Top 20 New NASA Spinoff Technologies

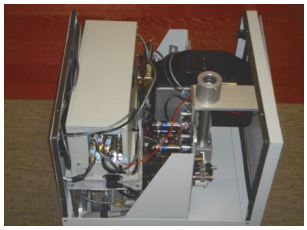
Spinoff is NASA's premier annual publication, featuring successfully commercialized NASA technology. For more than 40 years, NASA has facilitated the transfer of its technology to the private sector. The resulting commercialization contributes to the development of products and services in the fields of health and medicine, consumer goods, transportation, public safety, environment and resources management, computer technology, and industrial productivity.

The following is a list of the top 20 spinoff technologies produced over the past 5 years, based on factors such as quality of life, economic benefit, and value back to NASA.

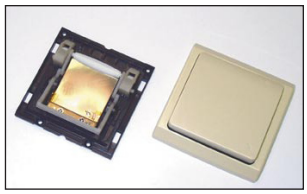
- A water filtration system providing safe, affordable drinking water throughout the world is the result of work done by Marshall Space Flight Center engineers who are creating the Regenerative Environmental Control and Life Support System, a complex system of devices intended to sustain the astronauts living on the International Space Station. The devices, available through Water Security Corporation Inc., of Sparks, Nevada, make use of the available resources by turning wastewater from respiration, sweat, and urine into drinkable water.

- Remote-controlled tractors with a margin of error of one centimeter are the result of work done at the Jet Propulsion Laboratory by scientists working to design ultra-precise GPS for use on a satellite probe sent into orbit to test two unverified predictions of Einstein's theory of relativity. These tractor-steering systems, sold by Menlo Park, California-based Novariant Corporation, are in use around the world, and their precision and ability to run unmanned for long stretches of time yield increased crops, reduced chemical use, and less wasted water. A Small Business Technology Transfer (STTR) grant through Langley Research Center facilitated the product's development.

- A bacterial spore-detection system developed at the Jet Propulsion Laboratory for cleaning Mars-bound spacecraft is now employed by Universal Detection Technology of Beverly Hills, California, as an anthrax detection system. It requires very little in the way of operating costs, and has a high reliability factor, with low susceptibility to false alarms. The Anthrax Smoke Detector is in use worldwide in government buildings, offices, airports, convention centers, hotels, casinos, and postal facilities.



- Langley Research Center engineers developed a low-cost device that creates electrical energy out of mechanical energy. It is now in widespread use as a wireless light switch and contributing to renovation and reconstruction efforts in areas affected by Hurricane Katrina. Face International Corporation, of Norfolk, Virginia, holds several of the NASA licenses, and is mass-producing the devices at a new, dedicated plant in Taiwan.



- Advances in space suit design by ILC Dover Inc., of Frederica, Delaware, have resulted in such widespread applications as therapeutic cooling and heating suits; safe, efficient pharmaceutical manufacturing; new, simple-to-use, life-saving gas and chemical masks; and lighter-than-air (LTA) vehicles. Since the early Apollo contract, ILC Dover, in conjunction with Hamilton Standard, of Windsor Locks, Connecticut, has designed and produced space suits for Johnson Space Center-based astronauts.