



3DSYSTEMS



Geomagic

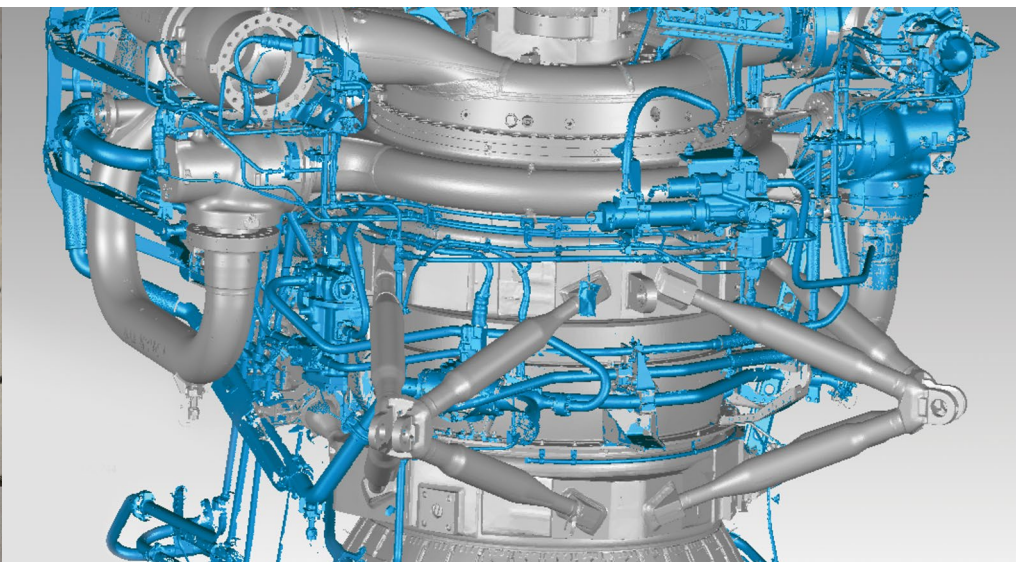
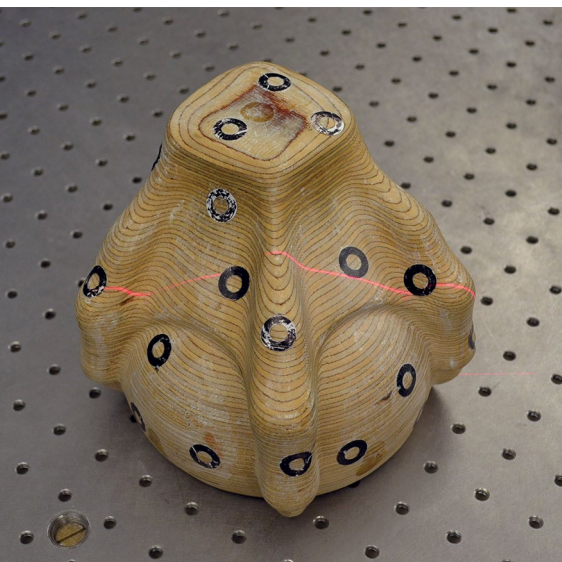
Studio[®]

The Ultimate 3D Scan Processing Solution



The Ultimate 3D Scan Processing Solution

Geomagic Studio® is the complete toolbox for transforming 3D scanned data into highly accurate surface, polygon and native CAD models.



