Geomagic Design X

Release Note

Version: 2023.2.0

Release Date: July, 2023
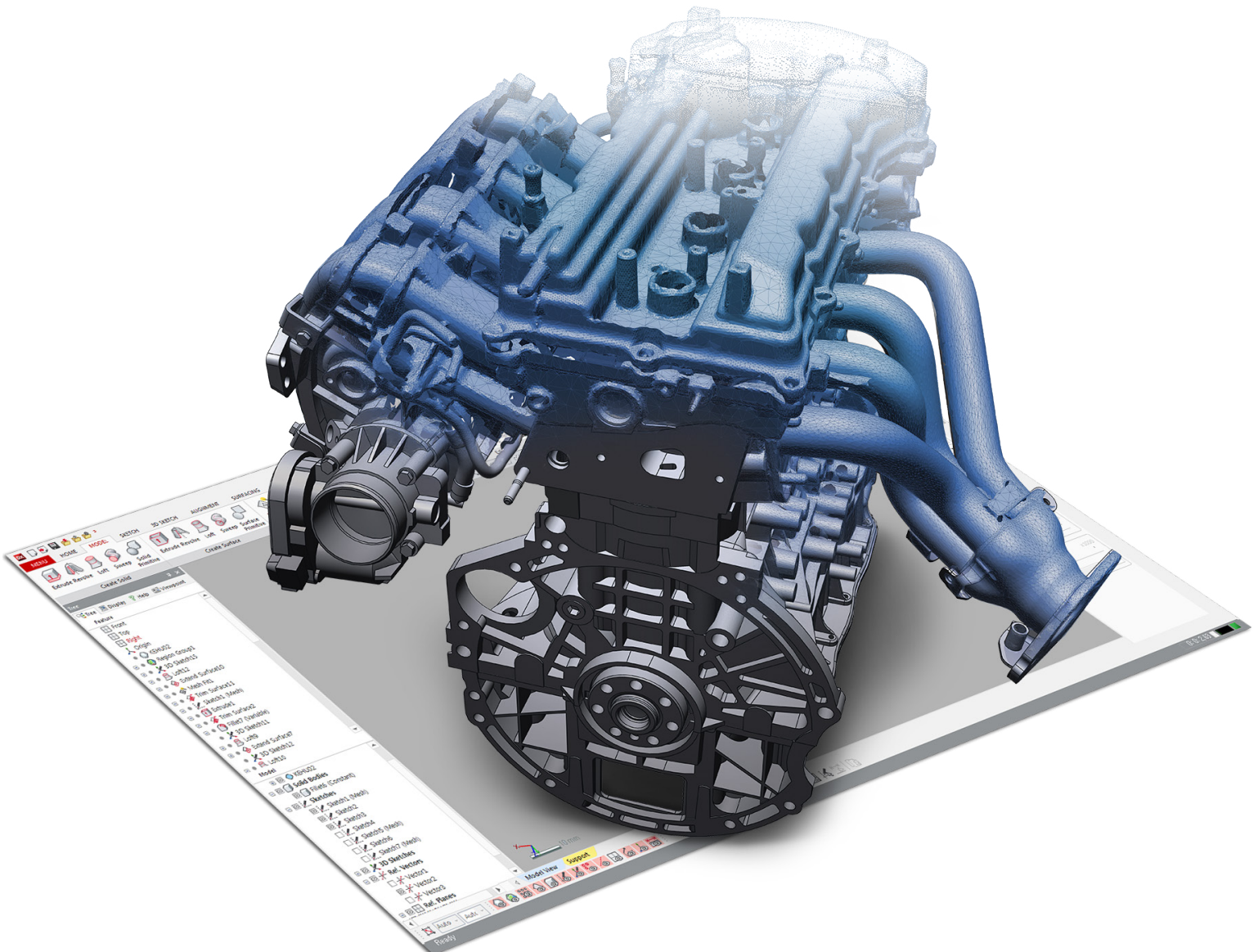
OQTON

Software: Geomagic Design X | Version: 2023.2.0

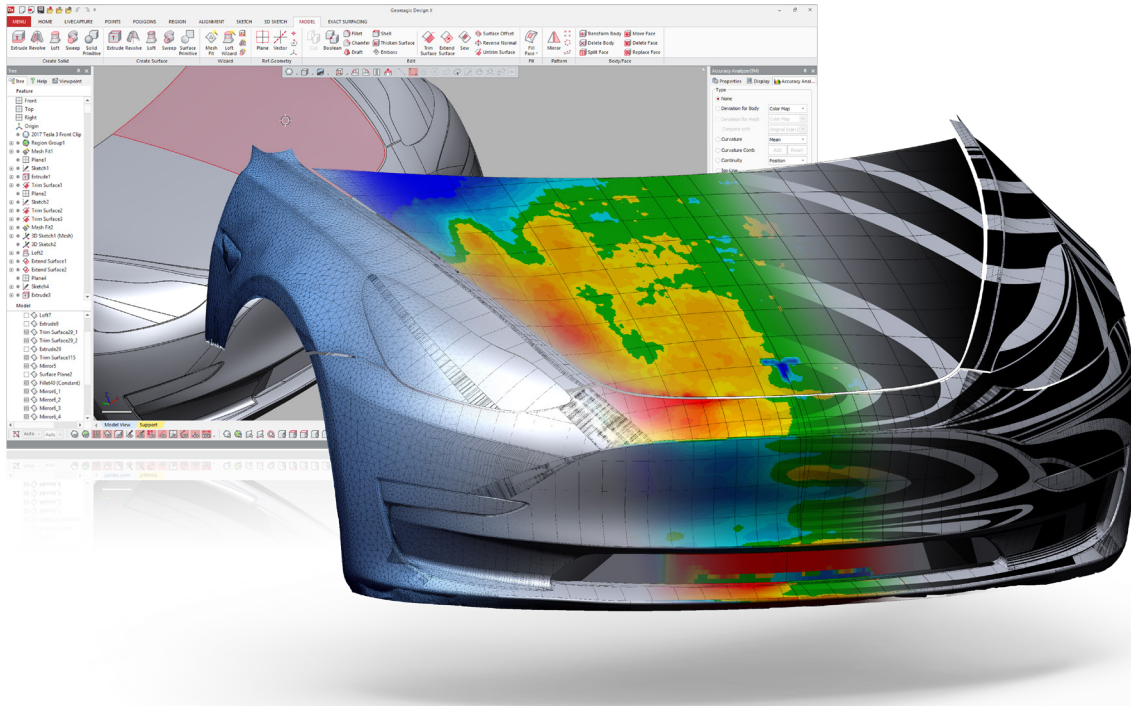Note: The `DX-E` label indicates features that are also available in Geomagic Design X Essentials edition.

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1 INTRODUCTION

INTRODUCING GEOMAGIC® DESIGN X™

Version: 2023.2.0

From Scan to CAD in no time

Bring physical parts into digital parametric CAD models with a reverse-engineering software that combines history-based CAD with 3D scan data processing. Geomagic® Design X™ is the industry's most comprehensive reverse engineering software, combines history-based CAD with 3D scan data processing so you can create feature-based, editable solid models compatible with your existing CAD software.

What Can You Do with Geomagic Design X?

Geomagic Design X converts 3D scan data into high-quality, feature-based CAD models. The software combines automatic and guided solid model extraction in a unique way while being incredibly accurate.

Scan virtually anything and create producible designs.

- Rebuild CAD data for broken tools and molds.
- Recreate lost CAD data for parts and molds.
- Design custom products.
- Convert physical parts into CAD for new product designs.
- Make existing parts fit with new parts.

2 INSTALLATION

System Requirements

For the latest system requirements information and to l earn about specific qualified system configurations, go to the System Requirements page in the Geomagic Support Center. Some users have had success running system configurations that deviate from the supported listed on our website. In such cases, these configurations are not officially supported by Oqton.
Additionally, we test a variety of hardware platforms in combination with the graphics subsystems. While we make every attempt to be as thorough as possible, hardware manufacturers change their products frequently and may be shipping newer products or have discontinued active support for others. Check the support section of the website for the latest system requirement information and specific qualified systems.

