

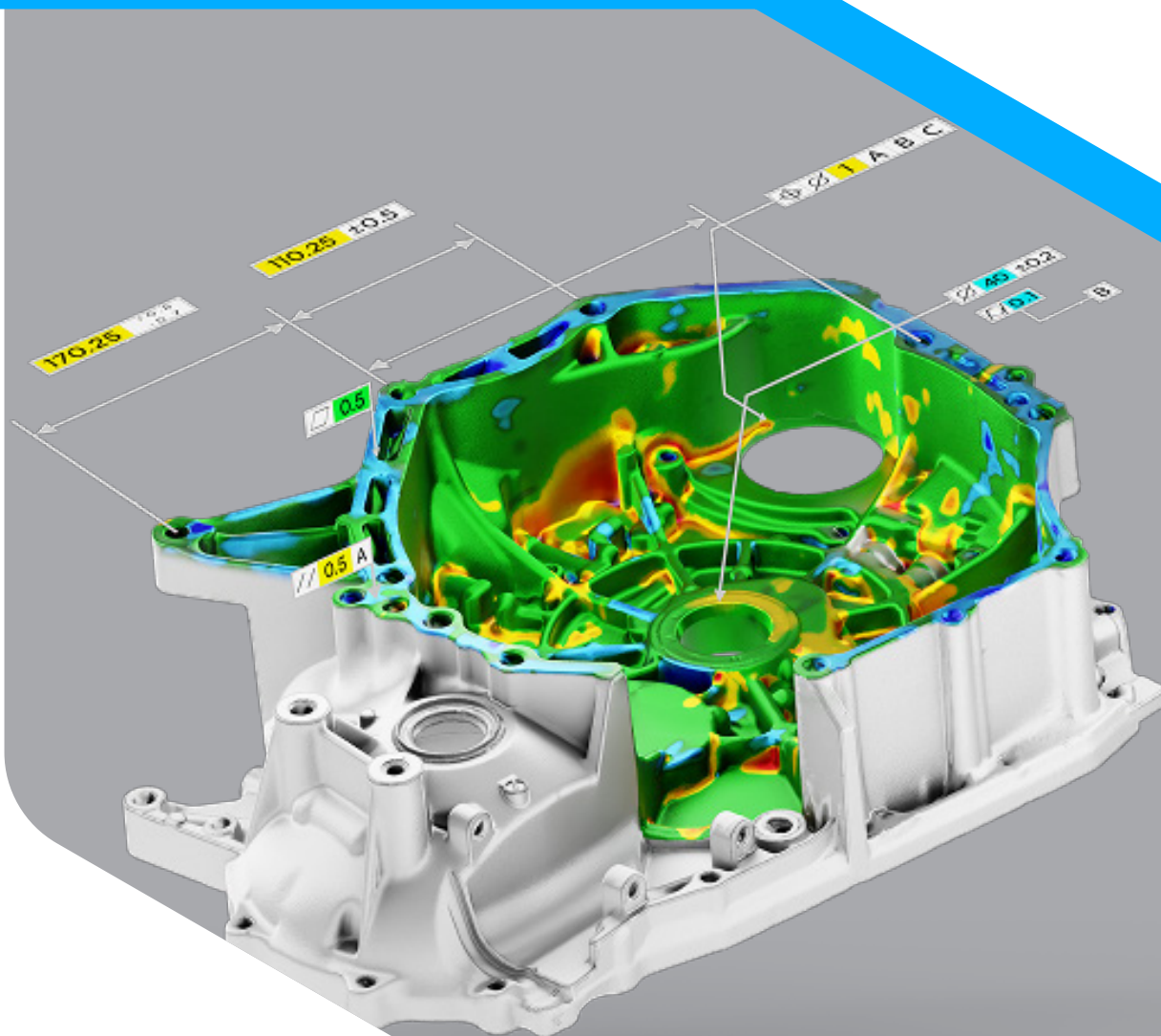


Cx Geomagic Control X

Release Notes

Version: 2026.1.0

Release Date: May, 2026



Note: The **CX-E** / **CX-EC** labels indicate features that are also available in Geomagic Control X Essentials and Geomagic Control X Essentials Connect software packages.

TABLE OF CONTENTS

- 1. INTRODUCTION.....1
- 2. INSTALLATION.....2
 - System Requirements.....2
 - Download and Install software.....2
 - Activate License.....2
- 3. NEW FEATURES AND ENHANCEMENTS.....3
 - Scanner Direct Control **CX-EC**.....3
 - New ZG Handheld Devices Plug-In.....3
 - New HyperProbe Plug-In.....3
 - Support for New Scantech Software (DefinSight).....4
 - Upgraded RDS Hardware Support.....4
 - Text and Visual Scripting Enhancements.....4
 - New Scripting Actions.....4
 - Custom Selection for Entity.....4
 - Transform Body.....5
 - Offset Operation.....5
 - Manual Pairing via Text Scripting.....5
 - Enhanced Scripting Workflows.....6
 - Pause-and-Select Workflow.....6
 - Custom Selection (By Geometry) Automation.....6
 - Scripted Mesh Cleanup.....7
 - Additional Scripting Options.....7
 - Projected Tolerance Zone Modifier in GD&T.....7
 - Fill Holes Option in Triangulate.....9
 - Straightness for Cylindrical Axes.....9
 - Use Reliable Data Only Toggle in Best-Fit Alignment.....10
 - Expanded Access to Properties.....10
 - Visibility Control in Text Scripting.....10
 - Access to Measurement and Deviation Results.....10
 - Concave/Convex Cylinder Query.....11
 - Scripting Usability and Performance Improvements.....11
 - Cleaner NumPy Output.....11
 - Faster Visual Scripting for Large-Scale Data.....11

DMO output for Automated Workflows CX-E CX-EC	12
Custom Selection for Entity	12
Scan Data Processing CX-E CX-EC	13
Split Mesh Enhancements	13
Enhanced Split Mesh Workflow	13
Multiple Split Tools	13
3D Curve Splitting Options	14
Expanded Split Tool Support	14
Improved Handling of Regions When Splitting with Closed Curves	15
Improved Support for Complex Profiles	15
Improved Robustness and Quality of Results	15
Decimation Enhancements	16
Design-Intent Aware Decimation	16
Improved Decimation Performance	16
Robust and Better Results	16
Clearer Reduction Control	16
Consistent Targeting in 3D Compare CX-E CX-EC	17
Constructed Geometry Improvements CX-E CX-EC	18
New Scan Boundary Method for Boundary Geometry	18
Correct Size and Position When Exporting Constructed Geometry	18
Boundary Inspection CX-E CX-EC	18
Scan Boundary Auto Search	18
ASCII Boundary Geometry Support	19
UI/UX Improvements	19
Clearer Group Names for Captured Data from LiveInspect CX-EC	19
Select Visible Only for CAD Entities CX-E CX-EC	19
Removed Unnecessary “Suppressed” Display Option CX-E CX-EC	20
Selection Highlighting Behavior Restored CX-E CX-EC	20
File I/O	20
Updated Support for Latest CAD Versions	20
DMIS report for Simulated CMM Points CX-E CX-EC	20
LGSx File Import CX-E CX-EC	20
Improved Native File Reliability CX-E CX-EC	20
Documentation CX-E CX-EC	21
Tutorial Sample Projects Open Reliably	21
Expanded Text Scripting Documentation	21
Licensing Enhancements CX-E CX-EC	21
Updated Licensing System	21
4. FIXED BUGS	22

1 INTRODUCTION

INTRODUCING GEOMAGIC® CONTROL X™

Version: 2026.1.0



Ensure Quality Everywhere

Bring the power of 3D scan-based inspection to more people in more places with industry-leading 3D metrology software that makes it easy to capture and interpret scan data.

Geomagic® Control X™ is a comprehensive metrology software platform that delivers the industry's most powerful tools within straightforward workflows. With Geomagic Control X quality managers are enabled with revolutionary ease-of-use, intuitive, comprehensive controls and traceable, repeatable workflows for the quality measurement process. Its fast, precise, information-rich reporting and analysis enable significant productivity and quality gains in any manufacturing workflow.

What Can You Do with Geomagic Control X?

Geomagic Control X includes features to help you ensure quality for each stage of your manufacturing workflow including designing, manufacturing, inspecting, and maintaining.

Design

- Design for manufacturability
- Find and fix problems

Manufacture

- Identify and resolve manufacturing and assembly issues
- Eliminate costly scrap and rework

Inspect

- Solve your toughest measurement problems
- Improve quality documentation
- Reduce quality control bottlenecks

Maintain

- Assess damage, deformation, or wear accurately and consistently
- Predict part failure before it happens

2 INSTALLATION

System Requirements

For the latest system requirements information and to learn 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 configurations listed on our website. In such cases, these configurations are not officially supported by Hexagon.

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 Geomagic Control X from [Software Support](#).

If a new version becomes available, the [Hexagon Universal Updater](#), which is running in the Windows system tray in the background, displays a notification. From the Updater, you can view and download available product versions. If the **Hexagon Universal Updater** was not installed, instructions for installing it are provided during the Geomagic Control X installation.

You can also manually check for updates by going to [Help > Check for Latest Version](#), or by opening the **Hexagon Universal Updater** from the Windows system tray.

NOTE: To receive update notifications, ensure that the Hexagon Universal Updater is installed and running in the background.

Activate License

Geomagic Control X requires license activation to run the application on your PC. You can choose to use a trial license for a 15-day period or activate a permanent license. After you start your application, the License Manager window opens. The License Manager allows you to activate and use the Geomagic Control X software.

NOTE: When you launch the License Manager, you can click the [Help ?](#) button found at the top right corner of the window to read the [CimLM Licensing Guide](#).

