

State-of-the-Art, Winged Submersible Makes History with First Sub-Sea Flight; Autodesk Partners with Hawkes Ocean Technologies to Support Innovative Approach to Deep Ocean Exploration

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SAN RAFAEL, Calif.--(BUSINESS WIRE)--Jan. 23, 2003--Autodesk, Inc. (Nasdaq: ADSK), the world's leading design software and digital content company, and Hawkes Ocean Technologies (HOT) today announced that the Deep Flight Aviator, a state-of-the-art, winged submersible, made its maiden sub-sea flight in San Francisco Bay. HOT built the Deep Flight Aviator specifically for long-range, economical ocean exploration and to fully explore the pioneering concept of sub-sea flight. The Deep Flight Aviator was designed using Autodesk Inventor, software for 3D mechanical design, enabling a team of two engineers to design and build the submersible at a fraction of the cost of typical ocean technology projects. The Deep Flight Aviator -- the newest craft in the Deep Flight series of winged submersibles -- is a two-seat exploration craft that was purpose-built to fly underwater.

The Deep Flight program began in the 1980s to move beyond existing constraints and develop a new generation of lightweight, manned, microsubmersibles that could open deep blue ocean space in the same way the first aircraft moved beyond ballooning to open air space. As the lead technology partner for the Deep Flight Aviator, Autodesk supports HOT's goal of developing advanced tools for deep ocean exploration. Graham Hawkes founded HOT when he realized that underwater flight was necessary for deep sea exploration and began experimenting with ways to improve a submersible's hydrodynamic efficiency and used Autodesk software to design wings for Deep Flight vessels.

"The Deep Flight Aviator is as different from all previous submersibles as aircraft are to balloons. While conventional submersibles are slow, bulky, stiff underwater balloons, the Deep Flight Aviator is a lightweight, high-powered, composite airframe with wings, thrusters and flight controls similar in configuration to the USAF A10," said Graham Hawkes, founder of HOT. "Just as design advancements in air flight have allowed us to explore space, the Aviator's unique design enables economical, long-range search and survey work, and should prove to be a revolutionary tool for ocean science and exploration."

The goal of the Deep Flight project is to make (manned) ocean exploration accessible. An equally important goal is to excite the next generation about the importance of exploring the 75 percent of our planet that is covered by water. Right now, it is estimated that less then five percent of our aquatic space has been explored because only a handful of aging submersibles explore our waters worldwide.

"We are delighted to be lead technology partner on the Deep Flight Aviator project. Autodesk's customers are some of the most creative people in the world and we understand the need to support inventiveness in order to remain competitive," said Buzz Kross, vice president of Autodesk's Manufacturing Division. "Graham's inventiveness has inspired generations of engineers, scientists and explorers about the exciting future for deep ocean exploration."

"With Autodesk Inventor, our products can be created and tested before any metal is cut, minimizing the design cycle time and allowing us to explore a wider range of concepts," said Hawkes. "Autodesk Inventor gives us the ability to model complete assemblies, allowing us to effectively check for problems before going into production. This capability has decreased our design errors immensely and has enabled us to design and build our submersibles with a skeleton crew, at minimal costs. Productivity has increased 400 percent allowing us to do the same work with two engineers that used to require eight."

The Deep Flight Aviator was designed and built by HOT in partnership with Autodesk, Inc. Sony Electronics Inc. added its video technology to the Deep Flight Aviator, by supplying advanced digital video cameras, the DCR-VX2000 and the DCR-PC101, for the project. Pelican Products, the leading manufacturer of waterproof, rugged equipment cases and flashlights is also a product partner. Spirit Of Adventure Inc., a corporation created to push the limits of underwater technology and expand the frontiers for exploration and adventure, owns the first Deep Flight Aviator craft.

About Hawkes Ocean Technologies

Hawkes Ocean Technologies, founded by Graham and Karen Hawkes, is a privately-held "skunkworks" based in Pt. Richmond, CA which builds the world's most advanced underwater technologies for deep sea exploration. For more information about the company, see www.deepflight.com.

About Autodesk

Founded in 1982, Autodesk, Inc., is the world's leading design software and digital content company. Autodesk offers solutions for professionals in building design, geographic information systems, manufacturing, digital media, and wireless data services. By delivering progressive products and services, Autodesk helps customers create, manage, use and maximize the value of their digital data throughout the lifecycle of their projects. For more information about the company, see www.autodesk.com.

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