Download and Install software

You can download and install the software from https://softwaresupport.oqton.com/s/article/GeomagicDesignX.
In addition, automatic software updates are available if you set the **Update Product Automatically** option to **True** in Preferences and a valid maintenance code is activated, and your computer is connected to the Internet. The application will check if a newer version is available and will download it automatically for installation.
You can also manually check if a newer version is available by going to **Help > Check For Update**.

Activate License

Geomagic Design X requires license activation to run the application on your PC.
After you start your application, the License Manager window opens. The License Manager allows you to activate and use the Geomagic Design X software.
NOTE: When the License Manager is launched, you can click the Help ? button found at the top right corner of the window to read the CimLM Licensing Guide**.**

3 NEW FEATURES AND ENHANCEMENTS

Note: The `DX-E` **label indicates features that are also available in Geomagic Design X Essentials edition.**

LiveTransfer To Latest CAD Software Versions

Geomagic Design X now supports **Inventor 2024** along with previous versions from 2010 to 2023. As a result, the following versions of CAD software are currently available in **LiveTransfer**:

- SOLIDWORKS 2006~2023
- NX 8~1953 series
- Creo up to 9.0
- AutoCAD 2010~2011
- Inventor 2010~2024

Note: LiveTransfer also supports older versions of CAD software, but please be aware that CAD software versions prior to the previous three releases have not been tested and we cannot guarantee LiveTransfer functionality for these versions.

Adjustable Font Style for Measurement Values `DX-E`

You can now customize the font style of measurement values in the **Preferences**, making it easier to adjust and enhance readability.
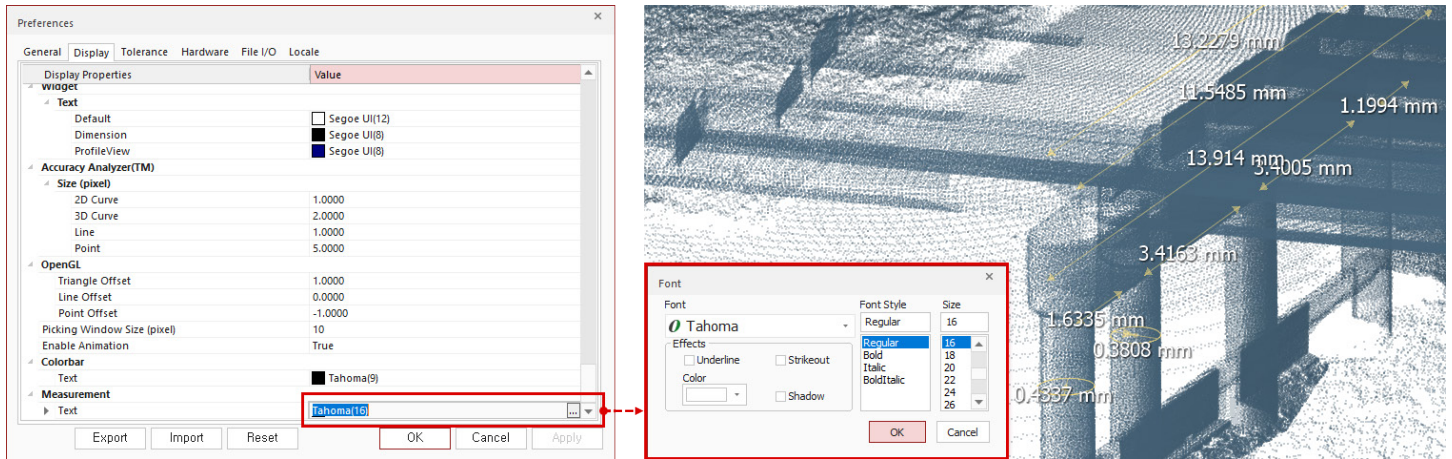
This enhancement also extends to real-time deviation checks with the **Accuracy Analyzer**, ensuring improved readability through customized font styles.
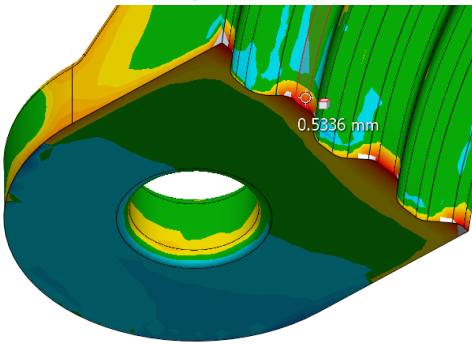
Hardware Interface Updates

