

Create accurate digital models from physical parts

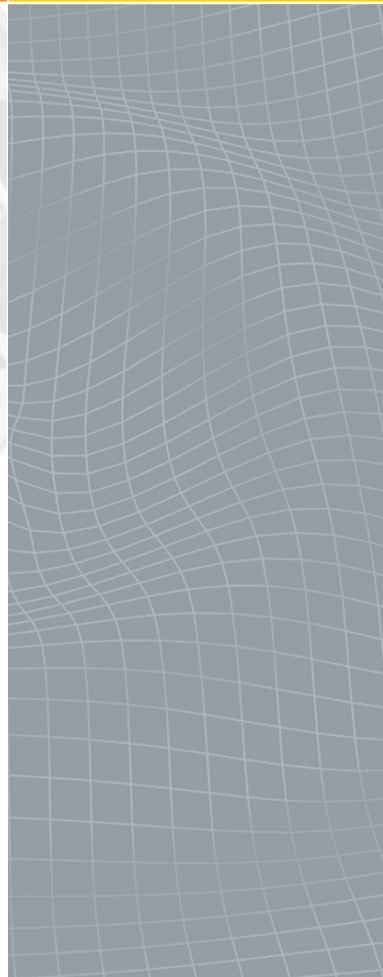
Converging reality and the digital worlds of design, manufacturing, and analysis with unparalleled automation, Geomagic Studio gives engineering professionals simplicity without compromise. Digital shape reconstruction integrates a digital representation of an object to design engineering workflows commonly providing tenfold gains in productivity.

Represent real-world objects in CAD, CAM, or CAE systems. Supporting all leading 3D scanners, Geomagic Studio captures point clouds, facilitates scan registration, creates a polygon model, and generates a NURBS model for import into any CAD, CAM, or CAE system. Easily process large data sets from sophisticated scanners with speed. Combine powerful automation with manual controls to accelerate and simplify preliminary modeling processes with full user control.

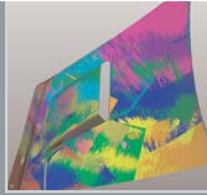
Customize products at the speed of change. Capturing existing shapes and constructing optimized digital production models, Geomagic Studio enables cost-effective rapid manufacturing and mass customization. Automatically repair surface models and create new functional components and structures that maintain the properties of the original shape. Send final models directly to digital production equipment to create unique, one-of-a-kind parts with greater efficiency than conventional production methods.

Model objects for digital analysis. Use Geomagic Studio to capture hand-tooled or as-produced objects for analysis software such as computational fluid dynamics (CFD) or finite element analysis (FEA). Through digital analysis, create better products, increase product performance, ensure safety, and reduce manufacturing or human error and risk. Digitally capture the shape of an existing cast or molded part, then refine it to enable cost-efficient or superior production materials and processes. Produce watertight models in hours, not weeks to accelerate digital modeling for analysis to produce better products faster.

Depend on the platform for possibilities. Geomagic Studio offers the ability to process and model limitless, complex shapes for an infinite variety of applications. In addition to automotive and aerospace industrial breakthroughs, Geomagic Studio fuels advances in medical devices and dentistry that result in better and safer results for patients. Professionals in art and archaeology preserve, analyze, and reconstruct some of the world's greatest art and antiquities. In combination with automation and ease-of-use, digital shape sampling and processing (DSSP) technology in Geomagic Studio satisfies requirements in virtually any industry where speed and accuracy are important.



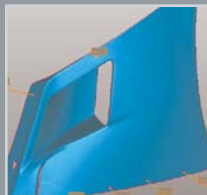
Geomagic Studio delivers digital shape reconstruction simply and without compromise. Automation and simplified workflows combined with patented surface- and curve-fitting mathematical algorithms are certified at the highest levels by PTB. Use Geomagic Studio to:*



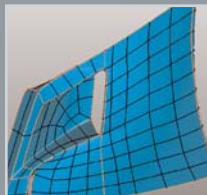
ORIGINAL SCANS



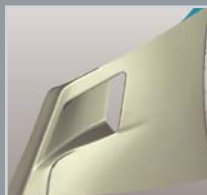
MERGED SCANS



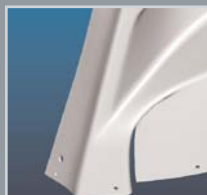
WRAP POLYGONS



PATCH LAYOUT



NURBS SURFACE



CAD SURFACE

Capture

Geomagic Studio accepts data from any 3D scanner or digitizer. Plug-ins for leading scanners allow users to directly control and manage data capture. Options for fully automated or manual registration, noise reduction, and other data refinement satisfy requirements for both speed and control.

Using ultra-fast triangulation algorithms, Geomagic Studio creates polygon models with the click of a button. Large, ordered and unordered data—all are accommodated with speed and ease.

Wrap

Eliminate time-consuming surface reconstruction by mathematically “wrapping” a polygon surface from point cloud data. Geomagic Studio’s automated processing, along with user controls for fine-tuning, creates watertight models for rapid prototyping and digital manufacturing.

Use Geomagic Studio to quickly repair surfaces with holes and jagged edges using curvature-based hole filling, automatic edge sharpening, and other features. Model editing capabilities include creation of tunnels and holes in addition to smoothing of surfaces and boundary edges, offsets, and shell surfaces in preparation for digital manufacturing.

Shape

Take advantage of Geomagic Studio’s one-click conversion of complex polygon models into accurate NURBS models for CAD, CAM, and CAE systems.

User-defined layout capabilities can override automatically generated patches for interactive surface editing. Quickly create templates that provide drag-and-drop re-use of patch layouts from one model to the next.

Geomagic Studio is packed with automation features to generate high-quality surfaces with guaranteed continuity. Modeling and verification methods preserve shape topology and adapt to local curvature without compromising consistency with input data.

New in Geomagic Studio 8

Geomagic Studio 8 introduces new advances in surfacing to reduce the processing time on complex parts by as much as 80%. New features include:

- **Intuitive workflow** generates NURBS surfaces easier
- **Powerful feature detection and segmentation** speeds model creation
- **Patch optimization** increases surface model accuracy
- **Adaptive surface fitting** uses less memory and reduces time without sacrificing quality
- **Improved noise reduction and registration** saves time and increases productivity
- **Full control of decimation aspect ratio** optimizes polygon models for CAE applications
- **Licensing wizard** provides easy license request and activation directly through the Internet

Learn More: Obtain detailed product specifications, download success stories, or sign up for a Geomagic Studio demonstration at www.geomagic.com

From aerospace and automotive engineering to dentistry, medical devices, industrial design, art, and beyond – Geomagic Studio with its DSSP technology provides the critical bridge between the physical and digital worlds.

* Physikalisch-Technische Bundesanstalt (PTB) institute certification is accepted worldwide as the leading indicator of accuracy, comparability and reliability for software that extracts measurement results from 3D scanners and coordinate measurement machine (CMM) devices.

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