netfabb®
Software for 3D Printing

netfabb Professional 5

New Features in netfabb Professional 5

Overview based on netfabb Professional 5.2 including most important features from previous netfabb versions

Usability improvements

- Automatic Repair one-click button solution to fix our part with advanced and powerful repair tools.
- Undo-Button: reverse the changes step by step
- Overall enhanced user interface and usability for more intuitive use
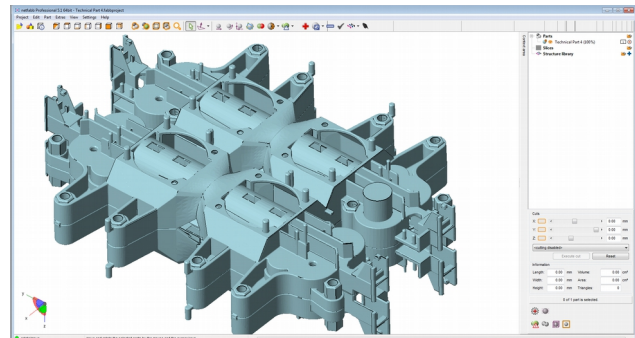
Repair

- Professional, fast, reliable and automatic part repair - even in most complicated cases
- Professional macro-scripting of repair steps and automatic repair routines
- Customizable repair scripts: e.g. reduce triangles, refine triangles, prefix & suffix tool to automatically name your parts etc.
- Manual repair: determine precise repair settings
- Remove parallel planes
- Close holes
- Fix flipped triangles
- Stitch triangles
- Remove double triangles
- Remove degenerated triangles and surfaces
- Remove tiny shells
- Wrap: Get the out surface of model fast and reliable (create one single outer shell). A real time saver, if you have meshes with unwanted internal structures.
- Merge many shells into one shell
- Remove overlapping triangles: Detect and select triangles which are overlapping. Doing this you can then extrude those triangles and smooth the mesh in this area. This will elliminate the overlapped triangles and close holes in your mesh.
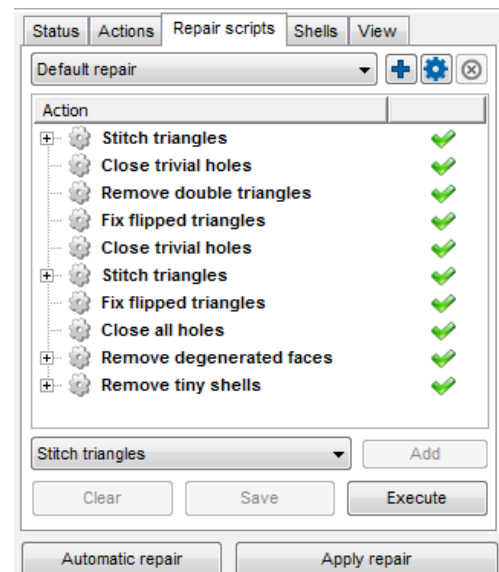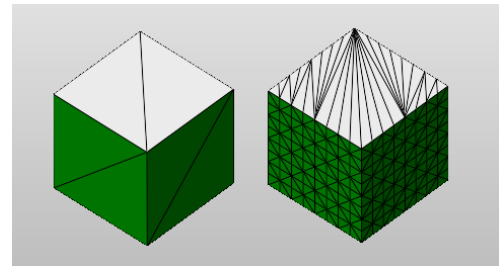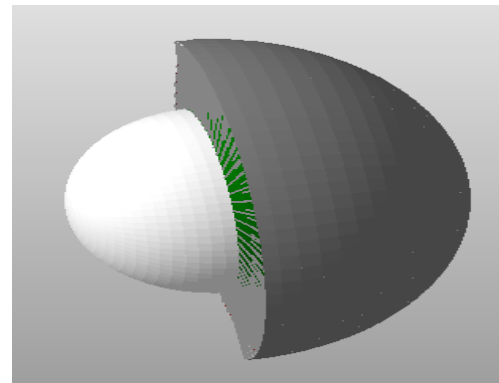

