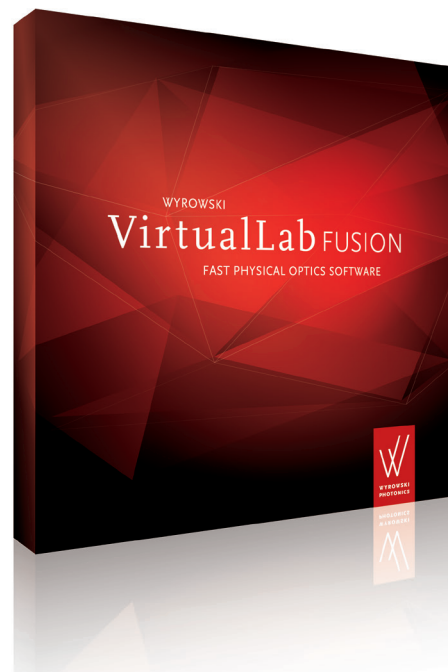
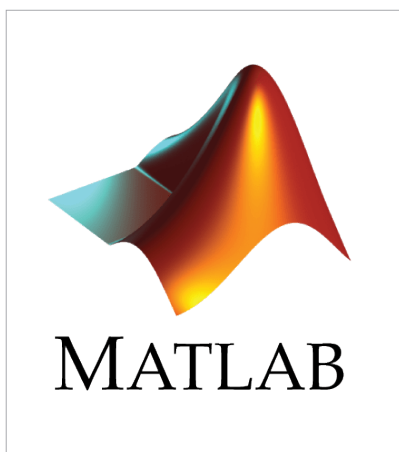


Cross-Platform Simulation with VirtualLab Fusion

Nowadays the consideration in optical design must often go beyond optics itself and include multi-disciplinary principles. As a result, a single software package often cannot provide all the needed functionalities in all fields of interest. As a solution, VirtualLab Fusion can run in batch mode and thus enable cross-platform simulations when used alongside other software tools.

Benefits in VirtualLab Fusion

- **Plenty of in-built electromagnetic field solvers** that handles various modeling situations
- **Unified field representation** allowing easy communication with external electromagnetic field solvers
- **Standard batch mode** that can be supported by most other software platforms



Batch-Mode

- VirtualLab Fusion can be executed via the standard batch mode. This facilitates the control of VirtualLab Fusion simulation via external software.
- The system parameters and results are stored in xml format, which can be read and modified by other software.
- All in-built electromagnetic field solvers in VirtualLab Fusion can be accessed externally and used together with other tools.

VirtualLab Fusion + Python

- With a standard Python script (prepared by LightTrans), the communication between VirtualLab Fusion and Python can be conveniently built up.
- Modeling results can be directly accessed with Python so that the analysis tools in Python can be applied.
- Customized optimization tools in Python can be applied together with VirtualLab Fusion field solvers.

VirtualLab Fusion + MATLAB

- A standard MATLAB script (prepared by LightTrans) can be used to trigger the communication between MATLAB and VirtualLab Fusion.
- Various field solvers in VirtualLab Fusion can be accessed from MATLAB, and possible analysis/optimization algorithms in MATLAB can be used together with VirtualLab solvers as well.

VirtualLab Fusion + ... (more)

- The cross-platform simulation capabilities of VirtualLab Fusion can be extended to many more software packages, because of the flexibility offered by the batch mode.
- Possible extensions with Wolfram Mathematica, Octave, and so on are under development and will be available later in 2019.

