

THE K-8 AERONAUTICS INTERNET TEXTBOOK

FINAL REPORT
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SUMMARY

Efforts were focused on web site migration, from UC Davis to the National Business Aviation Association's web site. K8AIT, which has remained an unadvertised web site, receives almost 2 million hits per month. Project continuation funding with the National Business Aviation Association is being pursued. A Memorandum of Understanding (MOU) between NASA Ames LTP and Cislunar has been drafted and approved by NASA's legal department. Additional web content on space flight and the Wright brothers has been added in English and Spanish.

Web Site Migration:

The University of California, Davis, one of the original K8AIT partners, has provided web site hosting and system support since 1995. The group at UC Davis which supported the project (ITDCAS) no longer exists and the university asked if the site could be moved to another provider.

The National Business Aviation Association (NBAA) approached Cislunar Aerospace, Inc. regarding usage of K8AIT for its educational goals. The NBAA is a non-profit organization which responds to the needs of business aviation in the United States. Jani Pallis discussed moving K8AIT to the NBAA's servers, with NBAA's VP of strategic programs, David Almy. An agreement was made and K8AIT will be migrated to the NBAA's site and will be known as wings.avkids.com.

Cybersurfari:

K8AIT is one of several NASA LTP sites which has continued to participate in Cybersurfari (www.cybersufari.com), a "kid-safe" Internet treasure hunt. Participants were led through K8AIT's sign language dictionary, Wright brothers and sports science materials.

Collaborations:

NASA produced a video on the wind tunnel study of tennis balls conducted under the project. John Bluck (external affairs) coordinated this. NASA and Cislunar were both approached several times for television news (KRON), television production (BBC, Learning Channel), newspaper, and webzine articles.

The Science Museum of London used some of the NASA/Cislunar wind tunnel photos in a museum display on sports.

For the 100-year anniversary of submarines in the Navy, Cislunar conducted water channel tests to demonstrate hydrodynamic differences in submarine designs (WWII versus modern designs) to students (<http://wings.avkids.com/Book/Vehicles/instructor/subs-01.html>). The tests were conducted by Kurt Long, U.S. Navy and Dr. Jani Macari Pallis, Cislunar Aerospace, Inc. Kurt Long and Dr. Rabi Mehta of the Fluid Mechanics Laboratory at the NASA Ames Research

Center Experimental Physics Branch supported the usage of the water channel to commemorate the occasion.

The technical research conducted in sport science by Dr. Rabi Mehta of NASA Ames and the PI was presented and published at several conferences including: the 1st International Tennis Science and Technology Congress (London) and Materials in Sports conference (San Diego).

The US Tennis Association supported a small grant which included adding materials on biomechanics to the K8AIT site (<http://wings.avkids.com/Tennis/Project/foot-02.html>). Students learn how different parts of the body behave like mechanical hinges and joints.

Explore Space Not Drugs:

As part of the move to the NBAA site, each page of the K8AIT web site was modified to include the phrase "Explore Space Not Drugs" and " Hear what astronauts have to say about staying drug-free." The phrases were translated to support the Spanish portion of the K8AIT web site. The phrases link to the <http://www.explorespacenotdrugs.com/> web site. Other LTP web sites have adopted this format.

Spanish Version:

All sections of the Spanish section were completed. In preparation for the site move, Raul Mendoza noted a few additional areas of K8AIT's Spanish version which needed translation or modification. He completed this work.

McGraw-Hill:

The children's book based on the aerodynamics of vehicles portion of K8AIT was released in early 2000.

Web Graphics:

K8AIT web graphics done by our project's artist Chad Okamoto continue to be requested for magazines and even television programming on a regular basis. Scholastic, Inc.'s children's science magazine requested them twice.

Web Chats:

Our last project web chat (<http://wings.avkids.com/Sports/starchat.html>) featured Mr. Mark Reynolds and Dr. Donovan Mathias of NASA Ames. At the time of the web chat Reynolds was preparing to leave for the 2000 Olympics in Sydney, Australia representing the United States in sailing. As a member of the US Sailing team, he and Dr. Mathias discussed the science and aerodynamics of sailing. Dr. Mathias had conducted simulations as part of a NASA project to study an America's Cup yacht and discussed NASA technology used in sailing. Subsequently, Mark Reynolds and his crewman Magnus Liljedahl were the only sailors to win a gold medal for the United States.

Project Continuation: Cislunar has made a proposal to the National Business Aviation Association to support a project on the Wright Brothers called "Wright Again". Wright Again virtually re-creates the development and construction of the Wright Flyer on the Web. The project follows the progress of the Wrights day by day, explaining the successes and setbacks

from a scientific perspective. Issues include aerodynamics, propulsion, control, and structural design. As the project moves along the developmental timeline, new discoveries are presented with accompanying hands-on classroom activities so that students can themselves become amateur engineers. All classroom activities are aligned with the National Science Education Standards. In partnership with The Franklin Institute Science Museum, project participants will use the original experimental data from the Wright's wind tunnel journals in our lesson plans.

The NASA Ames Research Center's Fluid Mechanics Laboratory will assist with wind tunnel testing facilities.

Royalties from the sale of the McGraw-Hill book based on the K8AIT web site have been used to maintain the web site.

A Memorandum of Understanding (MOU) between NASA Ames LTP and Cislunar has been drafted and approved by NASA's legal department. The MOU will support continuation of cross-referencing and promoting of educational projects and no-cost educational collaborations.