Define your own automatic repair scripts
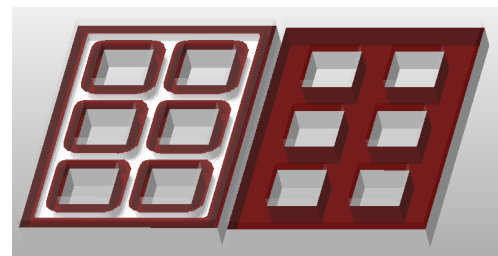
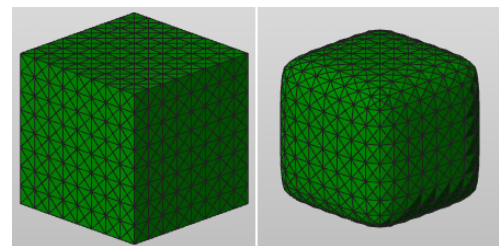*Wrap tool*

Edit, design and mesh manipulation

- Professional editing of triangulated files
- Easy editing with transparent view and clip planes to access hidden areas and the inside of parts for editing
- Most stable and reliable 3D mesh boolean on the market: combine and create new parts; merge, subtract and differentiate parts
- Reduce triangles and file size (including a preview option)
- Refine and smooth the mesh
- Remesh: create a completely new mesh of your part
- Compare meshes with each other
- Create Shells, hollow parts
- Remove Self-Intersections
- Remeshing: rearrange triangles
- Extrude triangles and surfaces
- Smooth triangles: Using an enhanced interface including a preview option you can smooth the mesh easily and fast.
- Retriangulation
- Hollow parts
- Cut parts
- 3D Extrude: Now you can also scale ("extrude") your mesh or selected areas of triangles in 3D, that means in all directions.
- Advanced cut tools
- Split large parts
- Z-Compensation: Implement an intentional anti-stretching in your model. A deformation often happens due to the laws of physics when the model is finally printed. With Z-Compensation you can counteract to this in advance and save printing material.
- Add and merge 3D text on parts
- Extrude 2D images to 3D: Convert your pictures and logos into a mesh (emboss logos).
- Compare meshes with each other
- Remesh: create a completely new mesh of your part
- Part library with predefined primitive and complex shapes. New primitives are: screw, nut, whistle, mold, gear wheel, grid rectangle, grid hexagon, grid cycle, hyperboloid, bitmap, heigthmap, convex hull (packing wrap), brick, bracelet, vase and fractal
- The primitives and geometric shapes in the part library are all adjustable
- Surface smoothing
- Deform the mesh on a triangle level and move single nodes. This enables you to manipulate the mesh on the most detailed level.
- New renderer: Even files with huge triangle numbers are now fast displayed. You can now view textures in the Mesh Repair mode. In addition, you can make your part transparent.
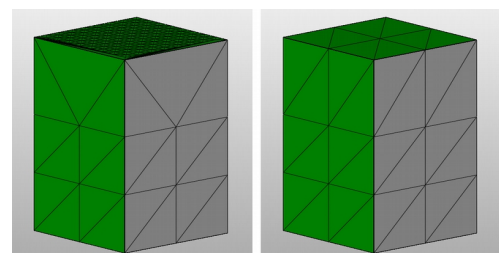- Exact part to part and part to surface orientation
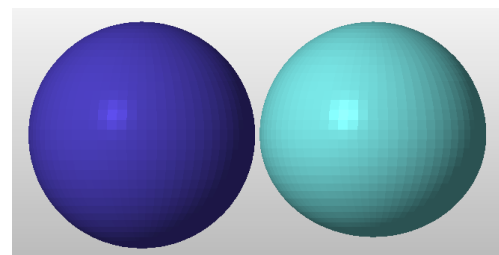

Refine triangle mesh

3D Extrude


Smooth triangles

Reduce triangles

Z-Compensation

Business workflow and process improvement

- Macro scripting for machine-specific part manipulation
- Integrated batch mode for autonomous repair, scaling, refinement, triangle reduction, part grouping and renaming of hundreds of files.
- Automatic creation of quotes and build reports including images and part properties
- Quick calculations based on volume, dimensions and surface area for quoting, management and quality control
- Quote quickly and accurately and get accurate part properties for accurate pricing
- Define your own quote and report templates
- Analyze part features to predict costs and build issues
- Control all parameters related to costs, quality and process stability
- Working with multiple platforms and build envelopes and the same time increase your work efficiency and productivity significantly: Prepare multiple build jobs for multiple machines and applications simultaniously.

