DEFORM™-3D is a powerful process simulation system designed to analyze the three-dimensional (3D) flow in complex metal forming processes. DEFORM-3D is a practical and efficient tool to predict the material flow in industrial forming operations without the cost and delay of shop trials. Typical applications include:

- forging
- extrusion
- cogging
- machining
- heading
- compaction
- rolling
- drawing
- upsetting

DEFORM has proven to be an accurate and robust solution in industrial applications for more than two decades. The simulation engine is capable of predicting large deformation material flow and thermal behavior with astonishing precision.

The Automatic Mesh Generator (AMG) produces an optimized mesh system where local element size is based on the specific process being analyzed. This facilitates the enhanced resolution of part features while maintaining good control of the overall problem size and computing requirements. A user-defined local mesh density provides advanced users a flexible control to meet their requirements.

While DEFORM-3D provides sophisticated analysis capabilities, the graphical user interface is intuitive and easy to learn. Moreover, it provides utilities to manipulate 3D geometry, including boolean capabilities to trim flash. Shearing and trimming operations can be analyzed, as well as complex machining operations. DEFORM-3D is the foundation for a comprehensive modeling system that integrates raw material production, forming, heat treatment, machining, mechanical joining and rolling.

DEFORM-3D continues a tradition of accuracy and state-of-the-art capabilities that was first established in the early 1980’s. Scientific Forming Technologies Corporation has the experience and background to provide unparalleled training and technical support.
DEFORM™-3D

This automotive suspension forging involved multiple hammer blows across multiple die cavities. Heat transfer was calculated during transfer, forging and dwell. DEFORM-3D provides information such as material flow, forming load, energy, strain, temperature, tool stress and more. Courtesy LC Manufacturing LLC.

The DEFORM Multiple Operation environment allows for the automatic simulation of entire process sequences. These are defined using a mix of flowchart, wizard-based and advanced menus. The full five station nut forming progression shown above was simulated, from start to finish, with a single click of the ‘Run’ button.

DEFORM is a trade mark of Scientific Forming Technologies Corporation. SSTC reserves the right to alter the product, price and/or computer system specifications at any time without notice. The SSTC 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.