Update Guide
Release 2018.5

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INTRODUCTION

This document serves as a guide for the new features and changes in TracePro 2018.5. The enhancements in TracePro 2018.5 are: three new features for the 3D Interactive Optimizer, two new features for the Solar Emulator, and new scheme commands. This release also fixes several problems reported by TracePro users. See the TracePro Revision History at www.lambdares.com for more details on problem resolutions.

WHAT'S NEW IN TRACEPRO 2018.5?

Changes in TracePro 2018.5 compared to 2018.4 are summarized as follows:

- 3D Interactive Optimizer: use a scheme command as an operand; new surface type: freeform slice; and automatic backup of io2 file.
- Solar emulator: Add capability to create a solar source using elevation and azimuth; and import list of names from the TracePro model.
- New scheme commands.

3D INTERACTIVE OPTIMIZER

The 3D Interactive Optimizer now allows you to define a scheme command as an optimization operand. The command can be an after-scheme command, or a regular scheme command found in the Macro Reference. To do this, simply insert a new operand in the *Operand list* and choose *Type:* scheme. Then click the *Target value* cell to open the *3D Interactive Optimizer Scheme Editor*. The commands entered in the *Scheme Editor* become the operand. See the 3D Optimizer Help for more details.

A new surface type is available: freeform slice. This surface type is created from one base loop and one or more sectional profiles. The profiles types are available: x profile and cut profile. The x profile defines a planar section perpendicular to the x axis and the cut profile is a tilted planar section with respect to the x-y plane.

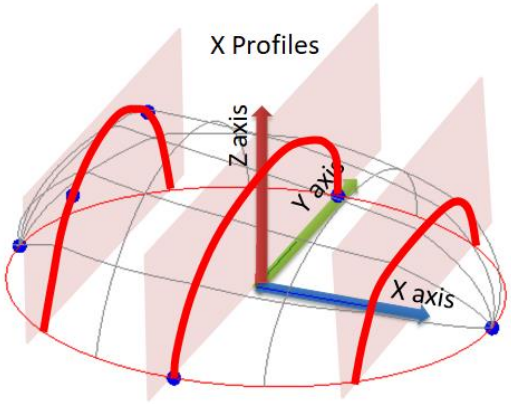

Figure 1. Freeform slice surface made using x profiles.

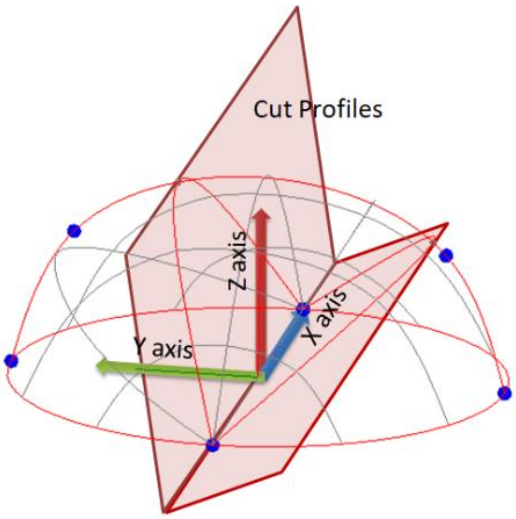

Figure 2. Freeform slice surface made using cut profiles.

The base loop lies on a plane, and the vertex where all sectional profiles join is along a line thru the origin. This restricts the freeform surface-slice to exist only above the x-y plane. To add control points or a new x profile, right-click on the base loop to open a pop-up menu. Please note that the Symmetry option in the base loop forces the control points to be inserted symmetrically (Quadrant, X Even, Y Even) or independently (None).

The Symmetry Option in the X Profiles and Cut profiles determines whether the control points are inserted as a pair or not.

A new feature: automatic backup of the io2 file during optimization. This feature is enabled by default, and is controlled in the **File|Options** dialog box, *General* tab.

SOLAR EMULATOR

The Solar Emulator can now create a solar source using elevation and azimuth angles. To use this feature, first define the solar source using the Sources tab. When you are ready to create the source, click *Export Sun model* and select *As Direct Input*. You will be prompted to first enter the elevation angle in degrees and click OK. Next you will be prompted to enter the azimuth angle and click OK again.

NEW SCHEME COMMANDS

Five new scheme commands are now available:

- (analysis:path-sort-set-percent-rays …)
- (view:set-bg-up-color …)
- (view:bg-up-color)
- (view:set-bg-down-color …)
- (view:bg-down-color)

The command (analysis:path-sort-set-percent-rays …) allows you to set the percent of rays displayed when using **Analysis|Display Selected Paths** for a given Path Sort Table (**Analysis|Path Sort Table**).

The view commands allow you to set and retrieve the “up” and “down” background colors in the Model Window. These commands correspond to the Model Window Background Color settings in **View|Options|Color**.