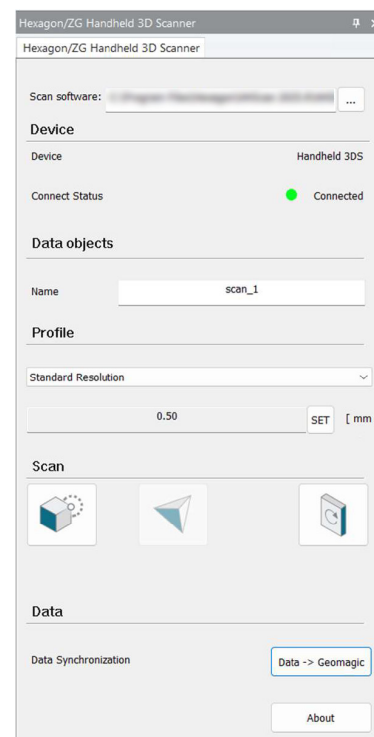
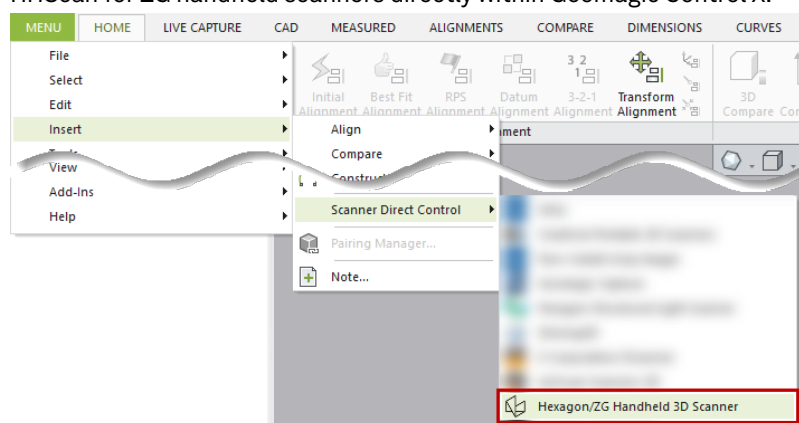
3 NEW FEATURES AND ENHANCEMENTS

NOTE: The **CX-E** / **CX-EC** labels indicate features that are also available in Geomagic Control X Essentials and Geomagic Control X Essentials Connect software packages.

Scanner Direct Control **CX-EC**

New ZG Handheld Devices Plug-In

A new **ZG Handheld Devices** plug-in allows users to use scanning properties from HHSan for ZG handheld scanners directly within Geomagic Control X.



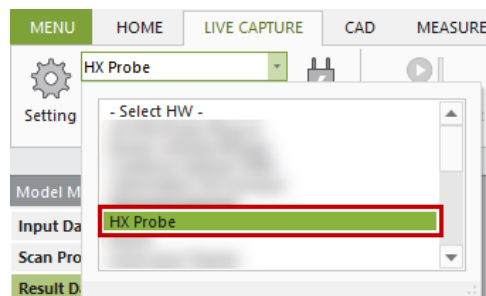
Supported Devices:

- **CERESCAN series** (*Available only in China*)
- **RIGELSCAN series** (*Available only in China*)
- **ATLASCAN series**
- **MARVELSCAN & HYPERSCAN series**

Note: HH Scan 2025.9 or Innov 3D 2025.9 (*Available only in China*), or a later version, must be installed prior to using the scanner interface. For setup and usage instructions, see the [ZG Handheld Scanning Interface Quick Start Guide](#).

New HyperProbe Plug-In

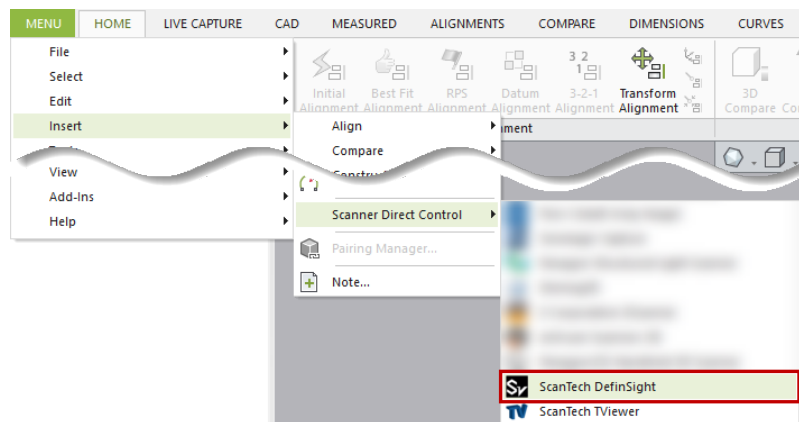
A new **HyperProbe** plug-in allows users to use HyperProbe directly through **LiveInspect**.



Note: HH Scan 2026.3 or a later version must be installed prior to using the HyperProbe plug-in. For setup and usage instructions, see the [Tutorial on using HYPERPROBE in Control X](#).

Support for New Scantech Software (DefinSight)

Support has been added for the latest Scantech software, [DefinSight](#), enabling seamless integration with updated scanning workflows.



Upgraded RDS Hardware Support

RDS support has been upgraded to [version 6.6](#), including:

- Support for gray scale line scanning
- Unicode support for project names and paths

These updates improve compatibility with modern workflows and international environments.

Text and Visual Scripting Enhancements

[Text and Visual Scripting](#) have been enhanced with new actions, expanded options, improved data access, and better usability and performance, enabling more flexible and automated workflows across selection, geometry operations, GD&T, and alignment.

New Scripting Actions

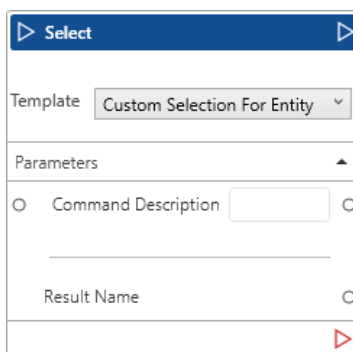
New actions are now available in Text and Visual Scripting, making it easier to automate selection, transformation, and alignment workflows.

Custom Selection for Entity

Custom Selections created from poly-vertices or poly-faces using the new [Select \(Custom Selection For Entity\)](#) action, available in both Text and Visual Scripting, can now be reused across other actions, enabling more efficient and consistent selection workflows.

```
Script 1
1 cxapp.operation.select.customSelectionForEntity
  (commandDescription='')
```

Custom Selection in Text Scripting



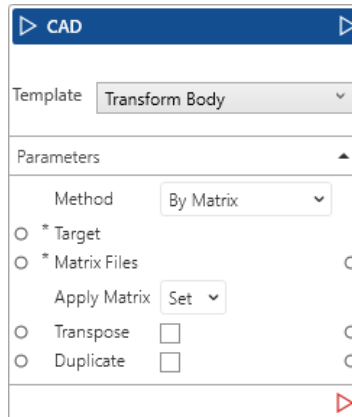
Custom Selection in Visual Scripting

Transform Body

The **CAD (Transform Body)** action is now available in both Text and Visual Scripting, allowing automated positioning, scaling, and matrix-based alignment of CAD bodies with fewer manual edits.

```
Script 1
1  cxapp.operation.cad.transformBody.rotateAndTrans
   late(['Sample_CAD'], rotateX=10.000000,
       rotateY=5.000000, rotateZ=-10.000000,
       translateX=40.000000, translateY=20.000000,
       translateZ=-30.000000, duplicate=False)
```

Transform Body in Text Scripting



The CAD (Transform Body) Visual Scripting interface features a blue header bar with a play button. Below the header, the 'Template' dropdown is set to 'Transform Body'. The 'Parameters' section is expanded, showing 'Method' set to 'By Matrix'. There are three radio buttons: '* Target', '* Matrix Files', and 'Apply Matrix' (set to 'Set'). Below these are checkboxes for 'Transpose' and 'Duplicate', each with a corresponding radio button on the right.

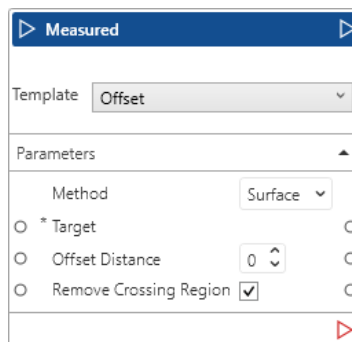
Transform Body in Visual Scripting

Offset Operation

The **Measured (Offset)** action is now available in both Text and Visual Scripting, allowing you to apply consistent geometry adjustments to Measured Data.

```
Script 1
1  cxapp.operation.measured.offset.surface
   ([ 'Sample_Scan_01' ], offsetDistance=5.000000,
   removeCrossingRegion=True)
```

Offset in Text Scripting



The Measured (Offset) Visual Scripting interface has a blue header bar with a play button. The 'Template' dropdown is set to 'Offset'. The 'Parameters' section is expanded, showing 'Method' set to 'Surface'. There are three radio buttons: '* Target', 'Offset Distance' (set to 0), and 'Remove Crossing Region' (checked). Each radio button has a corresponding radio button on the right.

Offset in Visual Scripting

Manual Pairing via Text Scripting

Text Scripting now provides a function to manually pair reference and measured entities, making repeatable pairing/alignment workflows easier to automate.

```
Script 1
1  cxapp.coreapi.pairing.manualPairing('Face<2>@Extrude', 'Probe Point<5>@Session1'
2  cxapp.coreapi.pairing.manualPairing('Face<3>@Extrude', 'Probe Point<7>@Session1')
```

Manual Pairing in Text Scripting

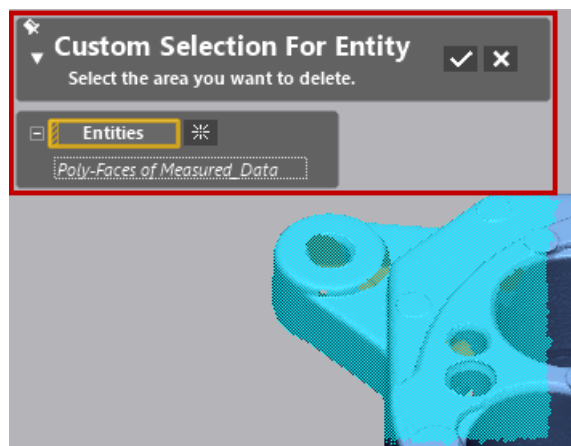
Note: the pairing action is not recorded, and it does not support Undo/Redo.

