



VisualDOC

LIST OF NEW FEATURES

VERSION 9.0

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VisualDOC 9.0

VisualDOC 9.0 includes several major and minor changes aimed at improving the user-interface and performance as compared to version 8.0. The highlights of this release are "What-If?" Study Tool, Component Data Generator and a new TAItherm plugin component which communicates with TAItherm software directly. The new TAItherm Plugin component automatically extracts, modifies, and reads data from the model, enabling the user to easily set up a TAItherm model in VisualDOC. Additionally, VisualDOC 9.0 help menu provides direct access to training documents and VisualDOC online tutorials. The following is the list of additions and enhancements in this release of VisualDOC.

"What-If?" Study Tool

"What-If?" Study Tool is a post-processing tool which is included in VisualDOC 9.0. This tool can be used to post-process the results of Direct Optimization and Response Surface Optimization design modules. The "What-If?" Study Tool can be launched from post processing tool palette under post processing tab as shown in [Figure 1](#).

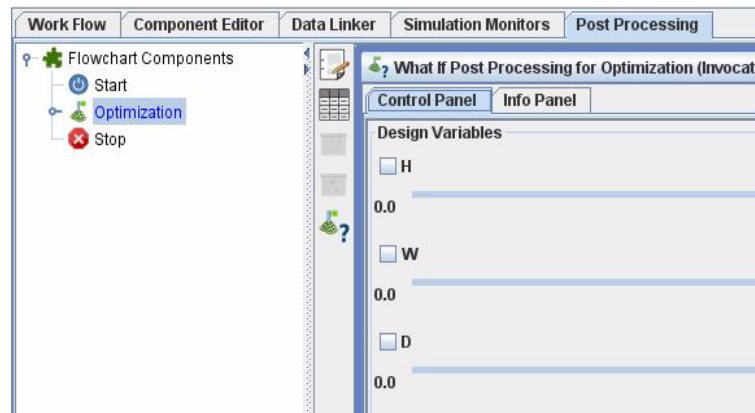


Figure 1 "What-If?" Study Tool in post processing tool palette

The "What-If?" Study Tool" can be used when the user wants to make small changes to an optimization problem definition and study the influence of changes on the optimum results. The "What-If?" Study Tool interface is as shown in [Figure 2](#).

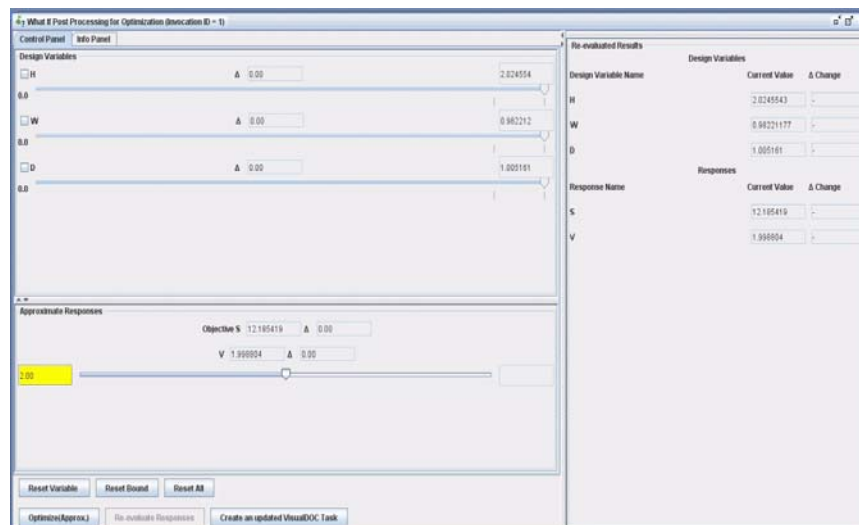


Figure 2 "What-If?" Study Tool Interface

TAItherm Plugin Component

VisualDOC 9.0 and all future releases are now equipped with plugin technology. With plugins, the user can easily add or remove any node from VisualDOC without having to reinstall or uninstall the entire software package.

TAItherm interface is the first plugin released with 9.0. TAItherm, a registered trademark of ThermoAnalytics Inc., is a complete and flexible thermal modeling software for solving thermal conduction, convection, and radiation of complex problems under steady-state and transient conditions.

This node enables TAItherm users to effortlessly set up an optimization or a DOE run of a TAItherm model in VisualDOC. The node combines functionalities of file I/O and executable components to automatically extract, modify, and read input and output parameters from a TAItherm model. The node can be set up to run locally, on a remote machine, or in parallel where each individual node could be local, remote, or even a combination of both.

Component Data Generator

Component Data Generator panel shown in [Figure 3](#) is a tool that allows the user to edit or modify parameters for design variables and responses prior to a run. This panel works with all inner and outer components that allow data addition or data modification.