Create your own quotes with only a few click

Slicing

- Always create 100 % flawless slices – guaranteed
- The netfabb slicing tool has been a separate add-on and is now fully included and advanced in netfabb Professional 5
- View and export slices in many formats (see file format data sheet)
- Cut and boolean editing for slices
- Integrated slice editor with offsets, filling, cutting and point reduction operations on slice level
- 2D offset for slices
- Apply calculations to slices
- Convert slices back to triangulated meshes for quality control
- Filling with hatch rotation
- Review the slices slice by slice and save them in different formats.
- Supported slice file formats:
- SLI, CLI, SLC, SSL, SLM, CLS, USF, CLF, ABF, PNG, BMP, SVG, DXF, MTT and PS format.

Always perfect slices

Boolean operations for slices

*Set exact layer size*

View & manage

- Define naming options for your parts
- Realtime part collision detection: check live and automatically whether your parts overlap each other.
- Advanced triangle selection
- Clip planes: Cut the view on any axis and view your mesh from the inside out as a 3D slice.
- Save parts or STLs as one part
- Open all files in a ZIP file
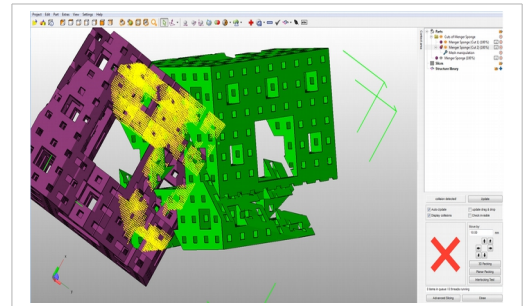
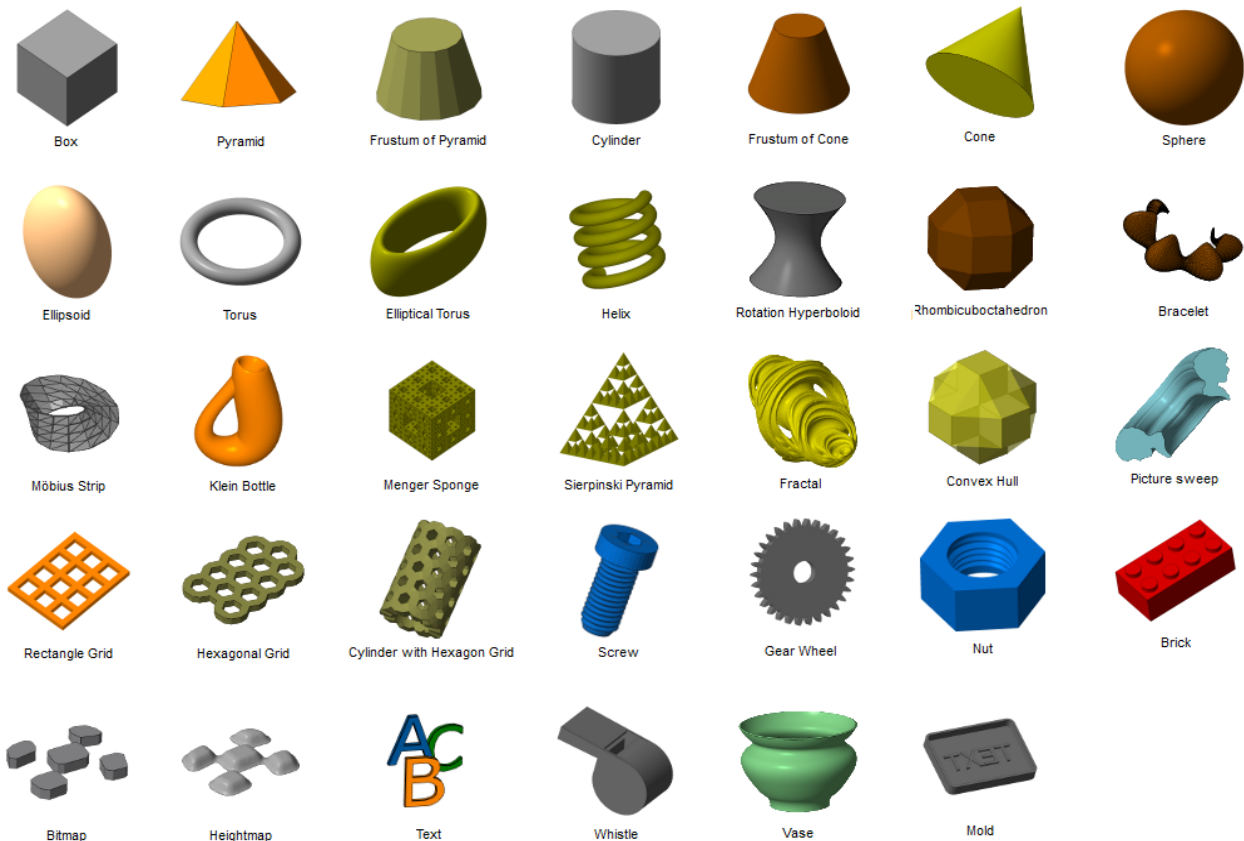

