

Geomagic[®] Wrap[™]

The Ultimate 3D Scan Processing Solution



Release Notes

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1 INTRODUCTION

We are pleased to announce the availability of the new version of Geomagic Wrap.

Geomagic Wrap is the ultimate 3D scan processing solution that enables users to transform point cloud data, probe data and imported 3D formats (STL, OBJ, etc) into 3D polygon meshes for use in manufacturing, analysis, engineering, design, entertainment, art, and archeology.

Enhancement to this release of Wrap include Scripting 3.0, advance Texture Map controls, new polygon and selection tools. Additionally, Wrap now supports 2D Dimensioning for fully analyzing mesh data for manufacturing and 3D Printing.

For more information, please visit www.geomagic.com.

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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 list. In such cases, these configurations are not officially supported by 3D Systems, Inc.

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 Web site for the latest system requirement information and specific qualified systems.

DOWNLOAD AND INSTALL SOFTWARE

You can download and install the software from gettingstarted.geomagic.com, select the Geomagic Wrap product, then click the "Download" button to download Geomagic Wrap.

In addition, you can manually check for any updates using the [Check for Updates](#) command. If 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.

ACTIVATE LICENSE

Geomagic Wrap requires license activation to run the application on your PC. You can choose to use an evaluation license for a 15-day period or activate a permanent license by using a virtual or physical dongle.

After you start your application, the License Utility window opens. The License Utility allows you to activate and use the Geomagic Wrap software.

NOTE: When you launch the License Utility, you can click the Help button to read the Licensing Guide.

You should have received an email from 3D Systems with your activation code. If you have not received an email from 3D systems, contact them at Geomagic.Support.Americas@3DSystems.com.

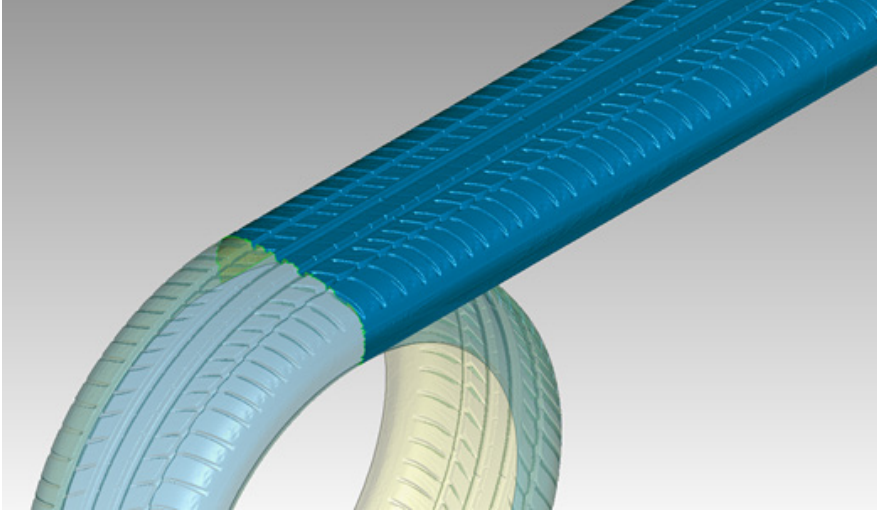
If you are an existing user and have already activated the license on your PC with the previous version of the application, you can run the newer version of the application without re-activating the license.

For more information, go to gettingstarted.geomagic.com, select the Geomagic Wrap product, then click [Licensing](#).

WHAT'S NEW IN 2017.0.0

New Unroll Tool

A new **Unroll** tool has been added to support editing a rolled polygonal mesh. This tool enable you extract barely visible detail, reveal data that has been previously missed due to the perspective of the original sketch, and correct the original design intention.



