

## **SpaceDev Awarded Patent For Hybrid Propulsion Technology**

August 15 2006

SpaceDev has been issued a United States patent for its hybrid propulsion technology. The U.S. Patent Office issued U.S. Patent No. 7,069,717, entitled "Hybrid Propulsion System," to SpaceDev for technology related to fine altitude and control systems on a spacecraft. The patented Hybrid Propulsion System provides increased control of thruster minimum impulse over conventional systems while simultaneously reducing oxidizer waste.

This translates to reduced costs and higher efficiency for SpaceDev's systems. According to the patent, liquid oxidizer from a main motor is used in a gas thruster by converting the liquid oxidizer to a gas state. This ensures that gas, rather than liquid, is delivered to the thruster.

"As indicated by the issuance of this patent, SpaceDev continues to make an impact in the private Space technology arena with our affordable and innovative space products and solutions," said Jim Benson, SpaceDev Chairman and Chief Technology Officer. "The historic flight of SpaceShipOne in October 2004 was a testament to the capability of this Company's proprietary rocket motor technology and, we believe, only the beginning of what SpaceDev will ultimately accomplish."

The technology behind the patent was developed and funded by SpaceDev. The SpaceDev inventors cited in the "Hybrid Propulsion System" patent are Chris Grainger, Manager Mechanical and Fluids Engineering and Frank Macklin, Vice President Engineering.



"We are continuing a strong tradition of intellectual property protection," said Mark N. Sirangelo, SpaceDev Vice Chairman and Chief Executive Officer. "We have filed and continue to file patents where appropriate, to position SpaceDev as a technology leader. In some cases, we have chosen to maintain trade secret status on certain technology; however, we have filed both an umbrella patent and niche patents for our hybrid propulsion technology protection."

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