Live collision detection

Kinect Interface

- Directly use your Microsoft Kinect scanner to make scans and load the scanned data directly into netfabb for fixing, closing holes and further editing and adjustment. Apply all the powerful netfabb tools on your scans from the Kinect scanner and prepare them for 3D printing and manufacturing as quickly and efficiently as possible.
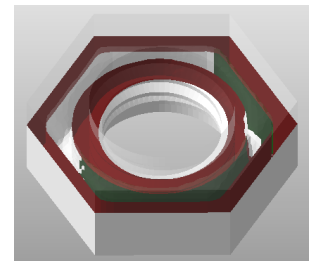

Clip planes

Add and modify your model with a lot of different adjustable parts from the part library, e.g. 3D text

|						
Box	Pyramid	Frustum of Pyramid	Cylinder	Frustum of Cone	Cone	Sphere
Ellipsoid	Torus	Elliptical Torus	Helix	Rotation Hyperboloid	Rhombicuboctahedron	Bracelet
Möbius Strip	Klein Bottle	Menger Sponge	Sierpinski Pyramid	Fractal	Convex Hull	Picture sweep
Rectangle Grid	Hexagonal Grid	Cylinder with Hexagon Grid	Screw	Gear Wheel	Nut	Brick
Bitmap	Heightmap	Text	Whistle	Vase	Mold	