Enhanced Scripting Workflows

Text and Visual Scripting have been enhanced to provide greater flexibility and control, enabling more interactive and automated workflows.

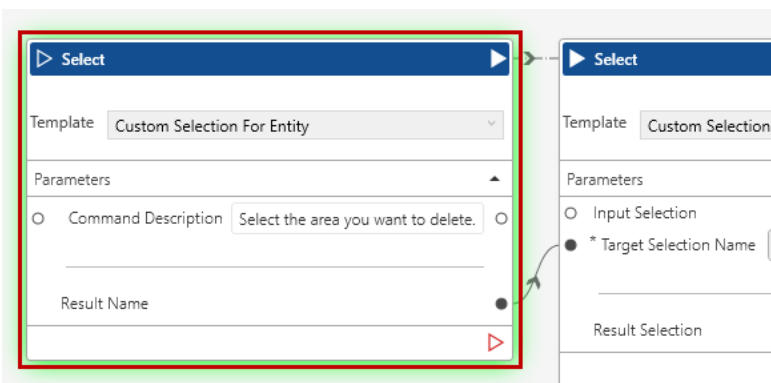
Pause-and-Select Workflow

Text and Visual Scripting can now pause playback to allow interactive selection of poly-vertices or poly-faces when used with the new **Custom Selection for Entity** action. The script then resumes using the selected entities, enabling more flexible automation workflows.



```
Script 1
1  ### Custom Selection For Entity (Poly-Faces)
2  cxapp.operation.select.customSelectionForEntity()
3  selectA = cxapp.document.getActiveResultData().lastCreatedCustomSelectionName()
4  cSelectA = cxapp.object.CustomSelection.create(selectC)
5  csA = cSelectA.inputSelection()
6  cxapp.operation.edit.delete([csC.toString()])
```

Pause-and-Select Workflow in Text Scripting



Pause-and-Select Workflow in Visual Scripting

Custom Selection (By Geometry) Automation

Text Scripting now supports applying **Custom Selection (By Geometry)** that was added in Result Data, helping you build consistent, repeatable selections without manual rework.

```
Script 1
1  ### Custom Selection (By Geometry: Box)
2  pos1=cxapp.geometry.Point3D(-10,-10,-10)
3  pos2=cxapp.geometry.Point3D(10,10,50)
4
5  cxapp.operation.select.byGeometry.box(0, pos1, pos2)
6  selectA = cxapp.document.getActiveResultData().lastCreatedCustomSelectionName()
7  cSelectA = cxapp.object.CustomSelection.create(selectA)
8
9  ### Custom Selection (By Geometry: Cylinder)
10 pos3 = cxapp.geometry.Point3D(40,65,-20)
11 pos4 = cxapp.geometry.Point3D(40,65,50)
12 rad1 = 10.5
13
14 cxapp.operation.select.byGeometry.cylinder(1, pos3, pos4, rad1)
15 selectB = cxapp.document.getActiveResultData().lastCreatedCustomSelectionName()
16 cSelectB = cxapp.object.CustomSelection.create(selectB)
```

Using Selection by Geometry to create Custom Selections in Text Scripting

Scripted Mesh Cleanup

You can now delete selected portions of a mesh in Text Scripting, enabling automated mesh cleanup workflows without manual intervention.

```
Script 1
1  ### By Geometry - Box - PolyFaces
2  pos1=cxapp.geometry.Point3D(-10,-10,-10)
3  pos2=cxapp.geometry.Point3D(10,10,50)
4
5  cxapp.operation.select.byGeometry.box(0, pos1, pos2)
6  selectA = cxapp.document.getActiveResultData().lastCreatedCustomSelectionName()
7  cSelectA = cxapp.object.CustomSelection.create(selectA)
8  csA = cSelectA.inputSelection()
9  cxapp.operation.edit.delete([csA.toString()])
10
11 ### By Geometry - Cylinder - PolyVertices
12 pos3 = cxapp.geometry.Point3D(40,65,-20)
13 pos4 = cxapp.geometry.Point3D(40,65,50)
14 rad1 = 10.5
15
16 cxapp.operation.select.byGeometry.cylinder(1, pos3, pos4, rad1)
17 selectB = cxapp.document.getActiveResultData().lastCreatedCustomSelectionName()
18 cSelectB = cxapp.object.CustomSelection.create(selectB)
19 csB = cSelectB.inputSelection()
20 cxapp.operation.edit.delete([csB.toString()])
21
22 ### Custom Selection For Entity - PolyFaces
23 cxapp.operation.select.customSelectionForEntity()
24 selectC = cxapp.document.getActiveResultData().lastCreatedCustomSelectionName()
25 cSelectC = cxapp.object.CustomSelection.create(selectC)
26 csC = cSelectC.inputSelection()
27 cxapp.operation.edit.delete([csC.toString()])
```

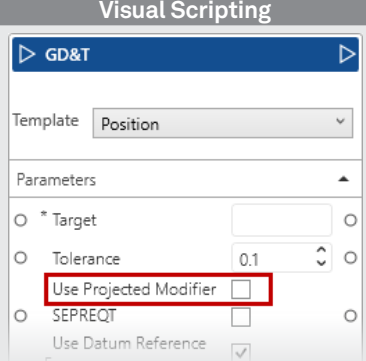
Deleting selected mesh portions using different commands in Text Scripting

Additional Scripting Options

New options have been added to Text and Visual Scripting, providing greater flexibility and control for GD&T, mesh editing, and alignment workflows.

Projected Tolerance Zone Modifier in GD&T

You can now set the [Projected Tolerance Zone](#) modifier through scripting for the following GD&T actions, enabling more complete automated GD&T workflows:

	Text Scripting	Visual Scripting
GD&T (Position)	<pre>Script 1 1 cxapp.operation.gdt.position_v2('Face<67>@Sample_CAD_01', tolerance=0.100000, useProjectedModifier=True, projectionDistance=1.000000, displayProjectionDistance=True, useSEPREQT=False, useDatum=True, datumActualMating=0, datumNames=['A', 'B', 'C'], useMaterialCondition=False, materialConditionType=0, minDimensionTolerance=0.000000, maxDimensionTolerance=0.000000)</pre>	

GD&T (Perpendicularity)

```
Script 1
1 cxapp.operation.gdt.perpendicularity_v2('Face<67>@Sample_CAD_01', 'A',
  useAutoTol=False, tolerance=0.200000, useProjectedModifier=True,
  projectionDistance=1.000000 displayProjectionDistance=True,
  useMaterialCondition=False, materialConditionType=0,
  minDimensionTolerance=0.000000, maxDimensionTolerance=0.000000)
```

GD&T

Template Perpendicularity

Parameters

* Target

Use Automatic Tolerance ☐

Tolerance 0.1

Use Projected Modifier ☐

Material Condition ☐

* Datum

GD&T (Angularity)

```
Script 1
1 cxapp.operation.gdt.angularity_v2('Face<67>@Sample_CAD_01', ['A'],
  tolerance=0.100000, useProjectedModifier=True,
  projectionDistance=1.000000 displayProjectionDistance=True,
  useMaterialCondition=False, materialConditionType=0,
  minDimensionTolerance=0.000000, maxDimensionTolerance=0.000000)
```

GD&T

Template Angularity

Parameters

* Target

Tolerance 0.1

Use Projected Modifier ☐

Material Condition ☐

* Datum Names

GD&T (Parallelism)

```
Script 1
1 cxapp.operation.gdt.parallelism_v2('Face<67>@Sample_CAD_01', 'A',
  tolerance=0.100000, useProjectedModifier=True,
  projectionDistance=1.000000 displayProjectionDistance=True,
  useMaterialCondition=False, materialConditionType=0,
  minDimensionTolerance=0.000000, maxDimensionTolerance=0.000000)
```

GD&T

Template Parallelism

Parameters

* Target

Tolerance 0.1

Use Projected Modifier ☐

Material Condition ☐

* Datum

GD&T (Concentricity)

```
Script 1
1 cxapp.operation.gdt.concentricity_v2('Face<67>@Sample_CAD_01', 0.100000,
  'A', useProjectedModifier=True, projectionDistance=1.000000
  displayProjectionDistance=True)
```

GD&T

Template Concentricity

Parameters

* Target

* Tolerance 0.1

Use Projected Modifier ☐

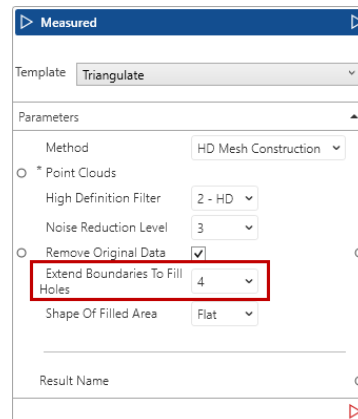
* Datum

Note: Projected Modifier is available only for axis-based entities (cylinder, cone, and line).

Fill Holes Option in Triangulate

The **Triangulate** command using the **HD Mesh Construction** method now includes the “**Extend Boundaries To Fill Holes**” option for more complete mesh creation.

```
Script 1
1 cxapp.operation.measured.triangulate_v2.hDMeshConstruction
  ([ 'Sample_Scan_01' ], highDefinitionFilter=2,
  noiseReductionLevel=3, removeOriginalData=True,
  extendBoundaryLevel=4, shapeOfFilledArea=0)
```



The screenshot shows the 'Measured' dialog box with the 'Triangulate' template selected. Under the 'Parameters' section, the 'Method' is set to 'HD Mesh Construction'. The 'Extend Boundaries To Fill Holes' checkbox is checked and highlighted with a red box. Other parameters include 'High Definition Filter' set to '2 - HD', 'Noise Reduction Level' set to '3', and 'Shape Of Filled Area' set to 'Flat'.