Dimensioning Tools

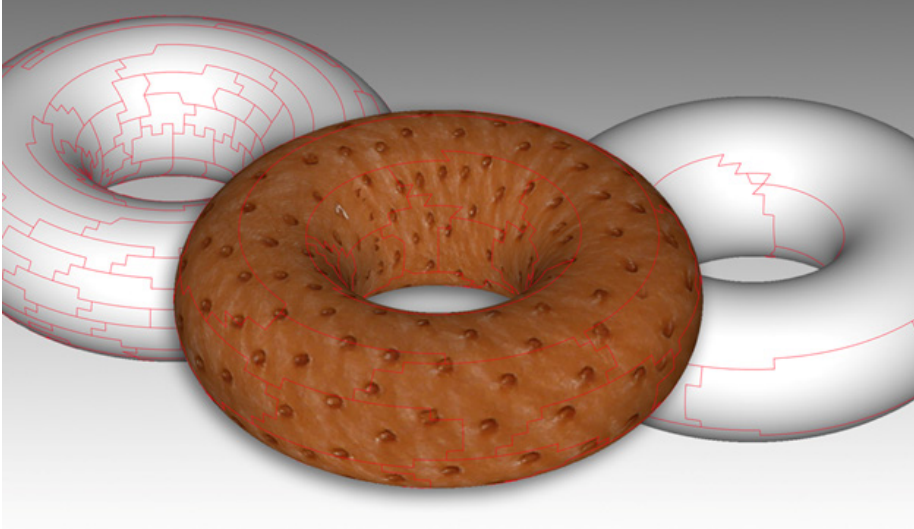
The basic dimensioning tools are now available in the Analysis tab. With the dimensioning tools, you can measure linear and angular dimensions, or radius and diameter of a feature.

Crease Angle Selection

The **Crease Angle Selection** tool has newly been added. You can select an area of an object and easily expand the selection by dragging the mouse up and down.

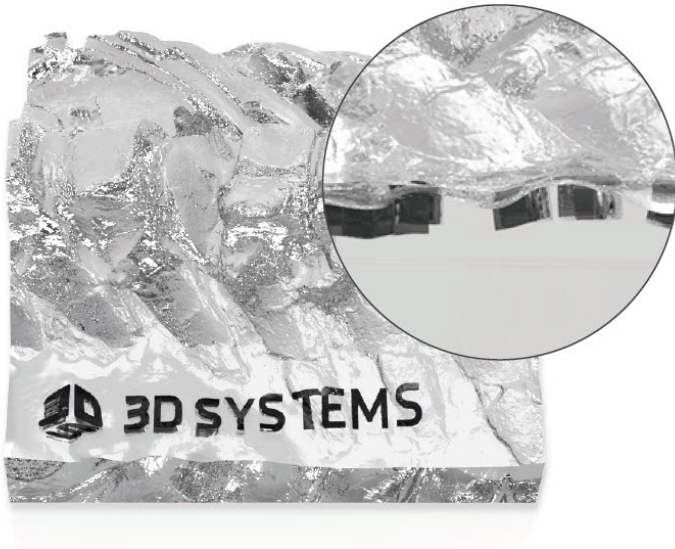
UV Map Creation

Enhanced control of UV Texture Map creation. You can now control over how the UV Texture Map is laid out.



New Options for Engrave - Entrapped Volume

The **Engrave** has been enhanced to allow for offsetting labels into part geometry. You can now select type, "**Entrapped**".



Scripting 3.0

The Scripting module has been upgraded to 3.0. The following is a list of new or moved classes in scripting 3.0.

CAD (moved from core geomagic.api.v2 into the cad extension module geomagic.api.v2.cad)

- BooleanCAD
- BuildCADFromGMCAD
- CADCompareInfo
- ComparePointsToCAD
- CreateCADFromSurface
- CreateMeshFromCADFile
- CreatePointsFromCAD
- CreateSurfaceFromCADFace
- CreateTriSelectionFromCADFaces
- DeleteCADFaces
- EvaluateCAEdge
- EvaluateCADFace
- FindClosestPointOnCAEdge
- FindClosestPointOnCADFace
- FindClosestPointOnCADModel
- IntersectCADByPlane
- IntersectCADModels
- IntersectCADWithRay
- LocateFeatureOnCAD
- MergeCADModels
- ReadCADFromFile
- RebuildCADMesh
- TrimCADWithCAD
- TrimCADWithCurveSet
- UndoCADOperation

