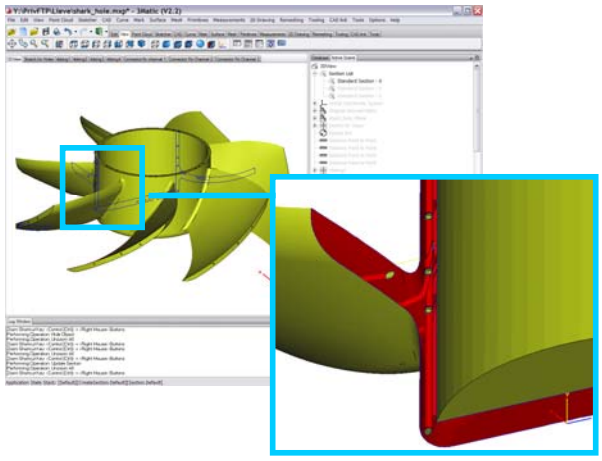
3Matic brings RP Tempering Technologies up to full strength

Total Customer Support Team and Materialise partner to provide custom 3Matic software, specifically designed to support the RP Tempering™ process

In March 2006 Materialise and Total Customer Support Team[1] (TCST) with consent from Par3 Technology - owner of the RP Tempering™ Technology - have teamed up to support this innovative process. The RP Tempering™ technology by Par3 Technology significantly improves material & mechanical properties of parts built with Rapid Prototyping technologies. This process allows for adding durability, impact strength and other characteristics without changing any of the part's external dimensions or aesthetic design. Using the RP Tempering™ Technologies you can enhance the strength of SLS and SLA rapid prototyping parts by including tunnels and/or grooves in the part design and injecting these with Par3 Technology's patented RP Tempering™ compound after the build. Some typical applications are strengthening screw bosses on a prototype part for a life cycle of 100 repetitions, strengthening ribs and rib intersections and strengthening snap and latch features for a life cycle of 25 repetitions. Actual living hinges can be accomplished with a simple CAD conversion that would take only 15 minutes using 3Matic software. The living hinges will last 200 life cycles in most cases and the tempering technique takes only a few minutes.



Prototype prepared for RP TemperingTM: the tunnels are automatically designed using 3Matic (section view)

The RP Tempering™ process requires making some geometry changes in the 3D model of the prototype before it's produced. At this stage many of the parts are in the STL file format, the industry standard for RP. Materialise' digital CAD software, 3Matic is the only available method of accurately and easily producing tunnels and grooves directly in STL files for the RP Tempering™ process.

"There is no need to switch back and forth between CAD files now that 3Matic is available to allow CAD functions to be performed directly on the STL file", comments Andrew Graves, TCST's VP of Technology. *"This product works perfectly to provide the modifications needed for the RP Tempering™ process. The team will continue to automate and simplify the product and to develop higher level commands to allow the users greater capability with much less effort."*

Users of traditional solid-modeling CAD systems will be immediately at home with functions like 2D-sketching, extrude, sweep, etc. For anyone who has never used CAD, the learning curve is not too steep and within a few days of training they can be up and running, tunneling STL files. Tunneling can be achieved in many ways but is most easily accomplished by using the built-in "Cooling Channel for Tooling" function. By defining a curve within the model, 3Matic can automatically create a cooling channel or tunnel of any diameter, which follows the curve. V-grooves are created in a similar fashion by defining a curve on the surface of the part and sweeping a 2D sketch of the V profile along the curve. Currently the base version of 3Matic (plus the Tooling Module) is used for the RP Tempering work. However, the 3Matic team is working on a custom version that includes just the functions required to support the RP Tempering™ process.

"One of the major limitations at the start of this product introduction was getting the right tools in place for the users to be able to make the changes in the geometry of their part files quickly and easily. I am very pleased with the support of the TCST/Materialise Team and feel that 3Matic *provides an excellent solution to this issue now and will only get better in upcoming releases,"* stated Earl Dunlap, President and CEO of Par3 Technology. *"TCST and Materialise have many years of experience working with multiple products and technologies in the Rapid Prototyping/ Solid Freeform Fabrication market place and I am very pleased to working with them."*

With special thanks Andrew Graves from TCST and Earl Dunlap from Par3 Technology.

[1]**Total C S Team, Inc** is a leader in providing support to Rapid Prototyping Users. TCST has the unique capability to integrate many years of practical application of RP systems with advanced analytical approaches to provide support to the users that will gives them a competitive advantage now and in the future. www.totalcsteam.com

[2] Par3 Technology's sole focus is to enhance the Rapid Product Development service industry. Specializing in intellectual properties and technologies spanning from "Rapid Ideation"™ cost reduction system to RP Tempering™ solid freeform fabrication prototyping technology and consulting companies in nano technologies. Visit the company's website: www.RPTempering.com