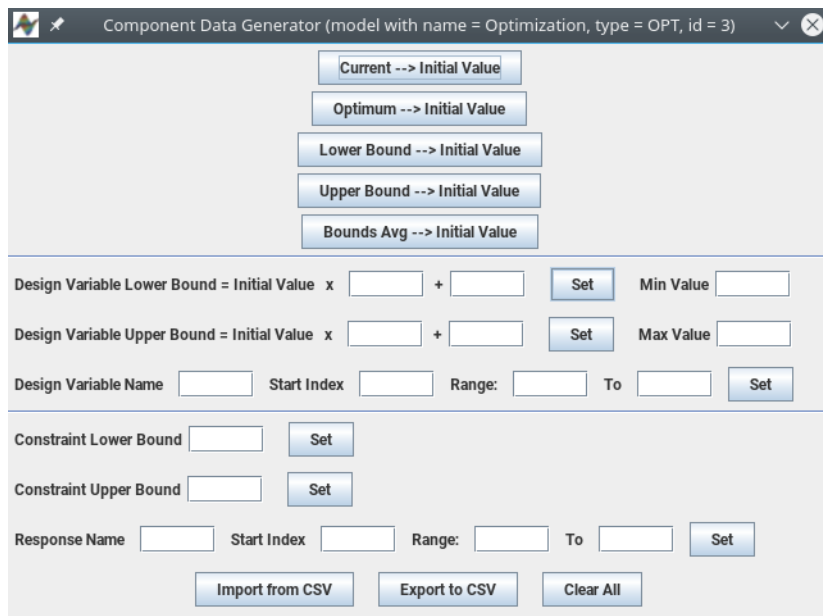


Figure 3 Component Data Generator

Help Menu

Help menu provides direct access to User Manual, Theory Manual, Getting Started Examples Manual and Advanced Examples Manual. Additionally, Tutorials option will direct you to our VisualDOC Tutorials YouTube Channel.

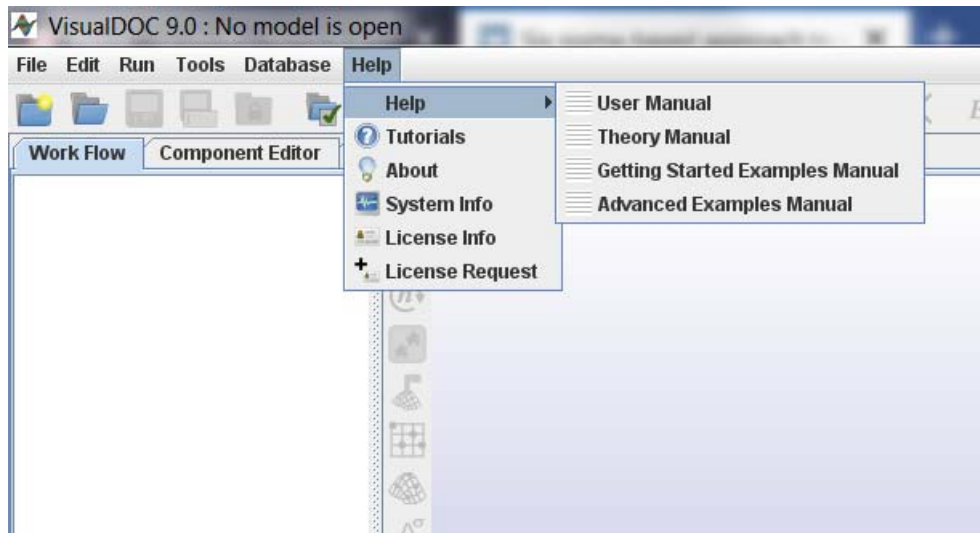





Figure 4 VisualDOC Help Menu

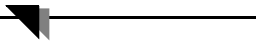
Other Additional Features

1.  **Close all frames Button:**
Clicking this button removes all the windows opened by the user under view monitors tab and post processing tab.
2.  **Update all monitors Button:**
Clicking this button updates the information shown by all the monitors.
3.  **Export Summary Report Button:**
Clicking this button allows the user to export summary report as text file and save it desired location.
4. **Open Model Button:**
Open Model Button is used to open external analysis (ANSYS, TAITHERM, MS Excel, Matlab) program through VisualDOC interface.
5. **Shortcut keys** are available for all operations in VisualDOC (New Project, Open Project, Undo, Redo, Copy, Paste, Save, Exit etc.)

New Examples and Documentation

Three new examples using the new and advanced features of VisualDOC have been added with this release. These are as follows.

6. **Equation:** This example demonstrates how to use "What-If?" Study Tool With Direct Optimization component.

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7. **beam_doe_RSA using DOE:** This new task, added to the Beam example, demonstrates how to use "What-If?" Study Tool with Response Surface Optimization Component.
 8. **ExhaustFrame:** This example demonstrates how to set up an optimization of a TAITherm model.

All the accompanying manuals have been updated for this new release.