COPYRIGHT AND TRADEMARK ACKNOWLEDGMENTS

COPYRIGHT

The TracePro software and all documentation are Copyright © 2013 by Lambda Research Corporation. All rights reserved.

This software may only be used by one user per license obtained from Lambda Research Corporation.

This document contains proprietary information. This information may not be copied in whole or in part, or reproduced by any means, or transmitted in any form without the prior written consent of Lambda Research Corporation.

TRADEMARKS

TracePro® and OSLO® are registered trademarks of Lambda Research Corporation.

TracePro Bridge™ is a trademark of Lambda Research Corporation.

ACIS® is a registered trademark of Spatial Corporation.

Adobe and Acrobat are trademarks of Adobe Systems Incorporated.

SolidWorks® is a registered trademark of SolidWorks Corporation.

Windows® and Microsoft® are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

All other names and products are trademarks of their respective owners.
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>What's New in TracePro 7.4?</td>
<td>1</td>
</tr>
<tr>
<td>Photorealistic Rendering</td>
<td>1</td>
</tr>
<tr>
<td>RepTile using Surface Bounds as Boundaries</td>
<td>2</td>
</tr>
<tr>
<td>Removal of CATIA V4 and V5 import</td>
<td>2</td>
</tr>
</tbody>
</table>
INTRODUCTION

TracePro 7.4 is a minor release and includes significant enhancements. This document serves as a guide for you to transition from TracePro 7.3 to 7.4. The major enhancements in TracePro 7.4 are a major new feature, Photorealistic Rendering, and a new option for RepTile boundaries.

WHAT’S NEW IN TRACEPRO 7.4?

Changes in TracePro 7.4 compared to 7.3 are summarized as follows:

- Photorealistic Rendering feature. This allows you to make a realistic-looking picture of your TracePro model using the properties you have applied.
- New option for RepTile boundary shape when applying a RepTile property. You can now use the other surfaces of the object as boundaries for the RepTile cell.
- Removal of the CATIA V4 and V5 import features.

PHOTOREALISTIC RENDERING

The Photorealistic Rendering feature provides visualization of your model with TracePro properties applied. The rendering is a compromise of speed versus accuracy. It is not as accurate as results obtained using the Luminance Map feature with True Color option, but it is much faster.

To use make a Photorealistic Rendering follow these steps:

1. Manipulate the model view using the controls on the View menu to one you wish to render. TracePro uses the data from the View|Set View dialog box to set the rendering view.
   a. Choose a small model window for faster rendering, as the rendering time is proportional to the number of pixels in the model window.
   b. You may want to save the view using View|Named Views so that you can easily reproduce it later.
   c. It is may be helpful to switch to Perspective View using View|Set View, because the Photorealistic Rendering view is also a perspective view.
   d. If the objects that you are rendering are not near the global origin, check the Eye Point and Target Point in the View|Set View dialog box to be sure that they are sensible. The model view will display geometry that is behind the eye point, while the Photorealistic Rendering will not. Enter appropriate values and readjust the view as necessary.

2. Select View|Photorealistic Rendering>Setup. Here you can select whether you want ambient illumination, and the direction from which the ambient illumination arrives. You can select an ambient luminance corresponding to Outdoor, Office, or Custom. The Custom selection allows you to enter a luminance value. The ambient luminance is a hemispherical source of infinitely distant illumination.

3. Select View|Photorealistic Rendering to begin the rendering process. An optional forward raytrace (TracePro determines whether this is beneficial) followed by one or more rendering
passes. The rendered image will be updated after each rendering pass, to give a preview of the image. If it is unsatisfactory, you can stop it, change your view or settings, and restart.

4. After the rendering is finished, you can adjust the brightness and contrast using View|Photorealistic Rendering>Options. This dialog box is also available by right-clicking on the rendered image.

5. You can save the image as a bmp file by choosing File|Save As while focus is on the rendering window, or by right-clicking on the rendering and choosing Save As.

Limitations of Photorealistic Rendering in TracePro are as follows:

1. **Dispersion** is not modeled. This means that, for example, separation of colors by a prism or grating is not modeled. Effective index of refraction of transparent materials is computed as the average index across the visible spectrum, weighted by the photopic efficacy. Diffraction, if specified, is computed at a wavelength 0.55 µm for all colors.

2. **Polarization** is not modeled. If you begin a rendering with polarization on (according to the setting in Raytrace|Raytrace Options, Options tab) TracePro will change the polarization setting to unchecked before beginning the rendering.

3. **Fluorescence** is not modeled.

4. **Coating DLL** surface properties are not modeled.

5. **Coating Stack** surface properties are not modeled.

6. **Bulk Scatter DLL** properties are not modeled.

7. **Grid Sources** are not modeled.

---

**REPTILE USING SURFACE BOUNDS AS BOUNDARIES**

This new option for the RepTile cell boundary uses the other surfaces of the parent object as the bounds for the RepTile cell. Specify this type of boundary when you apply the RepTile property using Define|Apply Properties.

---

**REMOVAL OF CATIA V4 AND V5 IMPORT**

The CATIA V4 and V5 import features, accessed by selecting File|Open and choosing the appropriate Files of type: selection, have been removed for TracePro release 7.4.