



The solution for the processing of 3D scans

Reshape is a reverse engineering solution designed to help import and manage files from the 3D digitalization of physical models in a CAD environment, to operate within prototyping, design review, finished elemental analysis and inspection. It is designed for companies in the automotive, transportation, moulds, product design, consumer product and medical industries, to name a few. In general, it is recommended whenever it is necessary to start from a physical prototype in wood, resin, etc. made by a modeling engineer or from any real object that has to be reproduced in a 3D computer image to process or change it. In many contexts, such as a few styling sectors and for specific Clay Modeling shapes (creation of a physical model), this is still a very important stage, especially for those who do not have powerful modeling tools such as ThinkDesign's GSM. Reshape builds upon think3's thinkcore Kernel by EGS, a company specializing in the development of software products and solutions for the processing of data from 3D scans (www.egsolutions.com).



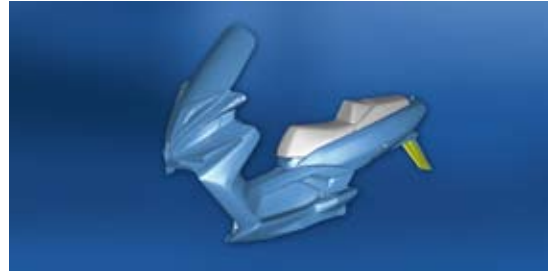
Toy model

Functionalities

Reshape can import mesh or stl files from 3D digitalization machines in .stl, .rve, .obj and .ply formats, and after the points reduction, cleaning and healing of the mesh, it can rebuild the surfaces of these files, if necessary. It includes automatic tools that enable the extraction of character curves, theoretic intersection curves, fillet edges and other meaningful curves lying on the mesh. These automations deliver good quality results. Anyway, it is still possible to operate manually where needed, exploiting all the functionalities provided by the integration with the ThinkDesign suite, such as the execution of mesh symmetries and patterns from the partial digitalization of physical models. The surface creation stage is not mandatory and not necessary for the whole model: users can choose not to reconstruct surfaces on the mesh to preserve its "character". In fact, sometimes, with artistic creations or toys for example, real models have higher detail levels that could be lost in the healing and reconstruction stages.

That extra something

A multi-year cooperation on a reverse engineering project between think3's R&D team and a leading company in the transportation industry produced an extremely powerful functionality which automatically creates very high quality surfaces. Starting from a defined patchwork of curves, this feature creates high quality surfaces on top of the mesh. The main differentiating element of this tool, compared to other existing reverse engineering solutions, lies in the fact that it produces trimmed surfaces, which means that the visible part is defined by the border curves determining the required domain, whereas the basic surface is often a simple four-sided and its quality is much higher compared to what the user could get with traditional reverse engineering techniques. This is the same approach as the Capping in ThinkDesign's GSM, already used and very popular among users: the quality of this technology now serves a full automation. With this feature, not only do users produce high quality surfaces in a very fast way, but the resulting model is not different from the one a CAD modeling expert would create manually in a longer time.



Reshape's absolute differentiator

The reverse engineering scenario offers various product levels:

Quick – Low Quality. These systems can rebuild very quickly but their quality level is low due to their automatic triangularization.

Slow – High Quality. Systems without automation involve a manual reconstruction stage, the quality of results depends on users' skills and is therefore extremely variable and always takes longer.

Quick-High Quality. Reshape has this position thanks to its features, because it brings together the speed of automation with the inherent quality of its powerful GSM³ engine.

Benefits

Thanks to its speed and quality, Reshape delivers immediate benefits: reduced acquiring/reconstruction time, reduced manual adjustments of surfaces, and it is more consistent with the digitalized shape in case of high quality digitalization. But the main benefit emerges when Reshape's output is implemented in ThinkDesign suite's CAD environment and thinkPLM suite's data management. The integration with ThinkDesign Styling, ThinkDesign Tooling, ThinkDesign Professional and thinkPLM provides a wide range of tools from the consolidated think3 solution: modeling functionalities, GSM assemblies, rendering, 2D tables and PLM for a comprehensive lifecycle management of reverse engineering information.

Mktg 03/2008

System requirements for Reshape

Minimum

- Vista™, XP Professional x64 Edition, XP Professional/Home SP2 or higher, Microsoft® Windows® 2000 professional/Server SP4 or higher
- Intel® Pentium 4 2 GHz or equivalent SSE2-enabled processor for AMD systems
- 1 GB System memory (RAM), 1.5 GB for Vista™
- 1 GB Virtual memory (paging)
- 600 MB Hard disk space for a typical installation
- 64 MB OpenGL™ 1.4 Graphics Accelerator
- Microsoft® .NET Framework Version 2.0
- Microsoft® Internet Explorer 6.0 SP1 or higher

Suggested

- Vista™, XP Professional x64 Edition, XP Professional/Home SP2 or higher, Microsoft® Windows® 2000 professional/Server SP4 or higher
- Intel® Pentium 4 2.4 GHz or equivalent SSE2-enabled processor for AMD systems
- 1.5 GB System memory (RAM), 2 GB for Vista™
- 2 GB Virtual memory (paging)
- 600 MB Hard disk space for a typical installation
- 128 MB OpenGL™ 1.4 Graphics Accelerator
- Microsoft® .NET Framework Version 2.0
- Microsoft® Internet Explorer 6.0 SP1 or higher

think3[®]

www.think3.com

© 2008 think3 Inc. All rights reserved. Think3, the think3 logo, ThinkDesign Styling, ThinkDesign Engineering, ThinkDesign Tooling, ThinkDesign Professional, thinkPLM, thinkteam are registered and unregistered trademarks of think3 Inc. All other trademarks, product names and company names or logos mentioned herein may be the property of their respective owners.