The Imagined Becomes a Reality ...

The first computer-generated OMNIMAX film show

The OMNIMAX visual medium is unique, presenting a full-field-of-view image on a domed screen. OMNIMAX Theaters in science museums around the country and at the EPCOT center in Disney World show filmed movies daily. The viewer is captured and held by the dynamics of this one-of-a-kind visual medium.

Minneapolis, the 1984 site of the annual international SIGGRAPH conference, is but a few miles from the Minnesota Science Museum in St. Paul. What a unique opportunity to premiere the first totally computer-generated OMNIMAX film! What if the pioneers of advanced graphics techniques had the computer power to generate state-of-the-art-digital scenes for an OMNIMAX movie sampler of the best in computer graphics?

Cray Research, DICOMED Inc., IMAX Corporation, SIGGRAPH, and a host of individual and corporate contributors teamed together to make this ambitious goal a reality. Four unique and captivating sequences of dynamic computer graphics generated on CRAY systems were contributed to the first totally computer-generated OMNIMAX film. These sequences demonstrate state-of-the-art-graphics techniques for modeling and visualizing of complex natural and physical events. We at Cray Research salute the graphics artists and analysts who made the movie a reality.

Imagine what else you could do with a CRAY!

Figures:
Top - "Planet Simulation". © Chuck Henderson and Agnis Kaugars, Geometric Productions, Berkeley, CA 1984.
Bottom - Simulation of spermatozoal motion. © Alan Barr, California Institute of Technology and Gray Lorig, Rensselaer Polytechnic Institute, 1984.
Other sequences computed on Cray systems by the Jet Propulsion Laboratory/Caltech Computer Graphics Group/Art Center College of Design, Pasadena, Ca.
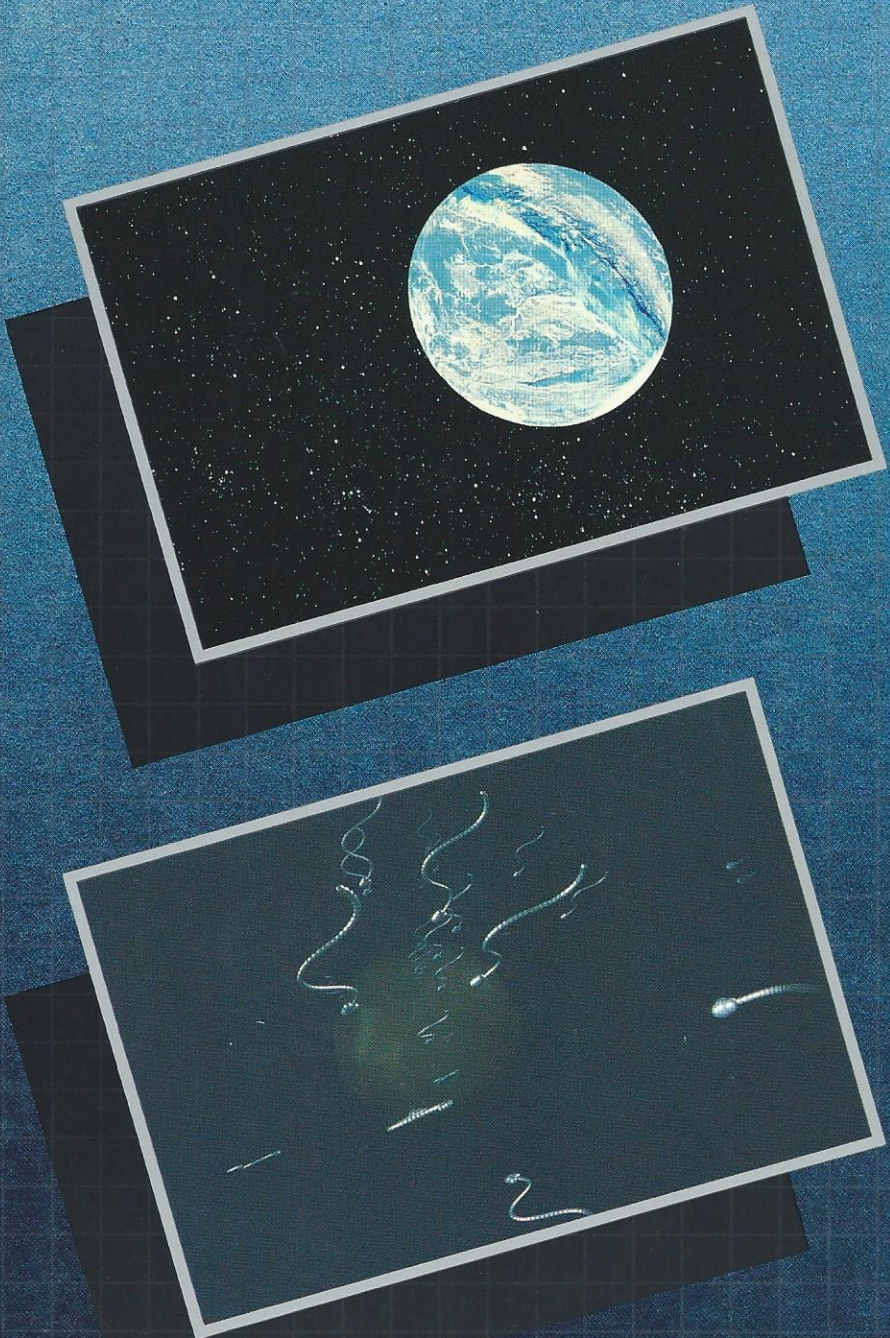
Making the Imagined a Reality ...

Making the imagined a reality has become commonplace using CRAY computers. Previously insoluble problems in the aerospace, petroleum and automotive industries, in science, engineering, and graphics are being solved today using the power and flexibility of CRAY computer systems. In each of these disciplines, the CRAY is used to simulate a real-world process with a computational model in less time and at less cost.

To support these applications, a wide range of graphic software systems is offered for CRAY computers. Device-independent line drawing systems like DI-3000 from Precision Visuals, Inc., TEMPLATE from Megatek, Inc., and DIS-SPLA from ISSCO, Inc., are being used now on many Cray computers. Systems for CAD/CAM and pre- and post-processing like PATRAN from PDA Engineering and MOVIE.BYU from Brigham Young University support a variety of engineering design activities. In those cases where photographic quality scene generation is the objective, the designers, artists, scientists, and movie-makers are turning to Cray systems to do what could not otherwise be done.

If your application or graphics task requires extraordinary computer power . . . if the problems you *can* do are much smaller than the problems you *would like* to do . . . if you need a general purpose powerhouse to run a variety of simulation, engineering or scientific codes . . . you need a CRAY!