

geomagic®

FASHION®

Transform physical objects into 3D CAD-ready surfaces



In today's competitive global marketplace, distinctive design and speed to market are critical for achieving market leadership. In addition, industrial designers and mechanical engineers must balance form with fit and function. Successful innovative design incorporates aesthetics and ergonomics while taking into account performance, quality, cost and manufacturability.

Bring physical objects into your digital designs

With Geomagic Fashion, you can jump start your design process by seamlessly bringing physical forms into the digital realm — leaving more time to explore and refine concepts. Whether starting with a clay model, incorporating organic elements or reusing components from an existing physical part, you can leverage these important assets and turn them into digital models.

Capture and reproduce design intent

Thanks to its built-in intelligence, Geomagic Fashion can quickly extract design intent from existing physical objects — creating optimized, CAD-ready surfaces that require minimal downstream editing. Geomagic Fashion automatically identifies analytic surfaces (planes, cylinders, cones and spheres) and swept surfaces (extrusions and rotationals). Plus, it automatically creates high quality complex freeform surfaces — a task that requires a tremendous amount of time in traditional CAD packages. The result - you'll spend less time creating the initial form, leaving more time to focus on fit and function.

Accelerate the modeling process

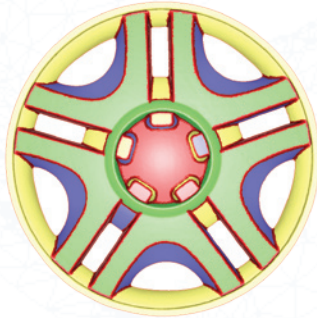
Geomagic Fashion's intuitive, step-by-step surfacing process allows you to produce high quality surfaces faster than ever before, while advanced tools provide early feedback and greater control. Automatic surface extension and trimming enable you to extend neighboring surfaces to intersect and create sharp edges for easier manipulation in CAD. Constrained surface fitting allows you to accurately capture design intent.

Minimize late changes through early collaboration

Communication and collaboration lead to better design, greater performance and shorter product development time. By transforming design ideas into high quality 3D models early in the design process, Geomagic Fashion enables teams to rapidly evaluate design concepts and provide valuable input on styling, functionality, manufacturability and costs. Aesthetic and functional requirements can be addressed early — avoiding costly changes and delays later in the process.

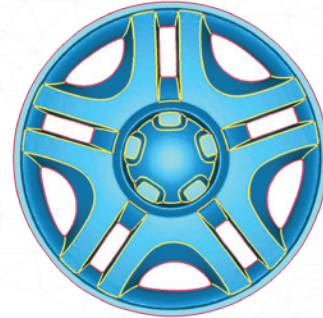
Geomagic Fashion guides you through the surfacing process in four easy steps.

Step 1: Detect Regions



Geomagic Fashion automatically detects the different surface regions based on the curvature of the model. Geomagic Fashion then extracts the contour curves, which are used to define the surface boundaries.

Step 2: Edit Contour Curves



Contour curves can be fine-tuned to ensure that they are optimally placed along edges and features. Contours not automatically extracted can be added manually by drawing directly on the mesh.

Step 3: Classify Regions



Primary surface regions are classified according to eight different surface types: planes, cylinders, cones, spheres, free-form surfaces, extrusions, drafted extrusions and rotations. Each surface is displayed in a different color for easy identification.

Step 4: Create Surfaces



Finally, primary surfaces are fitted based on parameters such as fitting tolerance, outlier percentages, dimensions and 2D profiles. Deviation analysis shows the accuracy of the fitted surfaces.

geomagic[®]
www.geomagic.com

Geomagic Worldwide Headquarters
PO Box 12219 RTP, NC 27709 USA
+1 800 691 1839 +1 919 474 0122
Regional Offices: Americas, Europe, Asia

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