The following hardwares are now supported in Scanner Direct Control and LiveCapture:

- **PMT ALPHA ARM Series**
  This is available in the following location:
  PMT Probe Device in LiveCapture

- **ScanTech Probing Devices**
  - **K-Probe (Probe working with KSCAN-Magic and AXE-B Series 3D Laser Scanner)**
  - **T-Probe (Probe working with TrackScan-Sharp and TrackScan-P Optical 3D Measurement System)**
 This is available in the following location:
  ScanTech K-Probe and *ScanTech T-Probe* in LiveCapture

- **ScanTech ScanViewer for KSCAN-Magic Series 3D Laser Scanner, AXE-B Series 3D Laser Scanner, and SIMSCAN Handheld 3D Laser Scanner**
  This is available in the following location:
 *ScanTech ScanViewer* in Scanner Direct Control

- **ScanTech TViewer for TrackScan-Sharp and TrackScan-P Optical 3D Measurement System**
  This is available in the following location:
  ScanTech TViewer in Scanner Direct Control
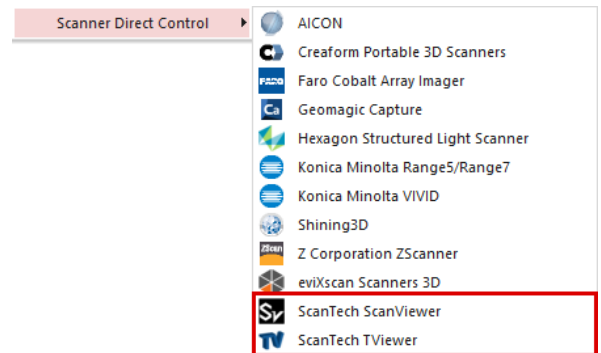

Section Measurement Features DX-E

Measurements taken using the Measure Section command can now be added as measurement features in the Model Tree after applying the measurements. These added measurements can serve as valuable references during the modeling process.
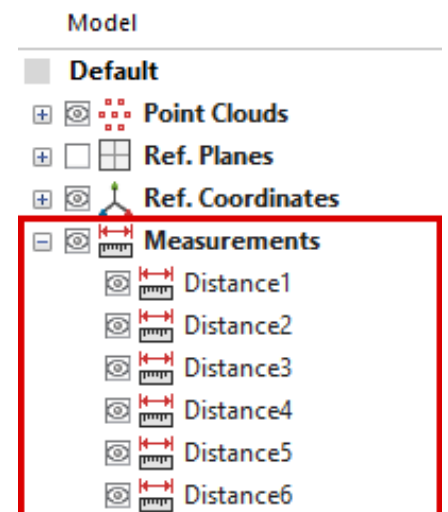
Miscellaneous Enhancements