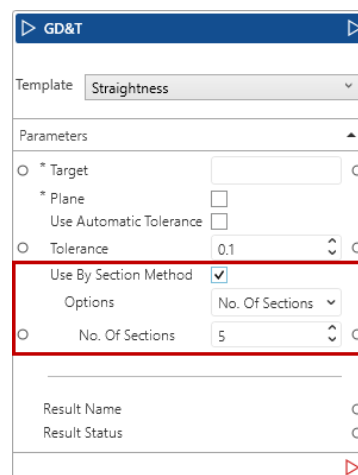
Triangulate with HD Mesh Construction method for Text Scripting

Triangulate with HD Mesh Construction method for Visual Scripting

Straightness for Cylindrical Axes

Straightness for cylindrical axes can now be created via Text and Visual Scripting using either the “**By Section**” or “**By Median Geometry**” method, aligning script behavior with the UI and recorder output.

```
Script 1
1 cxapp.operation.gdt.straightness_v2
  ('Face<103>@Sample_CAD_01', False, directionEntity='',
  useAutoTol=False, tolerance=0.020000,
  useBySectionMethod=True, sectionOption=0, numSections=5,
  distanceSections=0.000000, angleSections=0.000000)
2 cxapp.operation.gdt.straightness_v2
  ('Face<95>@Sample_CAD_01', False, directionEntity='',
  useAutoTol=False, tolerance=0.020000,
  useBySectionMethod=False, sectionOption=0, numSections=5,
  distanceSections=0.000000, angleSections=0.000000)
```



The screenshot shows the 'GD&T' dialog box with the 'Straightness' template selected. Under the 'Parameters' section, the 'Use By Section Method' checkbox is checked and highlighted with a red box. Other parameters include 'Tolerance' set to '0.1' and 'No. Of Sections' set to '5'.

Use By Section Method in GD&T (Straightness) for Text Scripting

Use By Section Method in GD&T (Straightness) for Visual Scripting

Use Reliable Data Only Toggle in Best-Fit Alignment

The **Best Fit Alignment** action now supports toggling “**Use Only Reliable Measured Data**,” giving you more control over automated alignment behavior.

Script 1

```
1 cxapp.operation.align.bestFitAlignment_v2
  (samplingRatio=25.000000, useMaxIteration=True,
   maxIterationCount=20, useMaxAvgDeviation=True,
   maxAvgDeviation=0.000000,
   useReliableMeasuredDataOnly=False,
   useSelectedDataOnly=False, selectedData=[],
   maxDistance=0.000000)
```

Align

Template Best Fit Alignment

Parameters

☐ Sampling Ratio

25

☐

☐ Use Max. Iteration

☒

☐ Max. Iteration Count

20

☐

☐ Use Max. Average Deviation

☒

☐ Max. Average Deviation

0

☐

☐ Use Reliable Measured Data

☐

☐ Use Selected Data Only

☐

Result Name

Use Only Reliable Measured Data option in Align (Best Fit Alignment) for Text Scripting

Use Only Reliable Measured Data option in Align (Best Fit Alignment) for Visual Scripting

Expanded Access to Properties

Text and Visual Scripting now provide enhanced access to object properties and results, enabling more informed and automated workflows.

Visibility Control in Text Scripting

Text Scripting can control the visibility of CAD, Mesh, Constructed Geometry, Curve, GD&T, Measurement, and Alignment objects to produce cleaner views and more focused reports.

```
1 instance = cxapp.object.CAD.create('CAD1')
2 instance.setVisibility(False)
```

Access to Measurement and Deviation Results

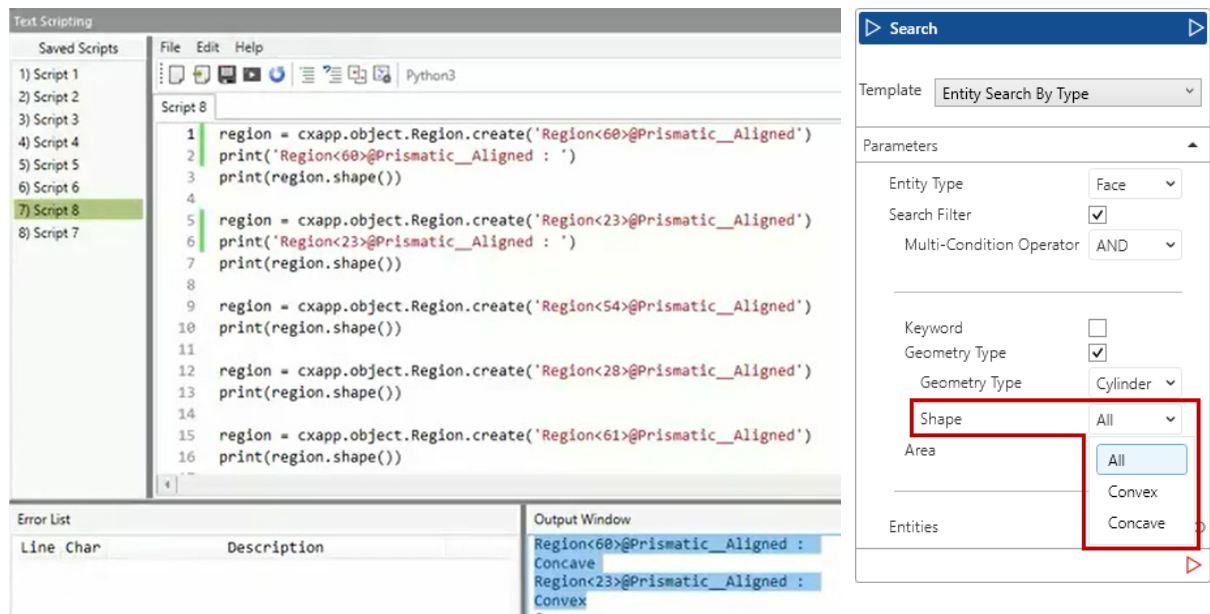
Text Scripting can read the measurement values and deviation results used for GD&T pass/fail analysis, simplifying downstream analysis and reporting.

Script 9

```
1 print('Linear Dim.2')
2 print(cxapp.gdt.Gdt3dDimension.create('Linear Dim.2').passFailResult())
3 print('Angular Dim.2')
4 print(cxapp.gdt.Gdt3dDimension.create('Angular Dim.2').passFailResult())
5 print('Radial Dim.3')
6 print(cxapp.gdt.Gdt3dDimension.create('Radial Dim.3').passFailResult())
7 print()
```

Concave/Convex Cylinder Query

Text and Visual Scripting can determine whether cylindrical, conical, and spherical regions are concave or convex, enabling smarter rule-based logic in automated inspections.



Concave/Convex Cylinder Query in Text Scripting

Concave/Convex Cylinder Query in Visual Scripting

Scripting Usability and Performance Improvements

Text and Visual Scripting have been improved to provide a smoother user experience and better performance, especially when working with large data.

Cleaner NumPy Output

NumPy-based scripts in Text Scripting now run without extra warning messages or repetitive pop-ups when rerun, keeping the Output Window focused and iterative scripting uninterrupted.

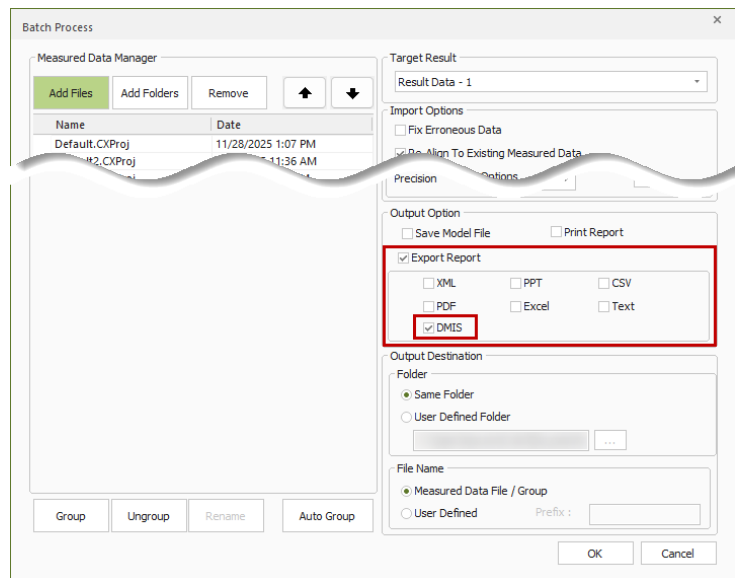
Faster Visual Scripting for Large-Scale Data

You can now generate Result Selection data faster in the Visual Scripting Editor, especially when using the Custom Selection action with large data.

DMO output for Automated Workflows

CX-E CX-EC

You can now generate **DMIS reports (DMO files)** from both **Batch Process** and **Automation Server**, helping keep DMIS reporting consistent across automated workflows.

