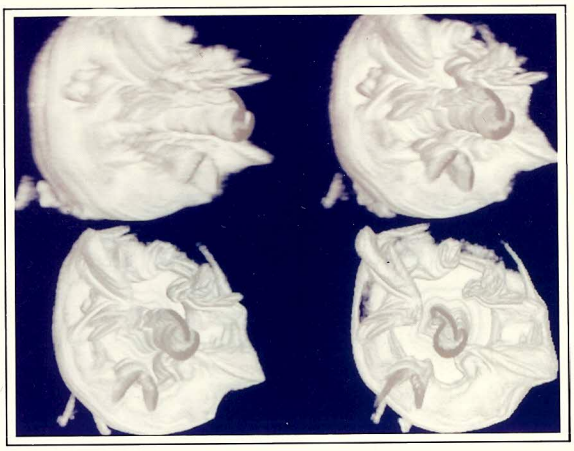
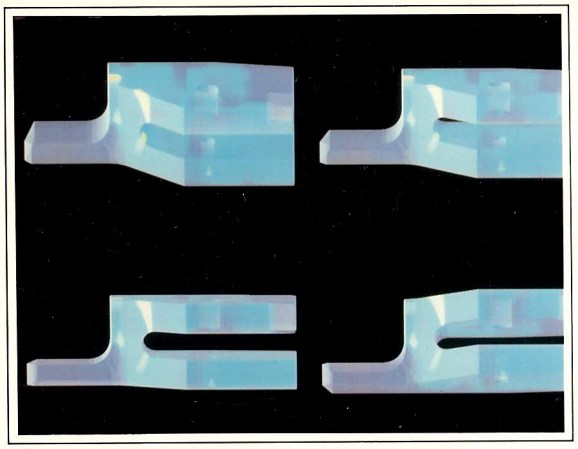
Pixar® Brings the Technology of Three-Dimensional Data Visualization To Applications in Science, Engineering, and Art

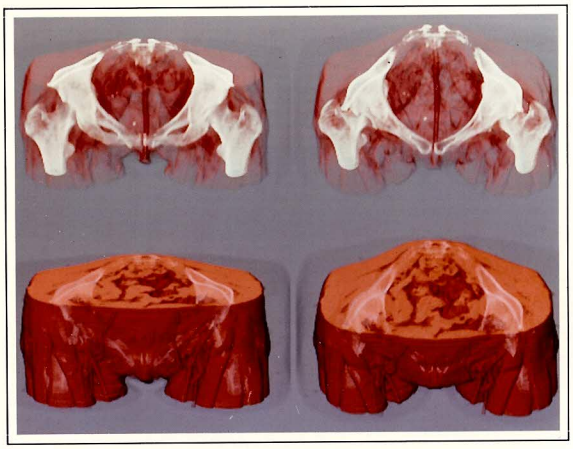


A turbulent puff of smoke is digitized by successive sweeps of a scanning laser. A Pixar Image Computer is used to reconstruct a three-dimensional volume of data from the successive slices and to generate an interactive, real-time rotating sequence, four frames of which are shown here. (Data courtesy Department of Aeronautics and Astronautics, Stanford University).



A simple three-dimensional part was modeled with Anvil-4000, a CAD/CAM system, and then a finite-element analysis was performed using the PATRAN P/Stress module, both from PDA Engineering. The internal stresses at all points within the part are visualized here, using the volume visualization and real-time playback capabilities of the Pixar Image Computer. (Data courtesy of PDA Engineering).

A simulated three-dimensional scene of photographic complexity and quality is realistically rendered using Pixar's proprietary three-dimensional image synthesis software. The full surface rendering software features complex shading, texturing, and motion blur of surfaces.



Pixar's unique medical imaging techniques reconstruct three-dimensional body visualizations from conventional two-dimensional computed tomography images. Frames from two real-time rotating Pixar Image Computer playbacks are shown here - muscles semi-transparent above, fully shaded below. (Data courtesy Department of CT Scanning, The Johns Hopkins Hospital).