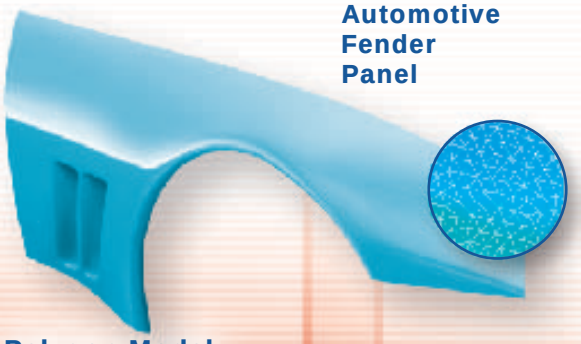
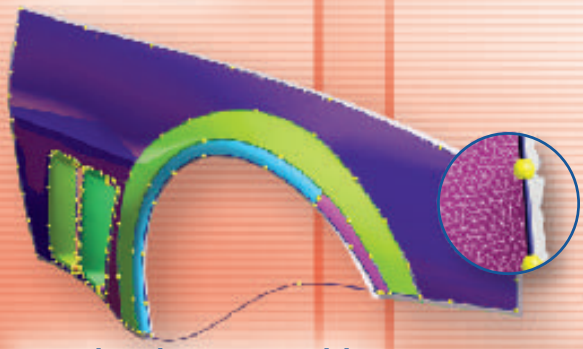
cadmus Fashion™

Surfacing Design Software



Polygon Model



Functional Decomposition

Trimmed Surfaces

CAD Model

Manufactured Parts

The only reverse engineering solution for transforming design intent into CAD models

Cadmus Fashion is a revolutionary new reverse engineering application for surfacing and industrial design. Working with 3D scan data, Cadmus Fashion can:

- Produce quality trimmed NURBS models from polygon models or point cloud data
- Recreate the original design intent in the CAD model
- Maintain surface continuity over disconnected regions
- Generate desired CAD data structures
- Ten-fold productivity increases over traditional CAD software when processing complex or free-form surfaces

These benefits are made possible with the introduction of a new methodology: functional decomposition. Free-form shapes are decomposed into a hierarchy of independent primary surfaces and dependent feature surfaces. The primary surfaces are automatically generated approximating the original surface data, and controlled by a specified tolerance - without the need to specify the number of control points. The smoothest possible surface is generated within the given tolerance. The feature surfaces have good quality, and guarantee smooth connections to the adjacent surfaces, automatically generating trim lines and providing a variety of fitting types.

www.geomagic.com

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Software Features

Point Processing
- uniform sampling
- curvature sampling
- outlier removal

Polygon Creation and Editing
- triangulation
- decimation
- hole filling

Surface Definition
- user-assisted segmentation

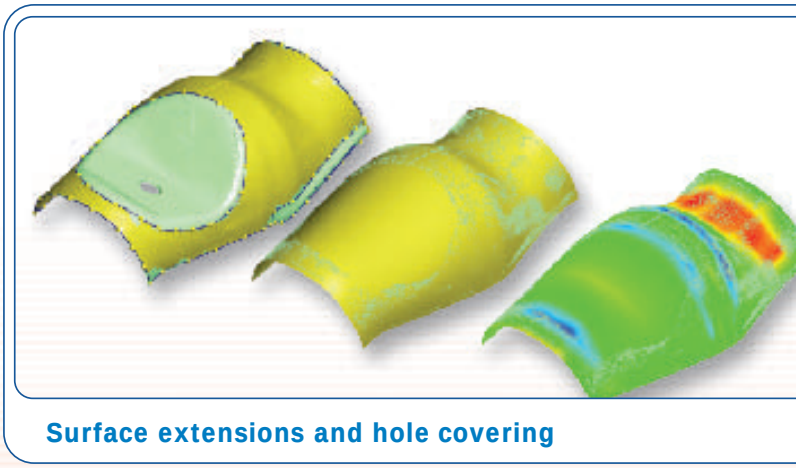
Primary Surface Fitting
- automatic surface generation
- tolerance-based fitting
- adaptive control point density
- natural surface extensions
- able to ignore holes and defects

Feature (Secondary) Surfaces
- constrained fitting guarantees continuity
- constant and variable radius rolling ball blends
- swept free-form surfaces
- N-sided patches
- automatic trimline relocation

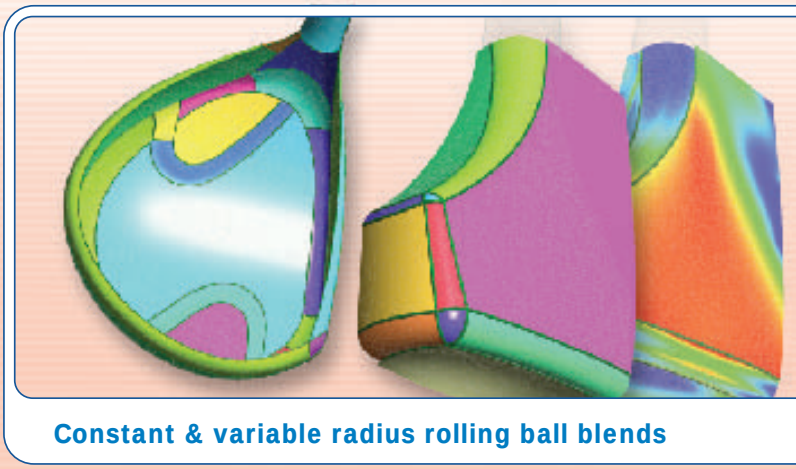
Analysis Maps
- curvature
- deviation
- contours
- isophotes
- environment

User Interface
- two simultaneous windows for regions and related surfaces

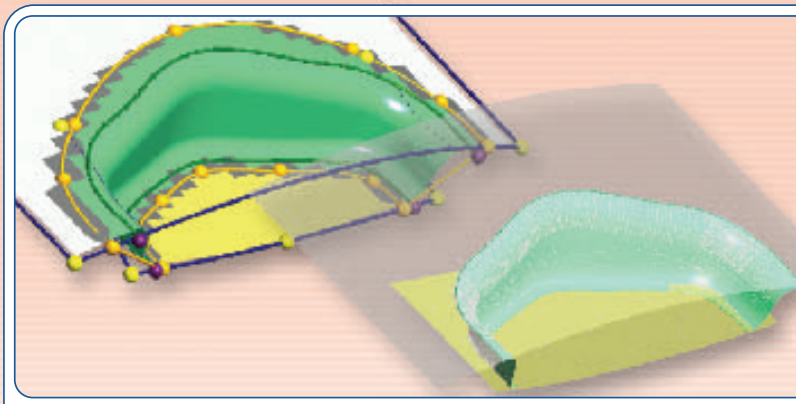
File I/O
- point / polygon import:
  - AC - Steinbichler
  - OBJ
  - STL
  - VDA - VDAFS
  - VTK
  - 3DP - ASCII xyz point cloud
- polygon export:
  - OBJ
  - STL
  - VTK
- surface export:
  - VDA - VDAFS II
  - IGS - IGES 5.2
- general:
  - BSP - Cadmus Fashion project file
  - direct data transfer with Geomagic Studio



Surface extensions and hole covering



Constant & variable radius rolling ball blends



Swept free-form feature surfaces

raindrop geomagic®

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