Capture (all new extension module geomagic.api.v2.capture)

- CalibrateCaptureScanners
- CalibrateCaptureTurntable
- CaptureDataConversion
- CaptureScanningSession
- ChunkyPointUndo
- DataFilter
- DefaultHardwareListener
- DeviceError
- DeviceManager
- DeviceQueue
- DeviceSession
- IDeviceExitListener
- IGridDataInfo
- IHardwareListener
- IMeshDataInfo
- IQueueListener
- PerformAutomatedScanning
- ScanDataIDArray
- ScanDataTransformArray
- ScanLineClipper
- ScanLineProcessor
- ShowCapture
- ShowCaptureSettings
- SoundPlayer

CoreExt (all new extension module geomagic.api.v2.coreext)

- ExpandBoxByComponents
- OffsetExtruded
- OpenBoundary
- SelectSimpleHoles
- SelectSmallComponents
- SimplifyRegion
- Solidify
- TrimWithPlane

Core (new objects in geomagic.api.v2)

- BestFitParallelPlanes
- BRepTopology
- BuildGMCADFromRegionSet
- CompositeModifier
- CreateTextureFromFeature
- DetectRegionsByFeatureClassification
- ExpandSelectionByDistance
- ExtendBoundary
- FindNeighborhoodByDistance
- FitLineFromRotational
- GetDataStoreValue
- InteractiveWarpMeshByLaplacian
- MarkTextureBoundaries
- ModifyVertexColorBrightness
- ModifyVertexColorClarity
- PlatformBuildInfo
- RemoveNonManifoldVertices
- RemoveVertexColor
- SelectTrianglesByAttribute
- SetDataStoreValue
- SetVertexColor
- SetVertexColorOpacityTransition
- SoftenVertexColor
- TestMeshIntersections
- Torus
- VoxelIntersector
- VoxelMeshExtractor
- VoxelPointsExtractor
- VoxelRenderer

Core (new sample data methods in geomagic.api.v2)

- createBox
- createConicalPoints
- createCylindricalPoints
- createHolePoints
- CreateMeshByPoisson
- createPlanarPoints
- createPlanarPoints2
- createSphericalPoints

Inspection (new extension module geomagic.api.v2.inspection)

- Correspondence
- CreateCorrespondence
- DimensionQueryEvaluator
- EditCorrespondence
- Feature2DRecreationInfo
- Feature3DRecreationInfo
- FilterCorrespondence
- GetInspectionObjectManager
- GetRecreationInfo
- InspectionAnnotation
- InspectionAnnotationEngine
- InspectionAnnotationEvaluator
- InspectionDimSrc
- InspectionDimSrcArc
- InspectionDimSrcEvaluator
- InspectionDimSrcLine
- InspectionDimSrcPlane
- InspectionDimSrcPlaneEvaluator
- InspectionDimSrcPoint
- InspectionObjectManager
- InspectionQuery
- InspectionQueryEvaluator
- Parallel3DDimAnnotationEvaluator
- Recreation
- Report
- SetRecreationInfo
- Table
- TableCell
- TargetRecreationInfo

Modeling (new extension module geomagic.api.v2.modeling)

- BooleanVoxelSpaceVDB
- CalcVolumeVoxelSpaceVDB
- CheckInterferenceVoxelSpaceVDB
- ConvertMeshToVoxelSpaceVDB
- ConvertVoxelSpaceToMeshVDB
- CopyVoxelSpaceVDB
- CreateLatticeStructureVDB
- CreateMaterialVolumeVDB
- CreateMetaballShapeVolumeVDB
- CreateShapeVolumeVDB
- FilterVoxelSpaceVDB
- MorphologyVoxelSpaceVDB
- OffsetVoxelSpaceVDB
- ParserComposeLatticeStructure
- ParserComposeMeshVertexColor
- ParserComposeVolumeMaterial
- RayTraceVoxelSpaceVDB
- RebuildVoxelSpaceVDB
- SliceVoxelSpaceVDB
- TransformVoxelSpaceVDB
- VoxelizeMeshVDB
- VoxelSpaceVDB

gfxV2 (new classes and methods geomagic.app.v2.gfxV2)

