

ProX 500

Customer Information Bulletin



Advisory

Upgrade / Repair / Retrofit

Safety Alert

Issue: DSP hang or crash on digital scanning systems.

Cause: Knots on Outline Scan Vectors.

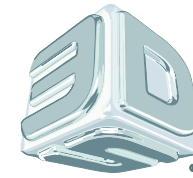
The SLS Slicer creates the scanner pattern and commands used by the Image Projection Module to draw each layer of an SLS build. The quality of the stlfiles, and their position/orientation within the virtual build space affects each slice.

In some instances, the slicer may create an artifact on the outline scan called “knots”. This artifact occurs when the outline border is not one contiguous line, closing one area. Rather the border wraps around itself, creating an attached closed area called a knot.



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The severity and count of knots depends upon the stlfile. The knots are most likely to occur with stlfiles that have overlapping triangles or other stlfile format issues. Occasionally, the knots might appear with stlfiles with small features on complex cross-sections.

When the Digital Scanning system encounters knots, it may hang, suspending the build. Typically, it does not fail immediately after encountering the knots but at some point later in the build.

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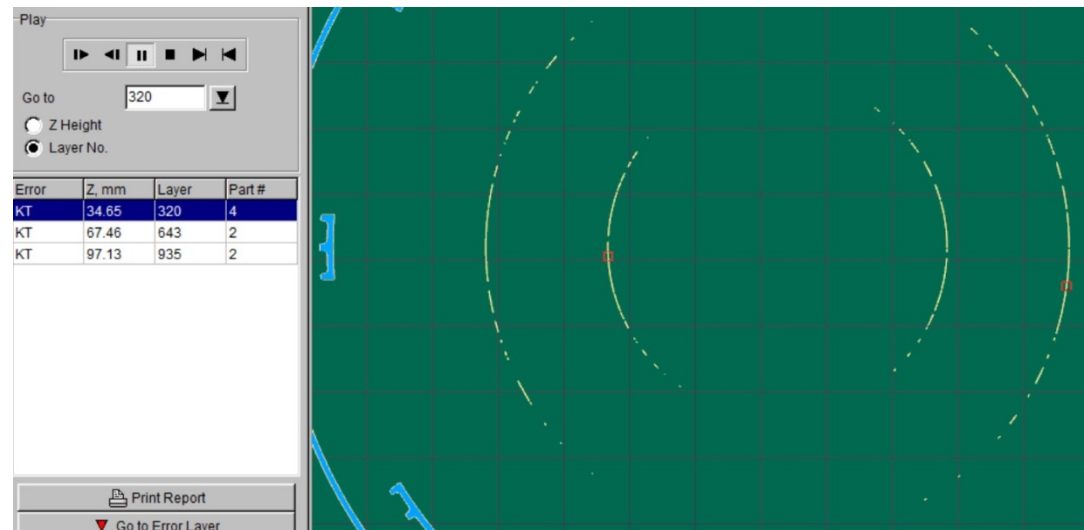
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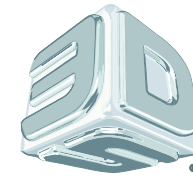
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Knots are reported by the slicer using the Build Setup Preview function, and the optional Preview Error Report Generator. The designation for a knot is “KT” and the knot is highlighted with a red box on the preview slice.



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In the event knots are found, the stlfiles can be:

- Repaired
- Adjusted for position (usually a move through Z less than one layer thickness)
- Adjusted for rotation (usually 3-5 degrees)
- Adjust the outline offsets

After any of these steps the Build packet should be previewed and checked for knots again.