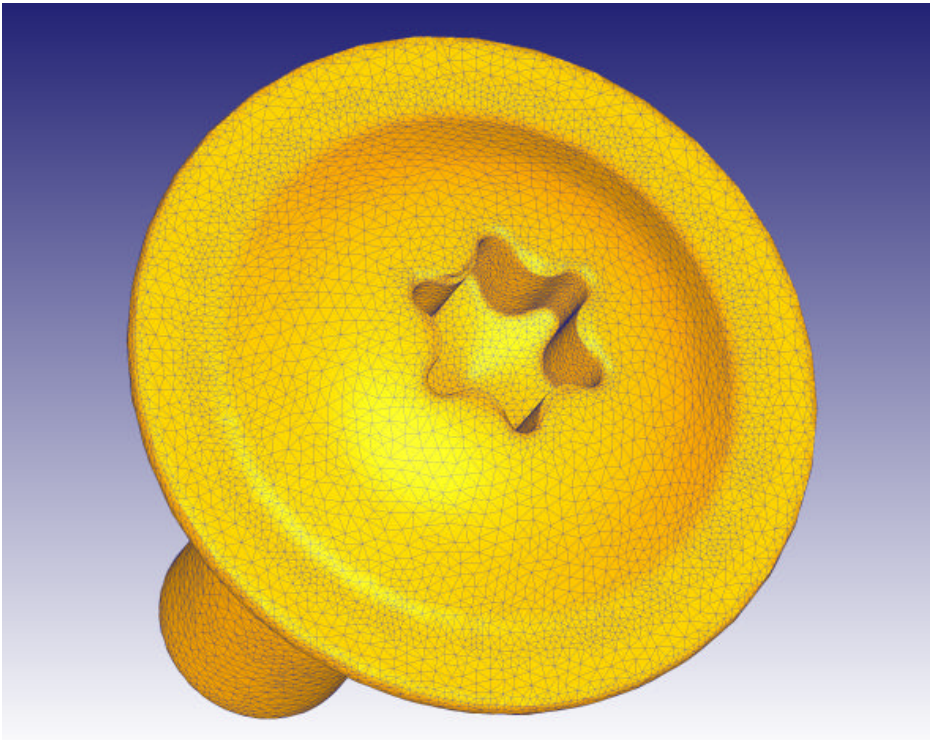


# DEFORM™ - F3

DEFORM™-F3 is an extremely capable process simulation system designed to analyze the three-dimensional (3D) flow of metal forming processes such as die forging, cold heading, upsetting and extrusion. DEFORM-F3 is a practical and efficient tool to predict the material flow in industrial forming operations without the cost and delay of shop trials.

Based on the finite element method (FEM), DEFORM has proven to be accurate and robust in industrial applications for more than two decades. The simulation engine is capable of predicting metal flow, loads and defects with astonishing precision. The automatic mesh generator produces an optimized mesh system with local element size control based on the specific process being analyzed with little to no user input. FEM parameters are derived from the process details supplied by the user. Gravity-based drop positioning allows a user to easily handle ill-defined workpiece location in die forgings



While DEFORM-F3 provides sophisticated analysis capabilities, the graphical user interface is intuitive and easy to learn. The system guides a user through data preparation, but allows direct access to modify parameters or review results.

DEFORM-F3 continues the tradition of accuracy and state-of-the-art capabilities established in the early 1980's. Scientific Forming Technologies Corporation has the experience and background to provide unparalleled training and technical support. More importantly, our support staff is personally committed to the success of each and every DEFORM User!

## Product Specifications

- Deformation and heat transfer are calculated in an integrated simulation environment.
- Full three-dimensional (3D) simulation describes a wide range of complex geometries and processes.
- Planar symmetry is easily defined by the preprocessor when applicable.
- Fully automatic optimized remeshing is performed during simulation.
- Forming equipment models are available for hammers, screw presses and mechanical presses. DEFORM-F3 also supports user defined translational movement.
- Material models include rigid-plastic for cold forming, thermal rigid-viscoplastic for hot forging, elastic and rigid for die stress analysis.
- FLOWNET and point tracking deformation, contour plots, load-stroke prediction and more are available in the postprocessor.
- An intuitive user interface allows for fast and efficient data preparation.
- A suite of positioning options is available to match the actual workpiece location in the die. Drop (gravity), mouse-driven, offset, rotation and interference positioning options are included.

**DEFORM**™

Design Environment for FORMing

## Computer System Requirements

- DEFORM-F3 runs on WINDOWS 2000, XP or Vista.
- The minimum recommended configuration is:
  - 2 GB RAM,
  - 2 to 4 processors,
  - 500 GB free disk space,
  - read/write DVD.

## Licensing

- The FEM engine is licensed to run on one CPU. Parallel processing options are available using MPI.
- Node-Locked licenses support one user on one computer. Floating licenses are available to use within a local area network.