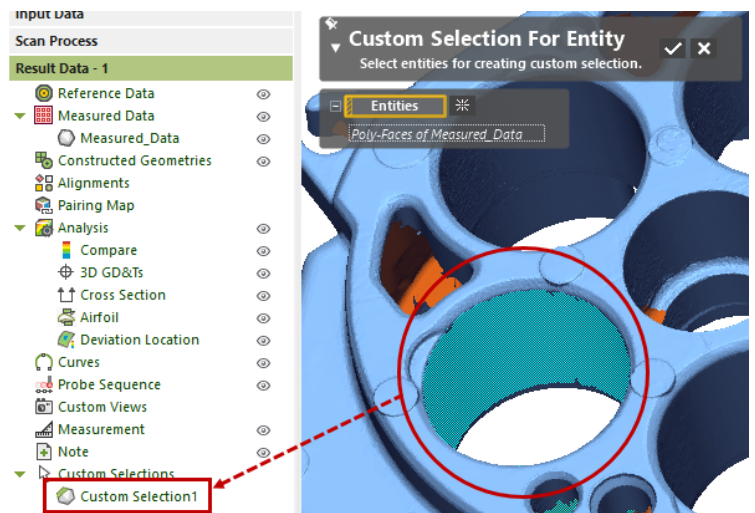


DMIS Report (DMO File) Output in Batch Process

Custom Selection for Entity

A new **Custom Selection for Entity** tool has been introduced, allowing you to quickly select poly-vertices or poly-faces and create reusable Custom Selection features for more efficient workflows.

Note: In Text and Visual Scripting, poly-faces or vertices can be selected indirectly using the Custom Selection For Entity action.



Scan Data Processing CX-E CX-EC

Split Mesh Enhancements

The **Split Mesh** tool has been significantly improved to provide a more flexible workflow, expanded splitting capabilities, and more reliable results when working with complex mesh objects.

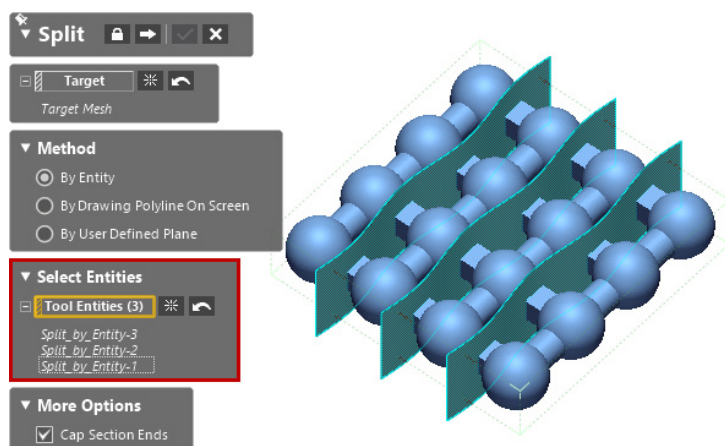
Enhanced Split Mesh Workflow

The overall splitting process is now easier to use and better suited for iterative editing.

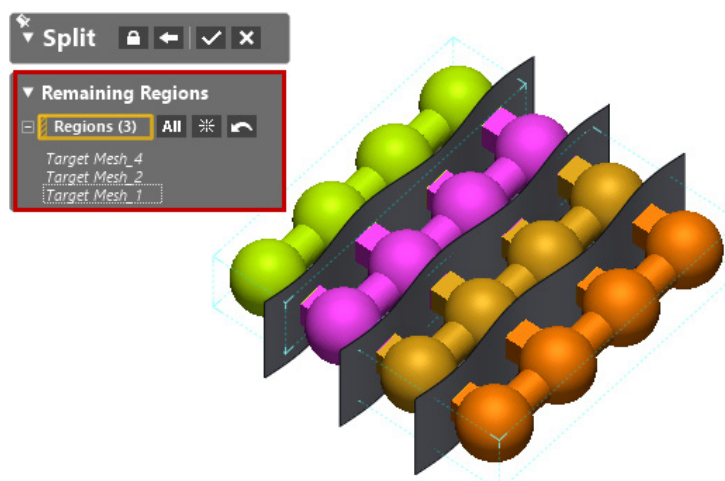
- All resulting mesh portions can be preserved as individual models.
- Multiple split tools can be used in a single operation to divide one or more meshes into multiple models.
- Splitting operations now produce more predictable results, especially when multiple or intersecting tools are used.

Multiple Split Tools

Multiple tools can be used simultaneously to split a mesh, and you can choose which resulting portion(s) to keep. When **Don't Quit Command with OK** is enabled, you can repeat the split operation until the result meets your requirements.



Multiple entities selected as split tools

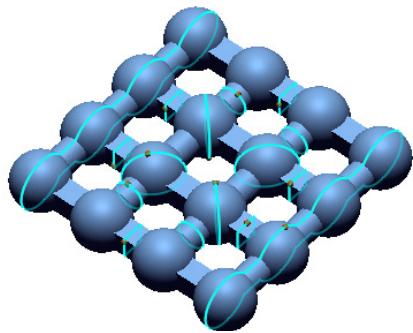


Selecting the mesh portions to retain

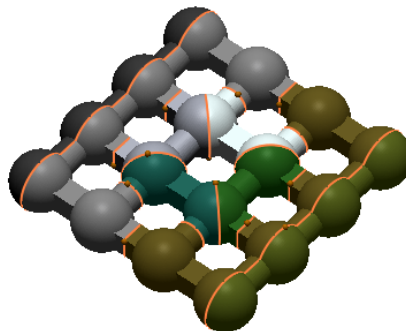
3D Curve Splitting Options

Curve-based splitting has been expanded for working directly with scan data. A new **Project Curve(s) To Nearest Scan** option allows a mesh to be split by projecting 3D curves onto the nearest mesh surface.

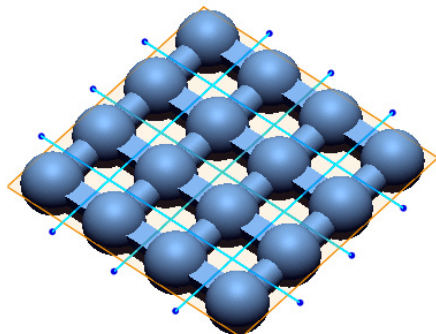
The existing directional projection method remains available, allowing curves to be projected along a specified direction when a controlled cutting direction is required.



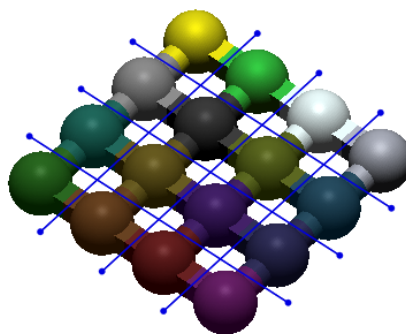
*Splitting a mesh
using curves projected onto the nearest mesh
surface*



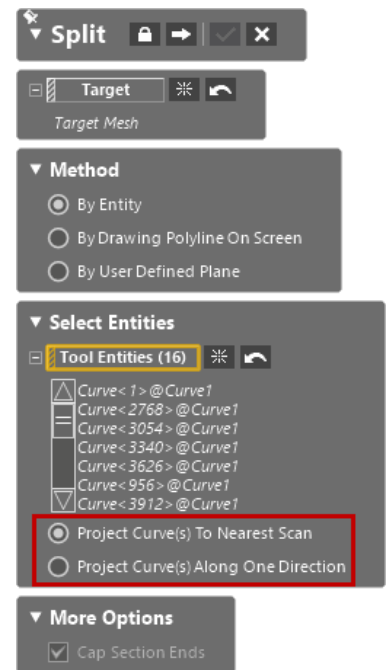
Split mesh results



*Splitting a mesh
using curves projected along a plane normal*

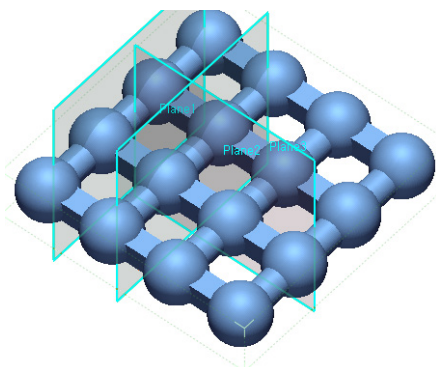


Split mesh results

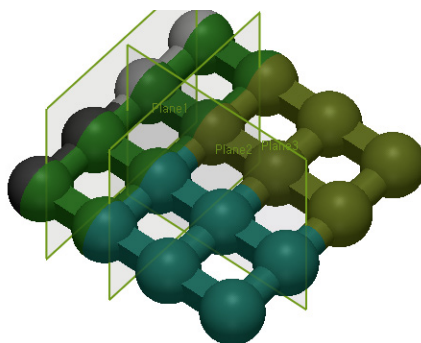


Expanded Split Tool Support

Planes can now be used as additional split tools. In addition to existing supported split tools such as **Regions, Curves, Faces, Surface and Solid Bodies**, and **Meshes**, planes can now also be selected directly as split tools, enabling more flexible workflows when preparing mesh objects for editing and inspection.