Case Studies

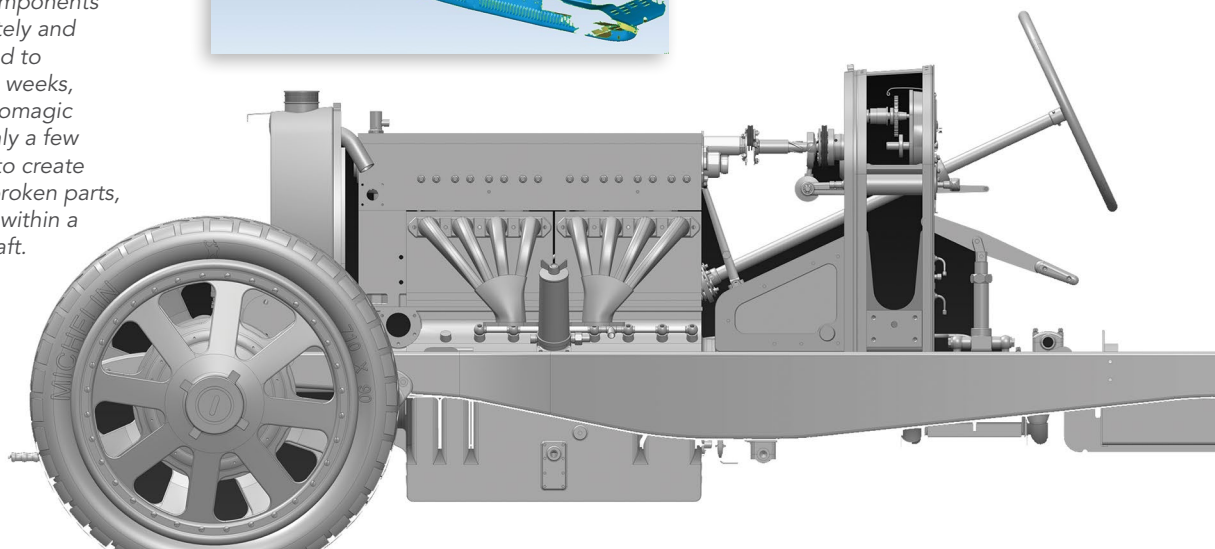
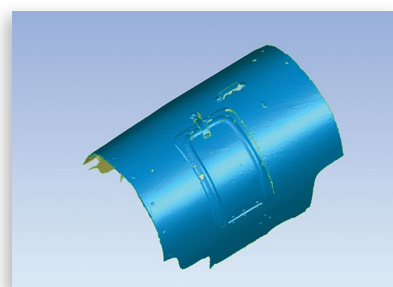
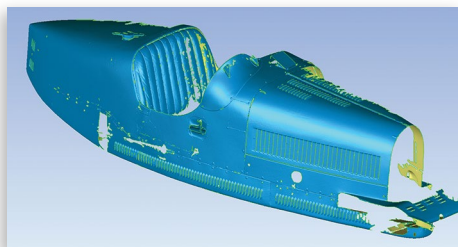
Consumer Product Manufacturing

Having previously outsourced its scanning needs, a cell phone accessory manufacturer implemented in-house reverse engineering, using Geomagic Studio, as part of a campaign to shave product development time without compromising quality. By using Geomagic Studio and 3D scanning in-house, the manufacturer was able to better protect its top-secret designs, export accurate surfaces to CAD, and reduce scanning and processing time by an estimated 50%.

Military

A military organization needed to repair cracked structural components on fighter jets more accurately and quickly. While they once had to ground aircraft for up to six weeks, a solution that included Geomagic Studio cut repair time to only a few days. Engineers were able to create precise 3D replicas of the broken parts, which were then machined within a day and retrofit to the aircraft.

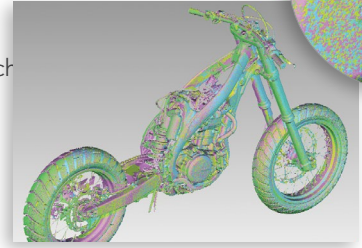
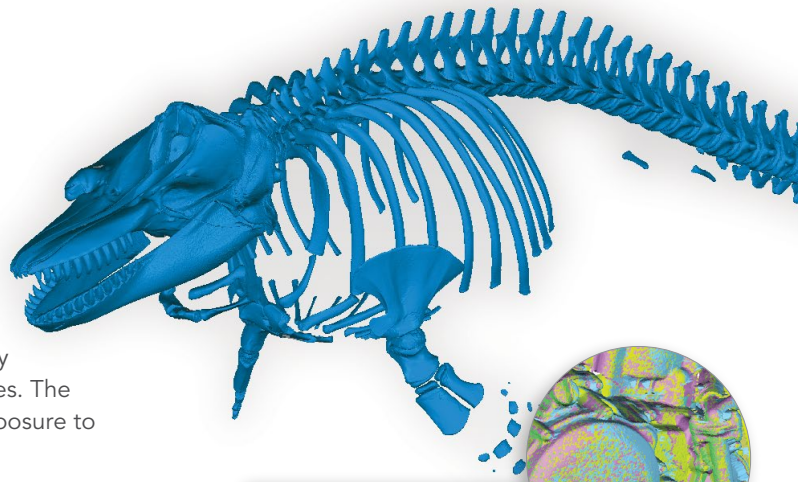
For manufacturers of every type, Geomagic Studio provides the industry's most powerful point cloud editing, mesh editing and advanced surfacing functions in an intelligent, easy-to-use application. Geomagic Studio's precise 3D data processing functions, in tandem with its automated tools, enable users to produce the highest quality models in significantly less time and reduce costly man-hours. For reverse engineering, product designs, rapid prototyping, analysis and CAD export, Geomagic Studio is the ultimate 3D creation tool.



Key Features of Geomagic Studio

Geomagic Studio's expansive array of point cloud and polygon editing features plus powerful surfacing tools help you create high-quality 3D models faster. Additionally, because Geomagic Studio captures design intent from any shape, you can seamlessly transfer parametric models to a number of external CAD packages. The latest version of Geomagic Studio also includes new platform exposure to allow more customization options.

