Public Use of Earth and Space Science Data Over the Internet

NASA's Digital Library Funding Program

NASA repositories of Earth and space science data are a source of information of interest to general public, especially in the areas of environmental monitoring, education and lifelong learning. This information has so far been largely unavailable to the general public due to lack of infrastructure and access technologies.

NASA Information Infrastructure Technology and Applications (IITA) program aims to accelerate development of technologies and applications that make it possible for the public to obtain NASA information of interest via the National Information Infrastructure (NII). NASA IITA program addresses all four elements of the IITA component of High Performance Computing and Communications (HPCC) with special emphasis on the Digital Libraries and Education and Lifelong Learning national challenge applications.

In order to accommodate the public need for Earth and space science data, while at the same time stimulating research and development in the private sector, NASA's IITA program solicited proposals via a Cooperative Agreement Notice (CAN) entitled "Public Use of Earth and Space Science Data Over the Internet." Proposals for cooperative agreements were sought for research and development of digital library technologies, for development of innovative applications of remote sensing data targeted to users outside the traditional user communities, and for a Remote Sensing Public Access Center. Cooperative Agreements are a relatively new funding vehicle designed to enhance collaboration among government, academic and industrial partners. The response to the CAN was enthusiastic. More than 350 proposals were received from private industry, academic institutions, and state and federal government agencies.

Twenty-six teams, comprised of members from private industry, academic institutions and government agencies, have been selected for awards totaling $37 million.

Selected teams in the digital library technology area will address problems related to: data compression and transmission techniques, search engines for content-based queries, enhancements to the popular World Wide Webbrowser,

Mosaic, scalability and interoperability, and access to Internet over cable television.

Selected teams in the applications domain will develop applications pertaining to forestry, agriculture, tourism, museums, and "info-tainment," television and education. In addition, several proposals provide access to data available on the Internet to promote student inquiry into the Earth as an integrated system. These projects improve access to educational materials by all students and teachers, irrespective of the physical locations of their school.

The IITA program has established a Remote Sensing Public Access Center in Fairmont, WV to coordinate, test and facilitate access to the products and services developed under the Cooperative Agreements. NASA is also a cosponsor of the NSF/ARPA/NASA Joint Initiative on research on digital libraries.

The homepage for the set of projects for developing Digital Library technologies is http://sdcd.gsfc.nasa.gov/ISTO/DLT and the homepage for the application projects is http://rsd.gsfc.nasa.gov/rsd. There you will find additional information as well as pointers to all of the homepages pertaining to the projects. The government-wide High Performance Computer and Communications (HPCC) Program also has a homepage: http://www.hpcc.gov.

To join the NASA Digital Library Technologies mailing list, send a request to

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