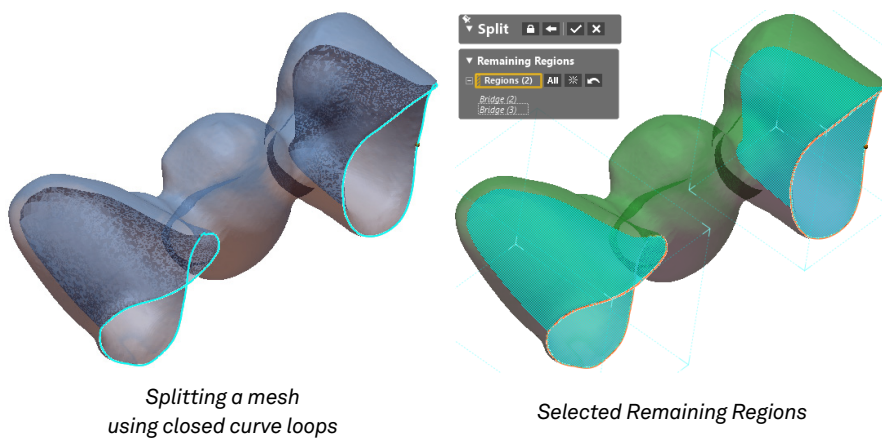
*Splitting a mesh
using existing planes*



Split mesh results

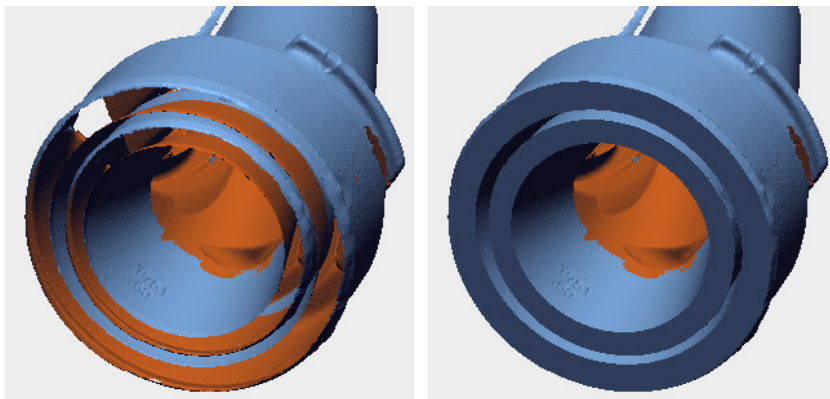
Improved Handling of Regions When Splitting with Closed Curves

Splitting a mesh using closed curve loops now provides a more reliable workflow for retaining and selecting both the inner and outer regions. This makes it easier to continue editing or processing the remaining portions of the mesh after the split operation.



Improved Support for Complex Profiles

When splitting with multiple enclosed concentric profiles, the command can now cap section ends automatically, producing cleaner and more usable results and reducing the need for additional repair operations.



Improved Robustness and Quality of Results

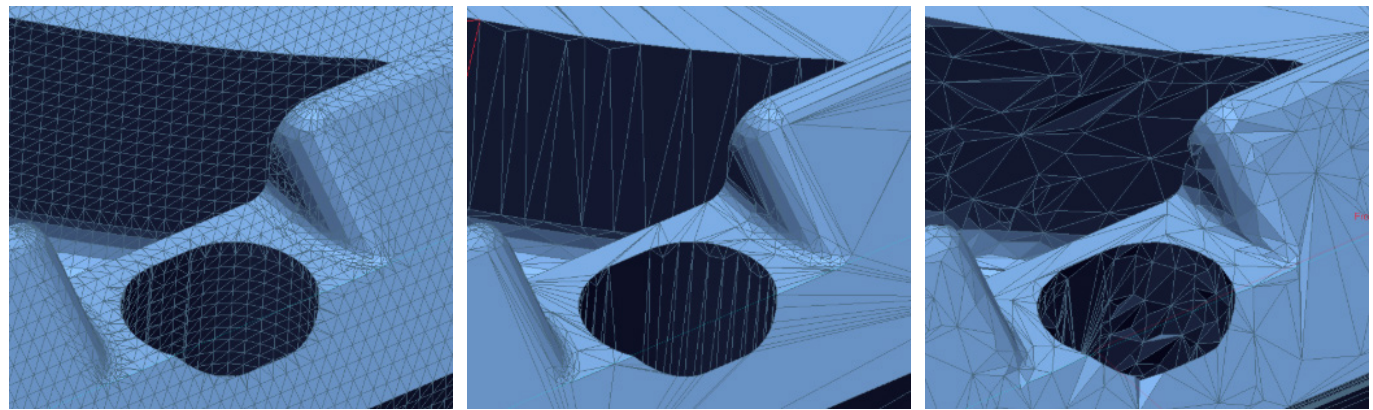
Several issues related to the **Split Mesh** command have been resolved, improving overall robustness and the quality of split results. For details, refer to the [Measured Tools](#) section in the **Fixed Bugs** list.

Decimation Enhancements

The **Decimate** command has been improved to provide clearer control, higher-quality results, and faster performance.

Design-Intent Aware Decimation

Mesh Decimation now considers design intent, producing higher-quality results, particularly for tessellated meshes used in 3D printing.



Original Mesh

Decimation in Geomagic Control X 2025.1.0

Decimation in Geomagic Control X 2024.3.x

Improved Decimation Performance

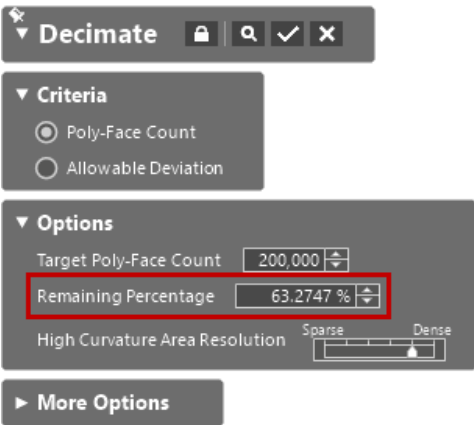
The **Decimation** algorithm has been optimized for faster processing. Performance improvements up to 2x-4x can be seen depending on the mesh data and decimation parameters. These improvements apply not only to **Decimation** but also to **Batch Processing** workflows.

Robust and Better Results

The **Decimation algorithm** has been updated to ensure that it always yields a watertight mesh with no defects and achieves the target poly-faces count.

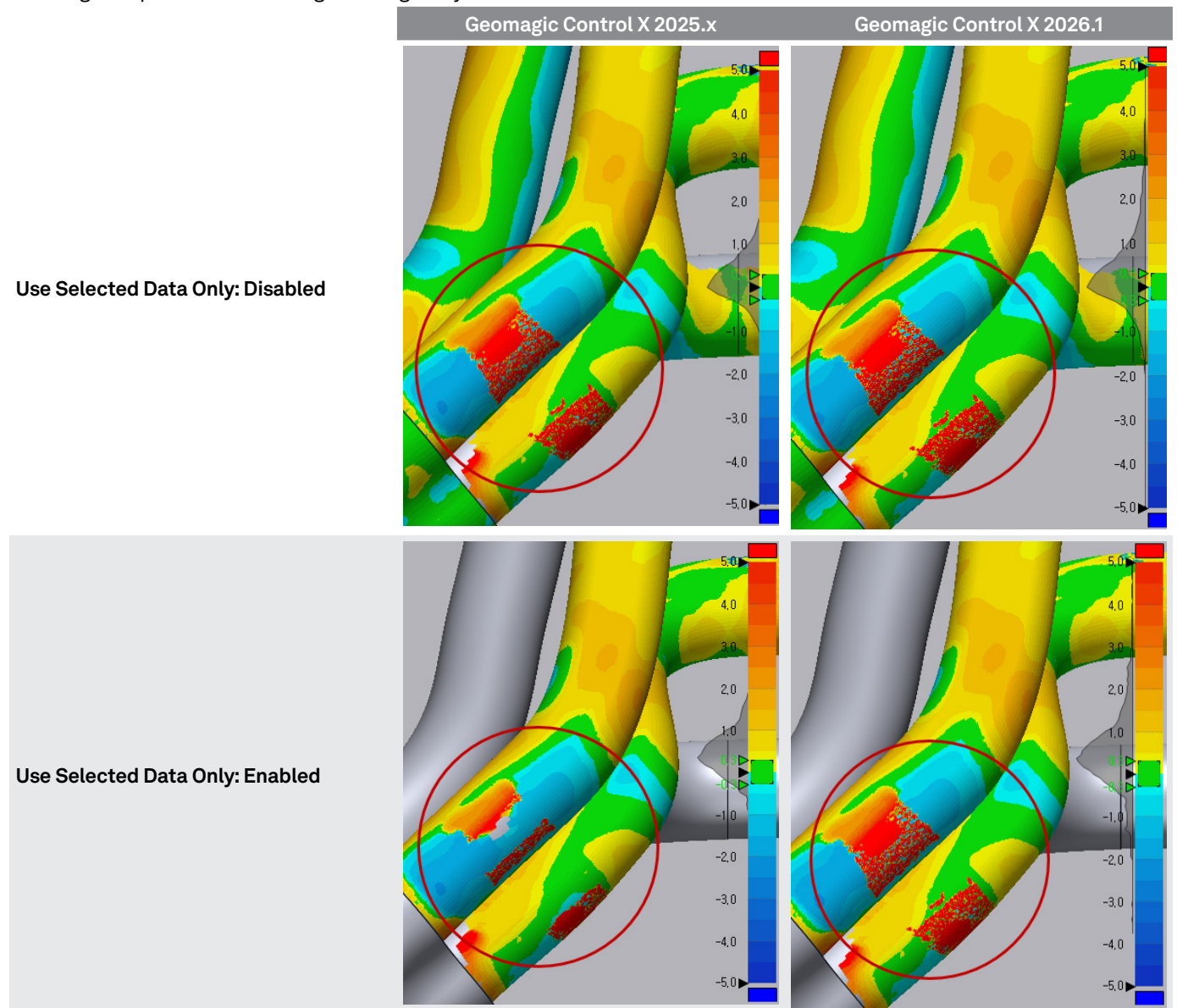
Clearer Reduction Control

The **Reduction Ratio** option has been renamed to "**Remaining Percentage**", making it easier to understand how much of the original points remain after decimation.



Consistent Targeting in 3D Compare CX-E CX-EC

3D Compare now keeps the target Measured Data consistent whether or not you use the "**Use Selected Data Only**" option, reducing unexpected result changes during analysis.