- setTransform

guiV2 (new classes and methods geomagic.app.v2.guiV2)

- GeolmageFrameWidget

wrappapp (new geoapp module geomagic.app.v2.wrappappV2)

- DeviationAnnotation
- Dimension
- FeatureAnnotation
- GDTCallout
- GetMeasurementsFromModel
- Measurement
- WallthicknessAnnotation

Geoapp (new methods geomagic.app.v2)

- addSelection
- appendMacroCallbackNodeToActiveWorkflow
- appendScriptNodeToActiveWorkflow
- getMacroArguments
- getSelectionByName
- runMacro
- setMacroReturnValue

Enhancements

Macro / Scripting

The [Group](#) functionality is now available in script / marco / automation.

Upgraded Licensing platform and Installer

The licensing platform has been updated so that it enhances security and robustness, as well as displays the license type in the title bar.

Object Mover

Enhanced the ability of the [Object Mover](#) so that it can be snapped to the World Coordinate System. This helps you quickly reorient the coordinate system of an object to the World Coordinate System.

Select by Draft Angle

In the [Select by Draft Angle](#) tool, you can now define the pull direction by typing xyz values for two points.

4 FIXED BUGS

BUG FIXES IN 2017.0.0

This section lists issues that have been resolved since Geomagic Wrap v2015.1.3:

- **GWR-1:** Report: Move Device command causing crashes.
- **GWR-4:** Can't create Offset Plane from WCSYS Plane.
- **GWR-5:** Object features shift when object is duplicated.
- **GWR-7:** Object Mover Erroneously Clears Transform.
- **GWR-8:** Settings in Display Tab are not recorded in inimi settings file.
- **GWR-12:** Boolean of 2 Closed Objects produces objects with holes.
- **GWR-13:** False transform is applied to object in Object Mover.
- **GWR-14:** Crash on rotate template in AutoSurface.
- **GWR-16:** Defects in some cases of Engraving.
- **GWR-17:** Custom Texture turns back on after Manual Alignment.
- **GWR-18:** [I/O] Foundation cannot import fls files that were created by FARO SCENE5.2.
- **GWR-22:** bestFitPlane.run() hangs Wrap forcing a reboot of my computer.
- **GWR-25:** Template Bug
- **GWR-26:** Select by draft angle-Pick Points.
- **GWR-27:** Selection Bug
- **GWR-50:** Crash on Sculpt with Knife tool in Wrap ADP Mainline Build.
- **GWR-72:** Wrap has error of Script of Multithreading_maxThread and Multithreading_minThread.

5 KNOWN ISSUES

Capture

- If you are using the [Quick Probe](#) command and you are probing a part with an existing CAD plane, probing a stray point can cause a mismatched set of features to be created between the Test and Reference objects.

Plug-ins

- The [Scanning Plug-In](#) setting (on the [Options](#) dialog box, [Hardware/Digitizers](#) section) allows you to select probing-only device plug-ins. When a probing-only device is selected using this drop-down list, no settings appear when you use the [Scan](#) command on the [Capture](#) tab. Make sure that you select the appropriate scanner plug-in using the [Scanning Plug-in](#) setting.

Miscellaneous

- If you are using an HP Laptop that uses the NVidia OpenGL driver, Control can crash when you rotate an object in a 3D PDF, due to an issue with the Adobe driver. You can solve this problem by changing the NVidia OpenGL driver's DirectX setting (under [Edit](#) / [Preferences](#) / [3D & Multimedia](#)) to 8.0 instead of 9.0.



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