

Space Hardware Wins NASA Small Business Contracts

Space Hardware Optimization Technology (SHOT) Inc. is working on two NASA Small Business Innovation Research contracts to flesh out the company's concepts for products for space-based research and experimentation.

Under one \$70,000 contract, SHOT is refining a cell-culture bioreactor system that flew on a 1998 space shuttle mission. SHOT refers to its Dynacult technology as "an entire laboratory in a cassette." SHOT spokesman Rich Boling said the cassettes, which are about the size of a lunchbox, automatically perform experiments when placed in a facility on the shuttle.

SHOT's second \$70,000 NASA contract is for an automated modular microscopic observation system, called Dynascope. Dynascope is designed to study the biological components of, or interactions between, fluids in space.

Boling said SHOT will deliver research on both space products — which have the potential for use in medical fields on the ground — to NASA in mid-August.

At right, Astronaut John Glenn works with SHOT's Advanced Separations hardware (to his right) and cassettes during his return to space on the STS-95 mission.



NASA PHOTO

Verestar, Intelsat Join For China Internet Service

Verestar Inc. and Intelsat are providing a customer in China with Internet access via satellite, said Gail Yamazaki, Verestar spokeswoman.

The service, which uses a Verestar ground station in Washington state and a Ku-band link on the Intelsat 802 satellite — located at 174 degrees east longitude — offers a 155 megabit-per-second transmission rate in both directions, Yamazaki said.

In a statement, Prakash Sewpaul, vice president of International Sales Development for Verestar, said he sees this symmetrical link as an "indication of the growth ... in international requirements for Internet use."

Yamazaki would not disclose the identity of the customer in China.

Cassini Movie Shows Jupiter's Moon in Eclipse

A moving picture derived from images taken by NASA's Cassini spacecraft show's bright spots of lava and auroral glows on Jupiter's moon Io. The movie was made us-

ing 48 images taken while Io was in Jupiter's shadow, according to NASA.

The moving picture shows that these auroras originate in electrical currents between Jupiter and Io, NASA said in a statement. These visible auroras are along the moon's equator — unlike Earth's auroras, which tend to occur at the poles.

Cassini will continue to observe Jupiter through March while the craft continues on its way to a 2004 rendezvous with Saturn.

SAIC Nabs NASA Goddard Software Test Contract

A Science Applications International Corp. (SAIC) group is gearing up to begin testing space science mission software under a contract with NASA's Goddard Space Flight Center. SAIC's five-year contract is worth \$23 million and runs through January 2006, said Chris Stoddard, division manager of SAIC's independent verification, validation and software assurance division.

SAIC's Applied Technology Systems Group will perform independent verification and validation testing on software for

such NASA projects as the Galaxy Evolution Explorer, which is designed to probe the causes of star formation.

Stoddard said the group uses a standard set of tests and analyses, much like a tool kit, to identify risk areas in programming. The group's work includes ensuring requirements are met and reducing or mitigating software risks, he said.

Harmonic's Cyberstream Powers Mach 6 System

Internet protocol (IP) and satellite video services provider Mach 6 is using Harmonic Data Systems' CyberStream system to provide clients with IP connectivity via satellite.

CyberStream enabled Mach 6 to establish its commercial two-way very small aperture terminal and one-way IP services. These services give Mach 6 the flexibility to serve Internet service providers and large corporations with one system, said Daniel Elbaz, Harmonic Data Systems' vice president of marketing.

Harmonic worked with Mach 6 during a

shoebox-sized system that astronauts can attach to their chest packs before space walks. Astronauts can point the device toward a specific area to determine whether substances such as ammonia coolant — which is required to maintain a uniform temperature on the station — are leaking.

Groundbreaking Held For Space Research Lab

A groundbreaking ceremony for the first phase of construction of the Space Experiment Research and Processing Laboratory (SERPL) was held Feb. 8. Located just south of NASA Kennedy Space Center's Visitor Complex, SERPL is intended to provide experiment processing and support biological and life sciences research for the international space station.

NASA, in partnership with other space organizations, is designing the facility. Final designs should be complete in October, Jan Heuser, SERPL program manager, said in a written response to questions.

Construction phases one and two are