H/W Direct Control List

The list of supported scanners under the Plug-In Device group in the Ribbon Bar has been reorganized and synchronized with the list of supported scanners in Geomagic Control X, providing users with a consistent experience.
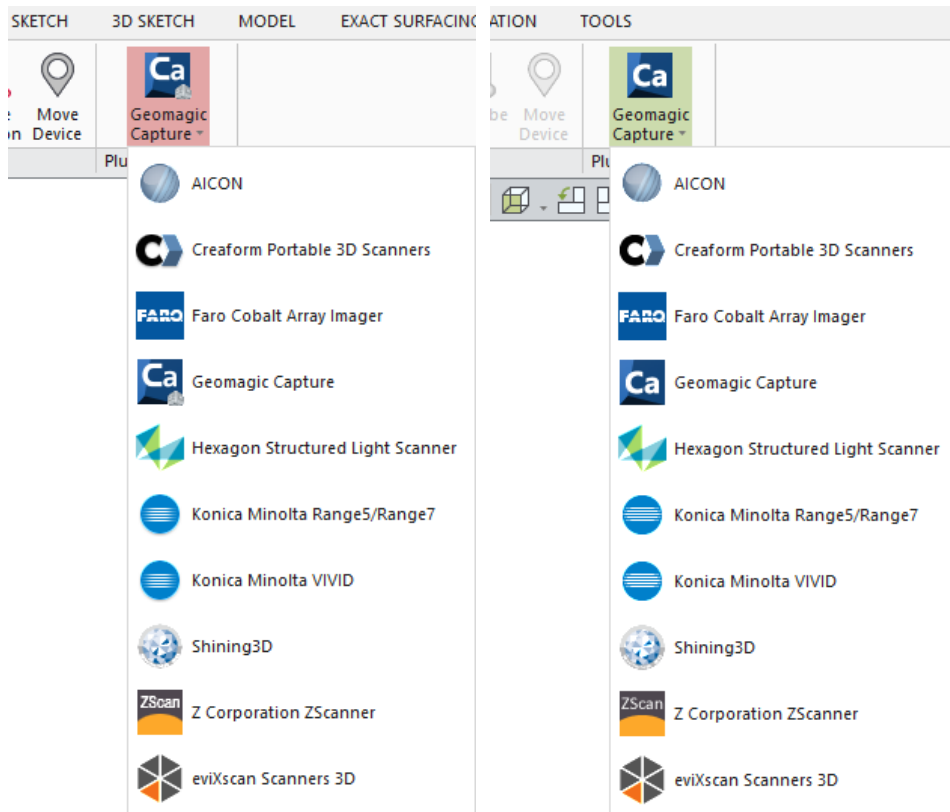

Supported Scanners in Geomagic Design X   *Supported Scanners in Geomagic Control X*

3D Sketch Export to CAD

A warning message will now notify users if some curves in the 3D sketch cannot be exported to the CAD application due to self-intersection issues. This enhancement provides valuable notifications for a smoother CAD export process, helping to prevent potential issues.
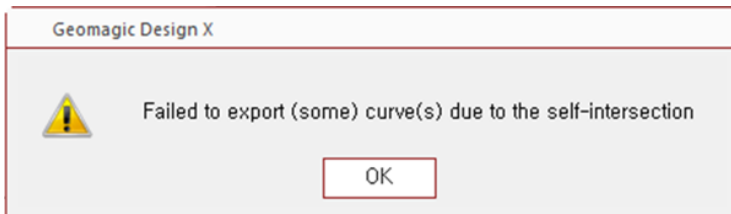
Improved Display Update Performance in LiveCapture DX-E

Improvements have been made to improve the overall display update speed during probing, scanning, and device movement in LiveCapture.

Moreover, the information update cycle of the Digital Read Out (DRO), referred to as **"InfoCenter"** within the application, has been optimized. This enhancement ensures that information is retained without any loss, providing users with a seamless scanning and probing experience.
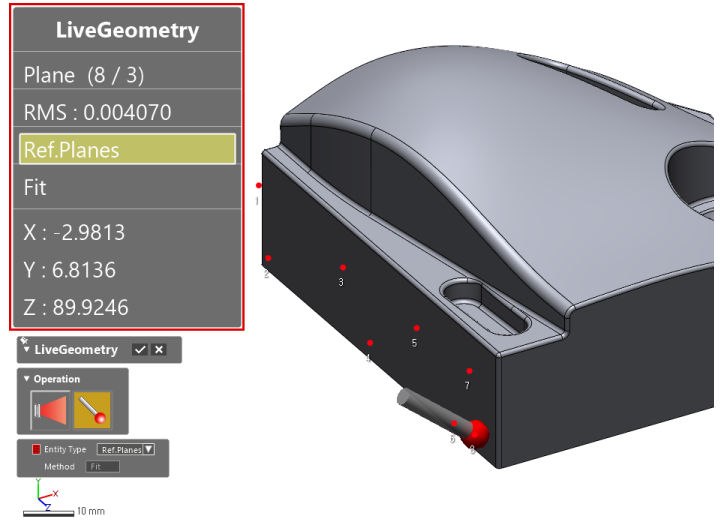
4 BUG FIXES

Note: The `DX-E` label indicates features that are also available in Geomagic Design X Essentials edition.