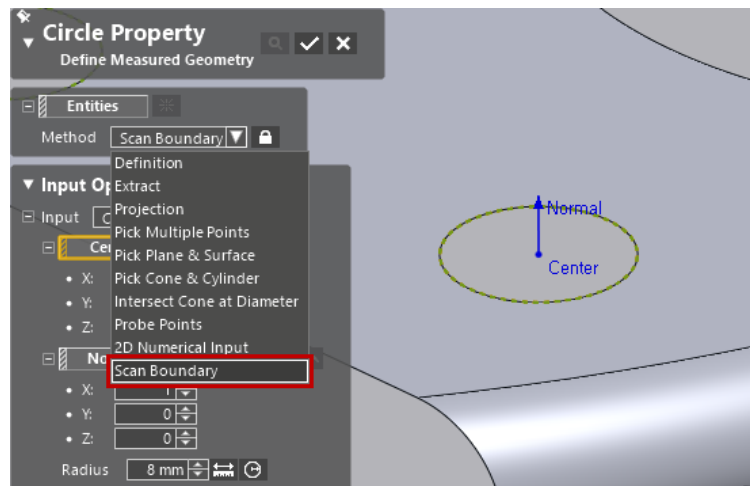
Note: Several issues related to the 3D Compare command have been resolved, improving overall robustness. For details, refer to the [3D Compare](#) section in the Fixed Bugs list.

Constructed Geometry Improvements CX-E CX-EC

Constructed Geometry workflows have been improved for more reliable export and enhanced boundary inspection support.

New Scan Boundary Method for Boundary Geometry

A new **Scan Boundary** method has been introduced for geometries such as **Circle**, **Slot**, and **Rectangle** created at the boundary of scan data. This method allows you to use boundary geometry defined from scan data or imported from ASCII boundary geometry to search for corresponding reference geometries during manual pairing, improving efficiency in boundary inspection workflows.



Correct Size and Position When Exporting Constructed Geometry

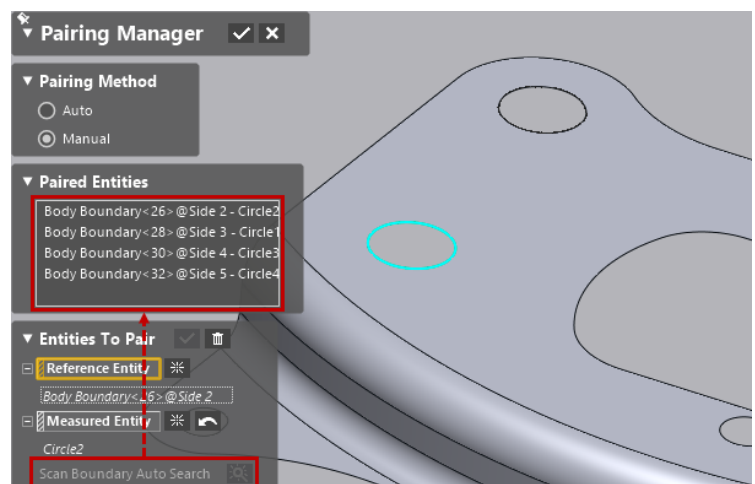
Exporting Constructed Geometries has been improved to ensure that planes, including infinite planes, are exported with the correct size and position. This provides more reliable downstream use of exported reference geometry in other applications.

Boundary Inspection CX-E CX-EC

Workflows for Boundary Inspection were enhanced with the new “**Scan Boundary Auto Search**” option and ASCII boundary geometry support for hole features, enabling automated feature pairing and improved boundary data treatment from 3D scanners.

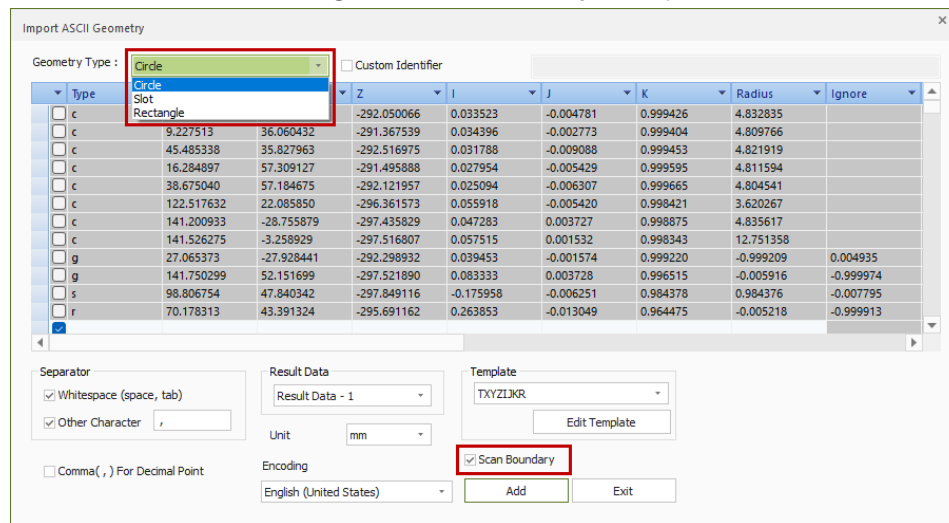
Scan Boundary Auto Search

A new “**Scan Boundary Auto Search**” option in the Manual Pairing method has been introduced, speeding up boundary pairing and reducing manual setup for boundary inspection workflows.



ASCII Boundary Geometry Support

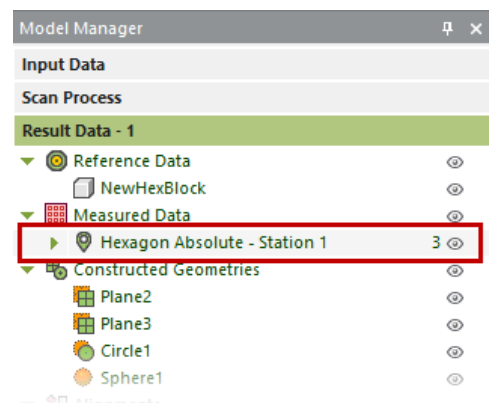
Geomagic Control X now imports **ASCII boundary geometry** from scan data via **Import ASCII Geometry**, allowing boundary hole features (circles, slots, rectangles) to be used directly for inspection workflows.



UI/UX Improvements

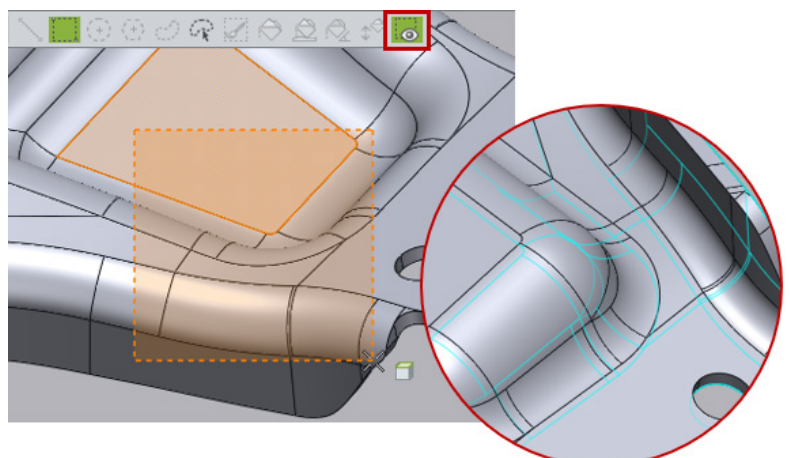
Clearer Group Names for Captured Data from LiveInspect **CX-EC**

Measured data groups created by LiveInspect tools now use a clearer “**Station**” naming convention, making large projects easier to navigate and review.



Select Visible Only for CAD Entities **CX-E** **CX-EC**

You can now use “**Visible Only**” to limit CAD face selection to entities visible in the current view, reducing accidental back-face picks and making selection more predictable in complex models.



Selecting only the visible top CAD face using the Visible Only option
(the bottom CAD face in the red circle is not selected)

Removed Unnecessary “Suppressed” Display Option CX-E CX-EC

The “**Suppressed**” checkbox has been removed from the Display options in Geomagic Control X, reducing confusion during viewing.

Selection Highlighting Behavior Restored CX-E CX-EC

Selection highlighting for point clouds returned to the previous behavior, reducing over-highlighting when multiple point clouds with different material colors are present.

File I/O

Updated Support for Latest CAD Versions

Native CAD file import has been updated to support the following versions:

CAD Application	File Extension	Version Supported	Comments
CATIA V5	.catpart, .catproduct	R8 to V5-6 R2026	Geometry and PMI (.catpart)
Creo (Pro/E)	.prt, .prt.*, .asm, .asm.*	Pro/E 16 - Creo 12.0	Geometry and PMI (.prt, .prt.*)
Inventor	.ipt	V6 - V2026	Geometry Only
	.iam	V11 - V2026	Geometry Only
NX	.prt	11 - NX2506	Geometry and PMI
SOLIDWORKS	.sldprt, .sldasm	98–2026	Geometry and PMI (.sldprt, 2014-2026)
STEP	.stp, .step	AP203, AP214, AP242 ¹⁾	Geometry Only

1) STEP AP242 PMI is limitedly supported and available as a ‘Preview’ feature found under the Add-Ins menu.

This update ensures compatibility with the latest CAD versions for seamless data exchange.

DMIS report for Simulated CMM Points CX-E CX-EC

DMIS report (DMO file) can now include tolerance, deviation, and pass/fail results for **Simulated CMM Points**, making results more complete for downstream review.

LGSx File Import CX-E CX-EC

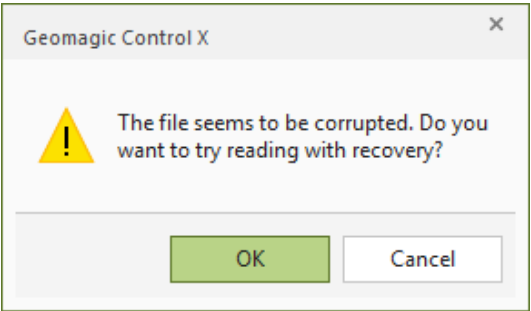
Added support for importing **LGSx** files generated by **Leica Geosystems laser scanners**.

LGSx is a reality capture file format that stores a complete scanning project in a single, highly compressed package for easy sharing and viewing. While LGSx files can contain multiple data types, Geomagic Control X imports **point cloud** and **texture** from the file.