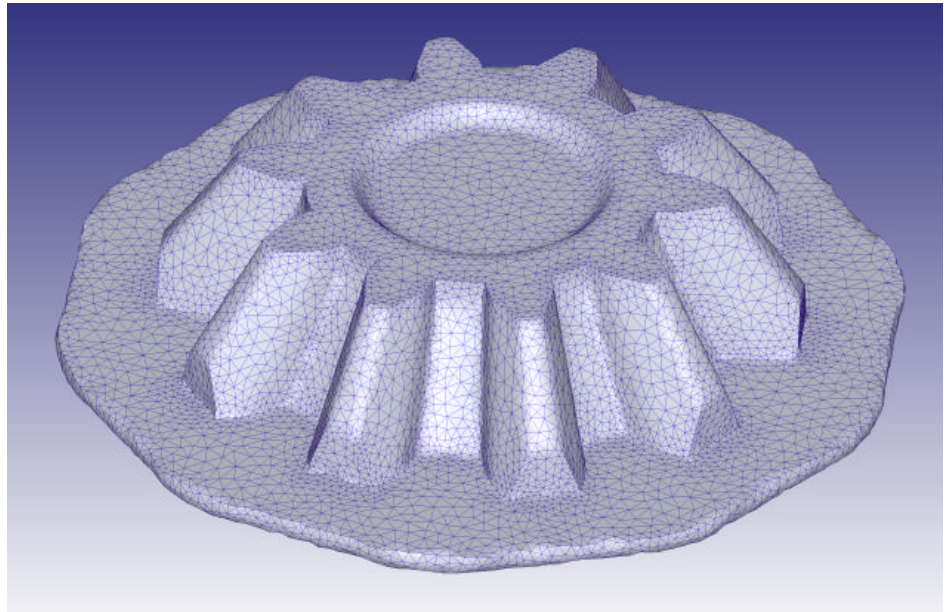
## General Information

- Training, support, regular updates and DEFORM User Group meetings are available to active users.
- Outputs include graphics, text data, animations and STL geometry.
- On-line documentation is provided in HTML format.
- The DEFORM Material Database includes a wide range of steel, aluminum, titanium, superalloy, copper and other materials.
- Internet access is required for on-line technical support and service pack updates.

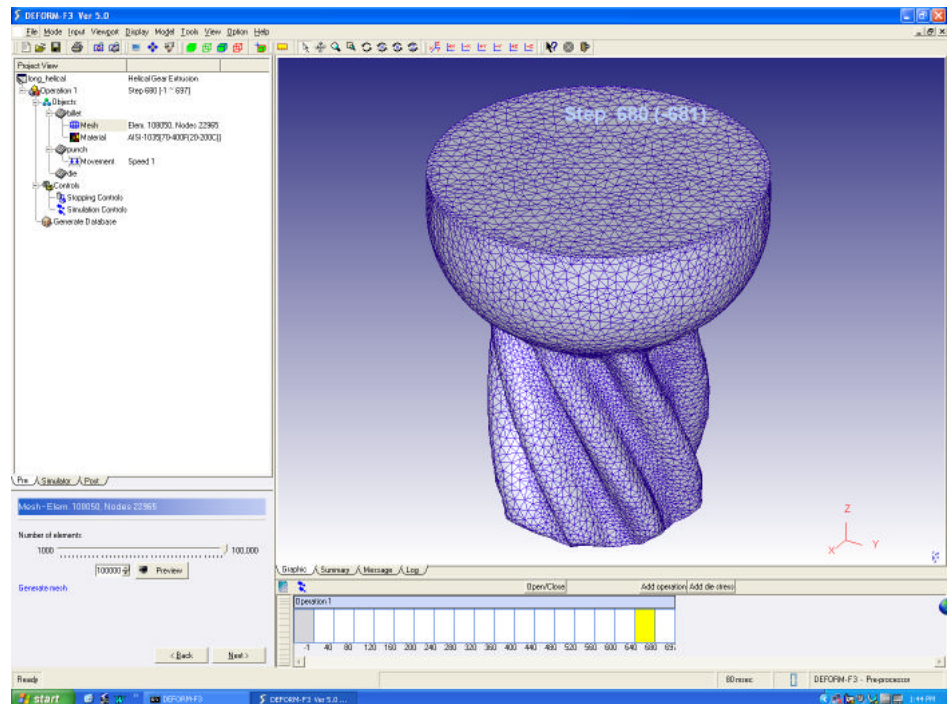
DEFORM is a trade mark of Scientific Forming Technologies Corporation. SFTC reserves the right to alter the product, price and/or computer system specifications at any time without notice. The SFTC software license agreement, including terms and conditions of software purchase or lease will be applicable. A perpetual license is subject to a maintenance fee for upgrades and ongoing system support.

4/11/08

# DEFORM™ - F3



*Hot forgings can be simulated using DEFORM-F3. This bevel gear was set up in minutes and run in a few hours on a laptop computer. Information on material flow, die fill, forging load, strain distribution, die contact, tool stress and more is available for your forging design - before spending money on tools.*



*DEFORM-F3 allows a fast problem setup in a very intuitive graphical user interface (GUI). The integrated environment provides a facility for users to set up complex problems quickly, run them efficiently and see the results clearly. OpenGL graphics are used for high quality graphic images in the display, animations and hardcopy.*