- Support for a wide range of non-contact and probe devices
- Automated point cloud data cleanup, mesh analysis and repair, remeshing tools, patch functionality and more
- Optimized for fast data processing and the ability to effectively handle large, dense point clouds
- Simplified 3D world coordinate system for easy alignment of data
- Python scripting environment allows you to customize point cloud processing workflows
- Included command line-driven version of the software eliminates the computing overhead of a graphical user interface, allowing you to save time and memory
- Export high-quality 3D data in all major neutral polygonal and NURBS formats
- Wide array of hardware plug-ins and supported file formats, i.e., STL, OBJ, VRML, DXF, PLY and 3DS, included at no additional charge
- Direct export of history-based models to major mechanical CAD packages, including Autodesk® Inventor®, CREO® Elements/Pro™, CATIA® and SolidWorks® (optional)
- Seamless export to SpaceClaim® Engineer direct-modeling CAD at the click of a button



Primary Industries

- Aerospace
- Heavy Equipment
- Medical
- Electronics
- Tool and Die
- Consumer Products
- Manufacturing

Image above: 4-year-old whale (SSSC-2011008). SSSC-2011008 was recovered, processed and scanned under NOAA Fisheries MMHSRP Permit 932-1905, Idaho Visualization Laboratory.

Capture, modify and manufacture using 3D content

SCAN

Capture real-world data using scanners and probes



PROCESS

Make exact 3D models directly from the captured data



PRINT

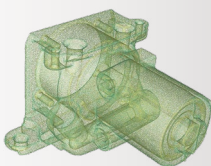
Output to 3D print, CNC, and other downstream processes



Capture, modify and output to CAD

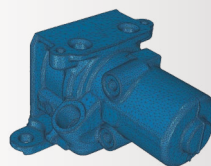
SCAN

Capture real-world data using scanners and probes



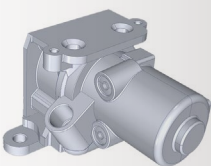
MESH

Automatically create mesh data for output



CAD

Transfer 3D model to history-based CAD platforms



Capture, create and prepare for analysis

SCAN

Capture real-world data using scanners and probes



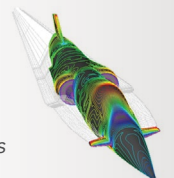
SURFACE

Create surface models for use in downstream applications



ANALYSIS

Use data directly in FEA, CFD and simulation platforms



FUNCTIONALITY	Geomagic Studio®
Scan directly into product via add-ins	•
Import points (.asc, .txt, .ac, etc.)	•
Import mesh (.stl, .obj, etc.)	•
Basic point editing (delete, sample, reduce noise)	•
Advanced point editing (add points, fill point holes, offset)	•
Basic mesh editing (delete, fill holes, trim, mesh doc)	•
Advanced polygon editing (sandpaper, patch, sculpt, shell)	•
Intelligent extraction of surfaces/solids/sketches from mesh	•
Complete sketching and solid modeling capability	•
Mesh-to-solid deviation analysis	•
Exact Surfacing (incl. AutoSurface)	•
Parametric Exchange with CAD	•
3D PDF generation	•

Specifications subject to change. Complete specifications at www.geomagic.com.

ABOUT US

3D Systems is a leading global provider of 3D content-to-print solutions including 3D printers, print materials and on-demand custom parts services for professionals and consumers alike. The company also provides CAD modeling, reverse engineering and inspection software tools and consumer 3D printers, apps and services. Its expertly integrated solutions replace and complement traditional methods and reduce the time and cost of designing and manufacturing new products. 3D Systems products and services are used to rapidly design, communicate, prototype or produce real functional parts, empowering customers to create and make with confidence.

HIGH-QUALITY ENGINEERING

Geomagic's automated software functions allow users to quickly perform complex operations on point cloud and probe data. International bodies certify our software products for accuracy, and our products have been thoroughly tried, tested and proven by our partners, developers and customers across the years. We remain strongly committed to supporting customers' engineering, design and manufacturing workflows.

ESTABLISHED WORLDWIDE OPERATION

Geomagic has teams in 10 countries and key offices in USA, Europe and China. A worldwide network of Geomagic partners and resellers serves thousands of customers in 62 countries.

WORLD-CLASS SUPPORT

Geomagic offers comprehensive support for all our software and hardware customers. See www.geomagic.com for free technical support, multi-language Knowledge Base information, free tutorial videos, data, instructions and how-tos. Multi-language telephone technical support and full access to software updates, downloads and plug-ins are available for maintenance customers only.

WORLD-CLASS TRAINING ON GEOMAGIC PRODUCTS

Geomagic offers consulting as well as in-office and on-site training classes across the globe in multiple languages. Training classes are taught by world-class trainers with real-world engineering experience.

Image credits: Shape Fidelity, Stuart Brown and 3D Engineers (page 2), Idaho Visualization Laboratory (page 3)

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