Data can be exported to the LGSx format from the latest versions of **Register 360**, **Cyclone 3DR**, and **Pegasus Office**.

Improved Native File Reliability CX-E CX-EC

The native **CXProj (Geomagic Control X)** file writing and loading process has been enhanced to better handle file corruption. If a corrupted CXProj file is opened, the application now displays a notification offering to attempt recovery, allowing you to open the modeling project with recovered data whenever possible.



Documentation CX-E CX-EC

Tutorial Sample Projects Open Reliably

[Tutorial CXProj sample files](#) now open without closing the tutorial window, so you can follow each lesson without interruptions.

Expanded Text Scripting Documentation

[Text Scripting documentation](#) has been expanded and updated, making Python automation easier to learn, adopt, and reference.

Licensing Enhancements CX-E CX-EC

Updated Licensing System

Geomagic Control X now incorporates the latest [CLM 12.0](#) Licensing System, which includes improvements and bugs related to licensing issues. For details, see the CLM release notes at <https://support.geomagic.com/s/article/CimLM-Licensing-Support>.

4 FIXED BUGS

Note: The **CX-E** / **CX-EC** labels indicate features that are also available in Geomagic Control X Essentials and Geomagic Control X Essentials Connect software packages.

The following is a list of issues that have been resolved since the last version of Geomagic Control X:

Common

• GV-31988: CX-E CX-EC	The application crashed on launch when FARO SCENE Redistributable Package installation was blocked.
• GV-31736: CX-E CX-EC	In some cases, the installer did not detect or install a required Microsoft Visual C++ component, which could cause the application to crash immediately after launch.
• GV-31483: CX-E CX-EC	The License Manager shortcut sometimes launched in a minimized state instead of opening normally.
• GV-31125: CX-E CX-EC	When selecting poly-vertices from mesh and point clouds at the same time, the mesh was sometimes not selected depending on the viewpoint.
• GV-31111: CX-E CX-EC	Unnecessary toolbars were listed under the Toolbars tab in the Customize dialog.
• GV-30576: CX-E CX-EC	A Constructed Plane was sometimes not created when using the "Min. Circumscribed" fitting type.
• GV-29754: CX-E CX-EC	When opening a CXProj file, an extra window sometimes appeared stating "Your browser isn't supported."
• GV-29186: CX-E CX-EC	In Best Fit Alignment with "Use Selected Data Only" enabled, selecting a CAD face sometimes selected the back face.
• GV-28009: CX-E CX-EC	The application sometimes crashed on launch and during use on a specific Lenovo laptop model.
• GV-25944: CX-E CX-EC	Clip View display sometimes did not work after reselecting the same entities.

Measured Tools

• GV-32241: CX-E CX-EC	The application crashed when using Undo or Redo in the Split command.
• GV-30310: CX-E CX-EC	The Split command sometimes did not work correctly when using another mesh as the split tool.
• GV-28809: CX-E CX-EC	Splitting a mesh using one or more surfaces did not always divide the mesh into all intended sections.
• GV-18190: CX-E CX-EC	The application crashed when decimating a textured mesh.
• GV-14300: CX-E CX-EC	Triangulation caused the application to crash when clicking Accept after a preview.

Compare Tools

• GV-31892: CX-E CX-EC	Black lines appeared on the 3D Compare color map after editing color bar colors.
• GV-31356: CX-E CX-EC	3D Compare tag colors did not update correctly after changing the warning ratio.
• GV-31290: CX-E CX-EC	The "Geometry + Deviation" export type was available only for 3D Compare and not for other Compare features.
• GV-30981, GV-30596: CX-E CX-EC	3D Compare tags did not update after deleting measured data.

GV-30847: CX-E CX-EC	The "Show Tag" option in Navigate 2D Compares did not work.
GV-30464: CX-E CX-EC	3D Compare results were incorrect when "Selected Data Only" was used.
GV-30429: CX-E CX-EC	In 3D Compare, color map boundaries did not align with contour lines when tolerance colors were enabled.
GV-30378, GV-2630: CX-E CX-EC	3D Compare calculations failed or were incorrect with "Use Selected Data Only" when no pairing search results were found.
GV-27469: CX-E CX-EC	The 3D Compare colorbar histogram displayed differently between v2022.1 and v2023.3+.
GV-10012: CX-E CX-EC	Color map colors were inconsistent on the same face with the same Color Averaging setting.

GD&T Tools

GV-27925, GV-21319: CX-E CX-EC	Saving a .cxproj file reset the GD&T Tolerance Table currently used in Metrology, causing tolerances from the Metrology table to be applied incorrectly and displayed as 0 until the Metrology dialog was reopened.
--	---

Automation

GV-31368: CX-E CX-EC	Automation Server sometimes ignored files added to the Monitoring folder after their inspections had completed and the jobs were removed from the Inspection List.
GV-31708, GV-28906: CX-E CX-EC	Inspection results differed depending on the selected report export format.

Scripting

GV-31502, GV-31489, GV-31488:	In Visual Script Editor, Pass/Fail report states were sometimes incorrect or changed after saving and reopening a CXProj file, or when checking pass/fail results from scripts.
GV-31439:	The application crashed when Filter Noise in Text Script used an invalid input type.
GV-31431:	Filter Noise in Text and Visual Script allowed a mesh as an input, and applying Filter Noise sometimes left the mesh with 0 poly-faces instead of showing an error message.
GV-31260:	DMO export with the Result Data name in Visual or Text Script sometimes failed after changing the application language.
GV-29830:	In Visual Script Editor, the application crashed when Triangulate was run with an unsupported target type.
GV-29784:	Exception messages were unclear when a referenced mesh name did not exist.
GV-29580:	In Text and Visual Script, Plane N-Division Start/End points were sometimes shown in the wrong locations when editing the result.
GV-31416:	For objects created by the Measured (Combine) or Measured (Merge) action (where target entity names were merged), using the Edit (Rename) action in Visual Script sometimes displayed the error message "The entity name is not unique" even when the name was unique.
GV-31262:	The report file still opened after generation even when the "Don't Pop-up Report" option was enabled in Report (Report Manager) action in Visual Script.
GV-28614:	Running a Visual Script that used a previously created alignment sometimes caused the application to crash.
GV-29257:	The Text Script Editor tab sometimes froze.
GV-26132:	An option in the GD&T (Line Profile) action was displayed with incorrect capitalization.

Hardware Interface

- **GV-29948:**
CX-EC The application sometimes crashed when using the Creaform Portable 3D Scanners.
- **GV-29946:**
CX-EC VXeElementsApiImplementation.exe did not exit after scanning finished in VXeElements.
- **GV-23359:**
CX-EC Scan data was not transferred to the application even after VXeElements API was closed and the plug-in was restarted.

LiveInspect

- **GV-32077:**
CX-EC Scanning a clipping plane during Live Capture caused the Hexagon Absolute Arm to disconnect and RDS Agent to report a hardware connection error.
- **GV-31545:**
CX-EC AICON probe plug-in appeared twice in the HW list in LiveInspect Settings.
- **GV-29745:**
CX-EC The application crashed when attempting to remove a probe point while probing in LiveAlign.
- **GV-29728:**
CX-EC Incorrect mouse help was shown for Probe Location.
- **GV-13420:**
CX-EC Voice guidance was missing for a CAD vertex.

Report

- **GV-30454:**
CX-E CX-EC When exporting a report as a TXT file in Microsoft Windows 11, characters appeared corrupted.

File I/O

- **GV-32263:**
CX-E CX-EC When generating a DMIS report for an inspection project containing Simulated CMM Points, the Direction Results of the simulated CMM points were output as 0.0.0.
- **GV-32264:**
CX-E CX-EC When generating a DMIS report for an inspection project containing Simulated CMM Points, deviation results were reported as INTOL even when no scan data existed.
- **GV-32056, GV-30777:**
When importing PMI for hole diameter pattern dimensions created in NX, the pattern settings were lost.
- **GV-31249:**
CX-E CX-EC DMIS Report did not include information for features with non-English names.
- **GV-30393:**
PMI import produced more errors in newer versions of Control X.
- **GV-30049:**
PMI import failed when multiple faces were set in the Surface Profile feature.
- **GV-29939:**
After importing PMI from NX, the material condition symbol was sometimes missing on annotations created on model surfaces.
- **GV-28643:**
After importing PMI defined in SOLIDWORKS, tolerance values for all Geometric Tolerancing features (Flatness, Surface Profile, Perpendicularity) were displayed identically, even though different values were specified in SOLIDWORKS.
- **GV-11415:**
When importing PMI from a STEP 242 file, GD&T references were assigned to incorrect faces and some note information was not imported.

Documentation

- **GV-32063:**
CX-E CX-EC Several Help topics contained typos.
- **GV-31432, GV-17943:**
CX-E CX-EC The Index and N-Division on Seed options in the Point command using the N Division method were missing descriptions in Help.
- **GV-31269:**
CX-E CX-EC Help included a topic describing the Support tab even though the tab is no longer available in Geomagic Control X.

GV-31268, GV-31266, GV-31259, GV-31247, GV-31238, GV-31135:	The Japanese Help file contained multiple issues, including outdated images, incorrect descriptions, and broken characters.
CX-E CX-EC	

Localization

GV-31369:	The Select (By Geometry) action in Visual Script Editor contained an untranslated word.
GV-31268, GV-31266, GV-31248, GV-31242, GV-30716:	Multiple issues with missing, incorrect, or truncated translations occurred in the Japanese user interface.
CX-E CX-EC	

Hexagon is the global leader in measurement technologies. We provide the confidence that vital industries rely on to build, navigate, and innovate. From microns to Mars, our solutions ensure productivity, quality, safety, and sustainability in everything from manufacturing and construction to mining and autonomous systems.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 24,800 employees in 50 countries and net sales of approximately 5.4bn EUR.

Learn more at [hexagon.com](https://www.hexagon.com)