Common

- **GDX-17461:** `DX-E` Geomagic Design X application couldn't be launched when the path of the **Cache Folder** was changed in the Preferences.
- **GDX-20204:** `DX-E` The **Ribbon** displayed strange names in certain cases.
- **GDX-20052:** `DX-E` The **Color Bar Tolerance** only displayed units in mm (millimeters).
- **GDX-19791:** `DX-E` The '`/path`' option didn't work during silent installation.

Sketch Tools

- **GDX-19954:** `DX-E` **Undo/Redo** worked incorrectly in the **Circle** command when the **ESC** key was pressed to discard measuring distance/radius.
- **GDX-19937:** `DX-E` Multiple sketch entities were deleted together when **Undo** was performed in the **Circle** command.

Scan / Mesh Tools

- **GDX-20106:** Color/texture was lost when triangulating a selection of a point cloud.
- **GDX-20107:** **Mesh Construction** triangulation failed when using a selection on a subset of a point cloud.
- **GDX-20108:** Normal information was ignored during **HD Mesh Construction** triangulation when using a selection instead of the entire point cloud.
- **GDX-20119:** `DX-E` Deleted mesh data reappeared while in the **Align Between Scan Data** command.
- **GDX-20127:** `DX-E` Reversed normals were observed for portions of point cloud data.
- **GDX-20180:** Canceling **HD Mesh Construction** triangulation caused the copying of the selected part of points.
- **GDX-19771:** `DX-E` Meshes disappeared after saving.

Hardware Interface

- **GDX-18002:** Poor scanning performance issue with **Faro Edge**.
- **GDX-19070:** Couldn't connect the **Kreon Skyline Scan Arm** within the Geomagic Design X application.

Modeling Wizard

- **GDX-19955:** The **Feature Tree** had an abnormal structure after using the **Pipe Wizard** command.
- **GDX-20195:** Strange geometry was created depending on the sensitivity value when using the "**Use Lines/Arcs When Possible**" option in the **Pipe Wizard** command.
- **GDX-20070:** Failed sweep calculation occurred when using the "**Use Lines/Arcs When Possible**" option for Profile/Path in the **Sweep Wizard** command.
- **GDX-19989:** Creation of pipe features failed when using the "**Use Lines/Arcs When Possible**" option in the **Pipe Wizard** command in some cases.

LiveCapture

- **GDX-18052:** The Help description for **Move Device** was inconsistent with the current UI or contained unclear descriptions.

Modeling Feature

- **GDX-19782:** When attempting to set the initial position of the 3D Polyline Curve using the "Insert Before" method in the 3D Polyline Curve command, an "Encountered an improvement argument." error message would appear, preventing the command from functioning correctly even after switching to the other method.

File I/O

- **GDX-18033:** `DX-E`
  The application crashed when opening a specific file.

- **GDX-20192:** `DX-E`
  Importing a specific **Geomagic Control X (.cxproj)** file with the "**Points Only**" option created an empty point cloud with a warning message that said "Failed to read temp tessellated shell".

- **GDX-20068:** `DX-E`
  The importing process would be interrupted when encountering files with broken sample strokes.

- **GDX-20125:** `DX-E`
  The application crashed when exporting a mesh as a **Binary STL (.stl)** file.

- **GDX-19783:** `DX-E`
  An **ASTM E57 3D Imaging Data (.e57)** file that included multiple parts was imported as one combined part.

- **GDX-17872:** `DX-E`
  Vertex normal issue causing texture mapping information of point cloud imported from **ASTM E57 3D Imaging Data (.e57)** files to display incorrectly.

Localization

- **GDX-20032, GDX-20298, GDX-20100, GDX-20034:** The following dialogs and windows had missing translations:
  - Target Registration
  - Add or Remove Buttons (for Toolbar) `DX-E`
  - Customize (for Toolbar) `DX-E`

- **GDX-20231, GDX-20114, GDX-20091, GDX-20029:** `DX-E`
  The multilingual packs contained several translation errors and issues with character truncation.

- **GDX-20302:** `DX-E`
  Japanese characters in the AutoUpdate dialog appeared broken.

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