Analyze

- Professional part analysis tools
- Analysis of wall thickness: analyse the thickness of the walls of your part. Check the buildability of your models in advance.
- Analysis of center of gravity: Check the center of gravity of your model and recognize, e.g., whether your model will be able to stand on your table.
- Analysis of part's shadow: Measure the shadow area of your parts and determine how much place or packaging it will require.
- Analysis of upskin and downskin analysis: Analyse the upsides and the downsides of your part and, e.g., estimate how much support it needs.
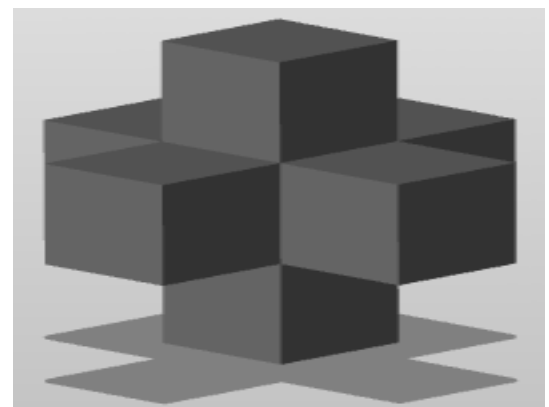- Analysis of support volume
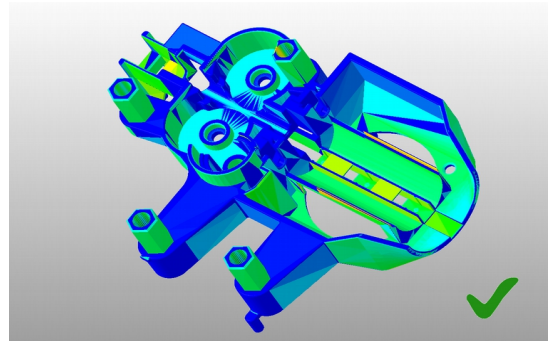
Wall thickness analysis
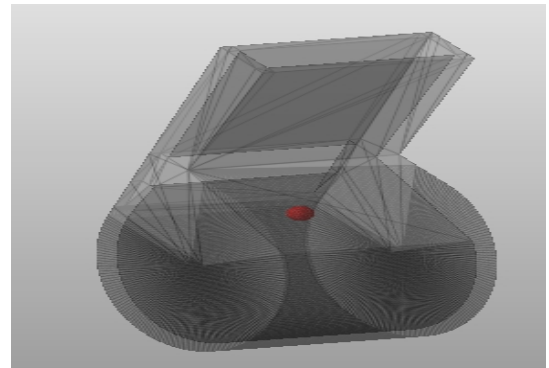
Center of gravity analysis
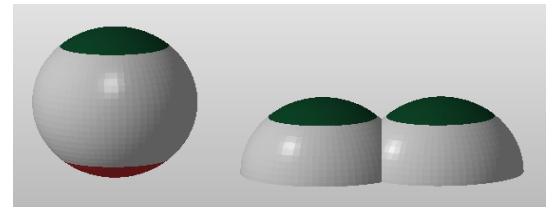
Upskin and downskin Analysis

Analysis of shadow area

Color, texture and labeling tools

- Import, view and convert colored and textured models
- Look at your mesh in multicolor and with textures
- View colors and textures of special 3D formats and repair such parts; convert textures with file formats. Import, view and convert colored and textured models.
- Full color support: All netfabb productivity advantages, now also for full color printing
- Analyze, repair and edit surfaces to get printable and perfect full-color parts
- Improved file formats: Color-STL, ZPR, OBJ, PLY, X3D, 3DS: netfabb support these formats now with colors and textures.
- Texture Module: Create colorful and textured parts and products exactly the way you and your customers want them.
- Colorize your models where you want and in the colours you want (works even on single triangle level).
- Support your vision with even more color: Even more creativity and far more interesting models which you can create on colorsupporting 3D printers.
- Project a texture, picture or logo directly onto you model: Make a direct and plane projection or cover your model with the picture from all sides (cylindrical or spherical).
- Supports textures and pictures in JPG, JPEG, PNG, BMP and TIFF.
- Load a picture or company logo and apply it as a texture onto your models: Adjust the texture alignment with an adjustment grid (parametrization) with absolute accuracy onto the surface of your model.

How to order:

Request a quote: www.netfabb.com/ordering.php

Send an order: sales@netfabb.com

Phone: +49 (0) 9492 601 640 0

List of Supported File Formats

System Requirements

Did you know?

- netfabb Professional bridges the gap between CAD or scan content and 3D printers. Like an automatic spellchecker, it ensures perfectly printed parts.

- You can install netfabb Professional on a server and access it from different PCs (one PC per license at the same time) – at no additional costs.

- netfabb is the world's most used software for 3D printing.

- netfabb licenses are forever. Buy once and use for a life-time.

- netfabb is available for Windows, MacOs and Linux at no additional cost.

- netfabb is so easy to use, it only takes a few hours to learn.